

Results of a 1999 Survey of the Feeding and Marketing Practices of Cow-calf and Feedlot Producers in Nebraska



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Introduction

The Nebraska cattle industry generates over \$4 billion in cash receipts annually. It is Nebraska's value added industry, converting low valued forages and feed grains into higher valued beef for consumers. Nebraska ranks among the top three states in cattle slaughter, cattle on feed, and number of beef cows (NASS, 1999). The level of profitability in the cattle industry not only affects the cattle producers and beef packers in the state, but also impacts the rest of the agricultural economy and the non-agricultural economy.

Given the importance of the cattle industry to the state of Nebraska, the overall economic health of the industry should be of concern to agricultural scientists working for the University of Nebraska. There is a need to know and understand present industry management and marketing practices to be able to design research and extension programs that will address industry problems and enhance the long-term profit potential for the industry.

The Nebraska Cattlemen funded a study from 1997 to 1999 that was designed to analyze the economics of their Nebraska Corn Fed Beef Program. A major component of the study was a mail survey that was sent to 1,000 cow-calf operations and 1,000 feedlot operations in Nebraska. The intent of the survey was to establish baseline data for various feeding, marketing, and management practices of Nebraska cattle producers and to evaluate the use of various forage and feed resources in different segments of the cattle industry. This publication is primarily the descriptive report that was delivered to the Nebraska Cattlemen.

Procedures

The Nebraska Agriculture Statistic Service (NASS) was contacted and their office was used to obtain a random list of cow-calf and feedlot producers. For 1997, the Nebraska Agriculture Statistic Service reported that there were 22,000 beef cow operations in Nebraska with over half of these operations having less than 50 head. However, there are only about 5,200 operations with more than 100 head and they account for 70 percent of the total beef cows. To obtain a more representative sample of cow-calf producers, representing the majority of cows produced, a stratified sample was taken from the NASS list of 22,000 operations with a greater number of surveys sent to larger rather than smaller operations (*Table 1*).

In 1997, there were 5,100 feedlot operations in the state, but only 665 feedlots with a capacity of 1,000 head or more. These 665 feedlots marketed 95 percent of the fed cattle in 1997. All of these larger feedlots were sent a survey and a random stratified sample of the smaller feedlots were sent a survey (*Table 1*).

The exact strata and the number of surveys to send to each strata were arrived at in consultation with NASS personnel for both the cow-calf and feedlot surveys. The number of valid surveys returned for each strata is listed in *Table 1*. There was no stratification for area of the state for either survey. There is often a concern in reporting survey results as to how well the sample represents the population. Bias can occur from the sampling procedure and from the response versus non-response to the survey. Some bias may have been designed into the sample against

Table 1. Random Sample Stratification for the Cow-calf and Feedlot Surveys.

<i>Cow-calf</i>				<i>Feedlot</i>			
<i>Size of Operation (head)</i>	<i>Surveys Sent</i>	<i>Surveys Returned</i>		<i>Size of Operation (head)</i>	<i>Surveys Sent</i>	<i>Surveys Returned</i>	
		<i>#</i>	<i>%</i>			<i>#</i>	<i>%</i>
25 - 99	150	17	15.7	100 - 249	175	11	10.4
100 - 299	300	28	25.9	250 - 499	100	11	10.4
300 - 499	300	26	24.1	500 - 999	60	18	17.0
500 +	250	37	34.3	1,000 +	665	66	62.2
	1,000	108			1,000	106	

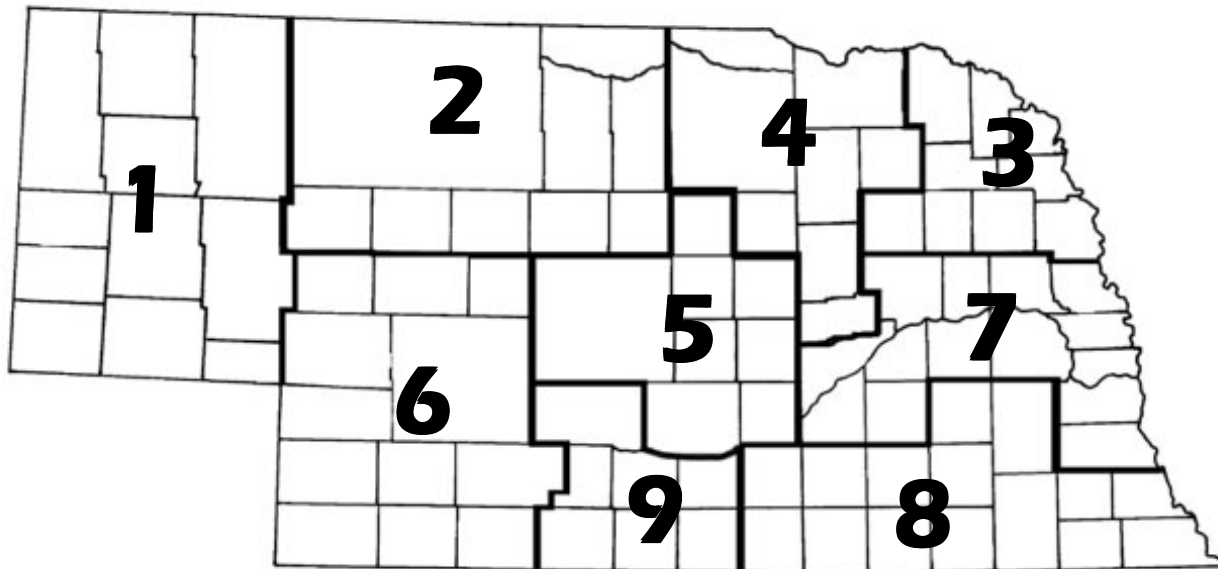


Figure 1. Map of Regions of the State.

smaller cow-calf producers. However, it is the opinion of the authors that the survey responses are fairly representative of feedlot operations in Nebraska.

A copy of the cow-calf survey and the feedlot survey instruments are contained in Appendix A and B, respectively. Descriptive statistics, primarily means and frequencies, were generated for all of the relevant variables from the surveys. Most of this document is reporting and describing those descriptive statistics.

Feedlot Survey Results

Size and Location

The size of feedlot and the number of cattle fed in 1998 are shown in *Table 2* for the 106 useable surveys. For the purpose of analysis, the feedlots were characterized by size of lot as either small, less than 1,000

head capacity; medium, 1,000 to 5,000 head capacity; or large, over 5,000 head capacity. Slightly under 40 percent and slightly over 40 percent of the survey respondents were from small and medium size feedlots, respectively. The remaining 20 percent were large feedlots. The average number of cattle fed in 1998 was 5,201 head. The largest feedlot in the sample fed nearly 90,000 head.

The state was divided into the nine geographic regions used by the Nebraska Cattlemen (*Figure 1*). The number and size of feedlots in the sample by region are also shown in *Table 2*. Regions 1 and 3 had the largest survey response, while there were only three surveys returned from Regions 2 and 4. Three of the regions had no large feedlots in the sample and Region 2 had no small feedlots. The largest feedlot in the sample is from Region 6 and Regions 1 and 3 also had several large feedlots.

Table 2. Number, Size and Location of Feedlots in Survey.

	Number	One time Feedlot Capacity (head)			Number Fed in 1998 (head)		
		< 1000	1000-5000	> 5000	Average	Minimum	Maximum
Total	106	39	45	21	5,201	55	89,600
Region 1	18	7	6	5	6,339	55	50,000
Region 2	3	0	3	0	2,323	1,500	3,500
Region 3	21	8	8	5	5,082	160	35,000
Region 4	3	1	2	0	2,567	700	4,500
Region 5	11	5	6	0	1,460	125	3,800
Region 6	11	4	5	2	12,138	360	89,600
Region 7	14	7	5	2	2,896	92	14,000
Region 8	11	5	3	3	4,756	100	20,000
Region 9	12	2	7	3	4,908	150	11,000

Table 3. Percent Cattle Placed on Feed by Weight and Month.

Weight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
500-599	3.53	1.26	1.22	1.33	0.06	0.09	0.35	1.34	2.89	13.81	8.16	1.15	34.8
600-699	1.36	3.68	2.11	0.67	3.12	0.45	0.78	0.88	0.84	6.14	5.31	0.90	25.2
700-799	0.54	2.35	1.46	1.32	2.08	0.54	0.75	2.85	3.53	1.63	1.44	0.90	19.4
800-899	0.88	0.84	1.25	1.04	0.82	0.64	0.62	2.10	2.96	2.65	1.16	1.03	16.4
900+	0.31	0.12	0.18	0.24	0.24	0.22	0.20	1.30	1.21	0.10	0.60	0.09	4.43
Total	6.62	8.27	6.21	4.60	5.07	1.74	2.45	8.35	11.42	24.14	16.67	4.08	100

The years that the feedlot had been in operation under the present ownership ranged from three to 60 years and averaged 28 years. There was essentially no difference in years in the business for small, medium, and large feedlots. However, the average years feeding cattle in Region 4 was 45 years and for Regions 7, 8, and 9 the average was over 30 years. The average number of years feeding cattle was less than 22 for Regions 1 and 2.

Placement of Cattle into Feedlots

Placement data for the survey respondents are reported in *Table 3*. The largest single placement month was October with nearly one-fourth of annual placements occurring in that month. Over half of the cattle placed in October were calves under 600 pounds. More than half of the cattle were placed in the months of September, October, and November. Slightly over half of the heavier yearlings, 800 pounds and over, were placed in the months of August, September, and October. However, these heavier yearlings accounted for less than 21 percent of total cattle placed on feed. Calves that weigh less than 600

pounds accounted for 35 percent of the total placement. Very few cattle of any weight were placed in June or July.

Feedlot Rations and Cattle Performance

Typical rations, on a dry matter basis, for cattle placed at different weights are depicted in *Table 4*. Corn grain and corn silage accounted for 57 to 80 percent of the ration, with the percentage increasing as placement weight increased. Furthermore, the percentage of corn grain, as compared to corn silage increased with placement weight. The percentage of hay in the ration varied from over 27 percent for 500-599 pound calves to less than 8 percent for 900 pound yearlings. Concentrates remained fairly constant in the ration varying around 3.5 percent. Other ingredients made up a little more or less than 10 percent of the total ration. Corn gluten and high moisture corn were the most common other feed ingredients. Corn gluten was used by a number of feedlots responding to the survey in Region 3. Distillers grain was also used by some feedlots in Eastern Nebraska. Feedlots in Region 1 also used beet pulp as an alternative feed.

Table 4. Typical Rations (Dry Matter Basis) and Projected Performance for Cattle Placed at Various Weights into the Feedlot.

Feed	500-599	600-699	700-799	800-899	900 +
Corn Grain (%)	35.93	42.81	60.57	65.38	73.29
Corn Silage (%)	21.10	21.57	11.37	9.62	6.28
Alfalfa Hay (%)	26.77	19.81	13.41	8.29	6.85
Other Hay (%)	1.08	1.41	0.95	1.84	1.10
Concentrate (%)	3.28	3.21	3.52	3.95	3.70
Other Ingredients (%)	11.63	11.15	9.80	11.07	8.76
Projected ADG (lbs)	2.48	2.77	2.96	3.27	3.25
Range	1.0 - 3.5	1.5 - 3.7	2.0 - 3.7	2.2 - 4.0	2.2 - 3.8
Projected Days on Feed	154	146	119	114	118
Lbs feed(dry matter)/Lb gain	7.17	7.18	7.50	7.28	7.18

Table 5. Sensitivity of Rations to Relative Feed Prices.

	<i>Not Sensitive</i> 1	2	<i>Some What</i> 3	4	<i>Very Sensitive</i> 5
	----- % of Respondents -----				
All Feedlots	12.12	31.31	26.26	18.18	12.12
Small	22.22	25.00	27.68	16.67	8.33
Medium	9.52	38.10	26.19	16.67	9.52
Large	0.00	28.57	23.81	23.81	23.81

Based on this survey, there were no significant difference in the rations for feedlots that fed calves for the NCFB program compared to the typical ration.

The average or typical rations varied considerably. Some background rations for 500 to 699 pound cattle were more than 50 percent corn silage, while others were over 50 percent alfalfa hay. Average daily gain on silage rations were between 2 to 2.5 pounds and on alfalfa hay rations between 1 to 2.5 pounds. Other feedlots rations for these 500 to 699 pound calves were more than 60 percent corn grain and average daily gain generally exceeded 3 pounds per day. For cattle that exceeded 700 pounds at placement, the percentage of corn silage or alfalfa hay in the ration was generally less than 50 percent.

Reported performance on these rations are also displayed in *Table 4*. Average daily gain varied from just under 2.5 pounds for 500 to 599 pound calves to 3.27 pounds for 800 to 899 pound yearlings. There was considerable variation in the reported

performance values. The differences in average daily gain reported in *Table 4* were reflective of the different rations fed. There were some inconsistencies in the reported feed efficiencies for the heavier weight yearlings. This is likely attributable to bias created by non-respondents to this question.

Respondents were asked to rank the sensitivity of ration formulation to relative feed stuff prices on a scale from 1 (Not Sensitive) to 5 (Very Sensitive). Over half of the respondents indicated that these rations were somewhat to very sensitive to the relative price of feed stuffs (*Table 5*). The larger the feedlot, the more likely they were to report that the ration were very sensitive to relative feed prices.

Cattle Ownership and Marketing Practices

Just over 71 percent of the cattle fed by the responding feedlots were fully owned by the feedlot (*Table 6*). However, there were cattle feeders that

Table 6. Feedlot Cattle Ownership and Marketing Practices of Responding Feedlots.

	<i>All Feedlots</i>	<i>Size of Feedlot</i>		
		< 1000	1000-5000	> 5000
	----- % of Cattle -----			
Cattle Ownership				
Full Ownership	71.27	96.08	62.91	43.10
Partial Interest	7.53	1.79	11.13	10.48
Custom Fed	21.20	2.13	25.96	46.43
Custom Feeding				
Retained Ownership	48.15	67.5	45.38	47.81
Investor Owned	51.70	32.5	54.62	51.75
Packer Owned	0.15	0.00	0.00	0.44
Marketing Practices				
Live Weight	30.71	35.00	25.23	34.14
Dressed Weight	56.23	51.97	58.72	58.81
Grid or Formula	12.91	13.38	15.60	6.40
Exclusive Agreement	0.54	0.00	0.82	0.95

Table 7. Pricing Method used by Responding Feedlots by Region.

Method	Region								
	1	2	3	4	5	6	7	8	9
	----- % of Cattle Priced -----								
Live Weight	59.0	16.7	30.8		7.3	78.0	17.9	2.7	16.5
Dressed Weight	21.6	83.3	60.7	75.0	82.7	8.7	60.0	92.3	70.8
Grid or Formula	19.9		8.5	25.0	10.0	11.5	22.1	5.0	11.8
Exclusive	1.5					1.8			0.9

owned 100 percent of the cattle in their lots and there were also those feeders that were exclusively custom feeders and did not own any cattle in their lots. Feedlot size was negatively correlated with cattle ownership, i.e. small feedlots owned a larger share of the cattle in their lots and large feedlots owned a smaller share of cattle in their lots. In fact, over 80 percent of the small feedlots reported owning 100 percent of the cattle they fed. By contrast, less than 20 percent of the large feedlots reported owning 100 percent of the cattle they fed, and just under 40 percent of the medium size feedlots owned 100 percent of the cattle they fed.

For those lots that custom fed cattle, slightly over half of the cattle were investor owned, and slightly less than half of the cattle were cattle in which the cow-calf producer had retained ownership. The small lots that custom fed appeared to feed more retained ownership cattle than investor owned cattle. Less than one percent of the cattle that were custom fed are fed for a packer.

The majority of fed cattle sold in from the responding feedlots were priced on a dressed weight basis. This is consistent with weekly fed cattle price data from the USDA-Agriculture Marketing Service. Live weight pricing accounted for about 31 percent of the cattle and grid and formula pricing was used for about 13 percent of the cattle. The pricing method was not significantly related to size of feedlot. However, pricing method was influenced by region (Table 7). Regions 1 and 6, the Nebraska Panhandle and Southwestern corner of the state relied much more heavily on live weight pricing than the rest of the state. Region 8, the southeast corner of the state was

dominated by dressed weight pricing. Fourteen percent of the feedlots sold all of their cattle on a live weight price and 33 percent sold all cattle on a dressed weight price. There were 4 percent of the lots that sold all cattle on a grid or formula price.

Membership in Organizations and Programs

Membership in Nebraska Cattlemen and in the National Cattlemen’s Beef Association (NCBA), feedlots that have been beef quality assurance certified, and feedlots that have participated in the Nebraska Corn-Fed Beef program were all positively correlated with size of feedlot (Table 8). Over 95 percent of the large feedlots were members of the Nebraska Cattlemen compared to only 60 percent of the small feedlots. Membership in NCBA was 90, 62, and 40 percent for large, medium, and small feedlots, respectively. Just over 76 percent of the large feedlots had been Beef Quality Assurance (BQA) certified compared to 42 percent and 22.5 percent of the medium and small feedlots, respectively.

While more of the larger lots had been BQA certified, they had not purchased any higher percentage of BQA certified calves. In fact, the medium size lots had purchased the highest percentage of BQA certified calves. For those operations that had been BQA certified, the most common management changes were: 1) changing the location of injections; 2) increased record keeping; and 3) only using products according to label instructions. A number of respondents indicated no management changes were necessary as they were already following BQA guidelines.

Table 8. Memberships and Program Participation for Responding Feedlots.

	NC	NCBA	BQA	Purchased BQA Calves	Purchased NCFB Tags	Fed Cattle for NCFB
	----- % of Respondent -----					
Total	70.75	59.43	41.51	16.18	13.27	13.98
Size						
Small	60.00	40.00	22.50	10.25	10.81	11.43
Medium	68.89	62.22	42.22	20.93	11.90	15.00
Large	95.24	90.48	76.19	17.50	21.05	16.67
Region						
1	61.11	55.56	27.78	8.33	11.11	11.76
2	33.33	33.33	33.33	16.67	0.00	0.00
3	76.19	57.14	52.38	10.00	5.88	5.88
4	66.67	33.33	0.00	0.00	0.00	0.00
5	45.45	36.36	36.36	18.18	10.00	9.09
6	54.55	54.55	54.55	4.55	9.09	10.00
7	92.86	78.58	50.00	16.67	25.00	20.00
8	72.73	63.64	27.27	27.73	9.09	11.11
9	91.67	83.33	50.00	40.90	27.27	36.36

The majority of feedlots that reported purchasing BQA certified calves also reported that they paid a higher price for those calves relative to non-BQA certified calves of similar quality. The price premium was generally \$1.00-2.00 per cwt., but one feedlot paid a \$5.00 per cwt. premium for BQA certified calves.

Less than 15 percent of the responding feedlots had sold cattle through the Nebraska Corn-fed Beef (NCFB) program. However, a couple of the responding feedlots were selling a majority of their cattle through the NCFB program. Only 20 percent of the feedlots who sold cattle through the NCFB program reported any management changes. Those who did report making changes, did not change feeding practices but only changed marketing practices. The typical change was to sort the cattle into different sales groups rather than sell the entire pen at one time.

Risk Management Practices

Use of futures and options to manage risk was positively correlated with feedlot size. For the large feedlots, 90 percent reported using the live cattle futures to hedge cattle, 80 percent reported using live cattle options, and 70 percent reported using corn

futures to hedge feed prices (*Table 9*). Less than half of the small feedlots used the live cattle futures or options on live cattle futures to hedge cattle and only one-fourth of the small feedlots used the corn futures to hedge feed prices. However, of the small, medium and large feedlots that did use futures, the small feedlots tended to hedge a larger portion of their cattle and corn. This may reflect the fact that smaller feedlots also tended to own a larger portion of the cattle they were feeding.

Demographic Data

Demographic data for the responding feedlots are reported in *Table 10*. Over half of the feedlots earned at least 50 percent of their farm income from the feedlot operation. All of the large feedlots received at least 50 percent of farm income from the feedlot. Just under 80 percent of the respondents were between the age of 35 and 65 years. There did not appear to be much difference in the age of the respondents by size of feedlot. A little over half of the respondents had earned a college bachelor's degree. The educational level of the medium and larger feedlot respondents was greater than that of the small feedlot respondents. All of the feedlot respondents were male.

Table 9. Use Selected Risk Management Practices by Responding Feedlots.

	<i>All Feedlots</i>	<i>Size of Feedlot</i>		
		<i>Small</i>	<i>Medium</i>	<i>Large</i>
	----- % of Respondents -----			
Use CME Live Cattle Futures	66.99	43.59	76.74	90.48
Use CME Live Cattle Options	53.85	42.50	52.27	80.00
Use CBT Corn Futures	44.12	25.64	48.84	70.00
Percent of Cattle Hedged by those who Use the CME				
Less than 25%	39.19	23.81	45.71	44.44
25 - 49%	22.97	23.81	17.14	33.33
50 - 75%	21.62	28.57	25.71	5.56
More than 75%	16.22	23.81	11.43	16.67
Percent Corn Hedged by those who Use the CBT				
Less than 25%	48.89	30.00	38.10	78.57
25 - 49%	35.56	20.00	52.38	21.43
50 - 75%	13.33	40.00	9.52	0.00
More than 75%	2.22	10.00	0.00	0.00

Table 10. Demographic Characteristics of Feedlot Respondents.

	<i>All Feedlots</i>	<i>Size of Feedlot</i>		
		<i>Small</i>	<i>Medium</i>	<i>Large</i>
	----- % of Respondents -----			
% Farm Income from Cattle Feeding				
Less than 25%	12.62	28.21	4.55	0.00
25 - 49%	18.45	20.51	25.00	0.00
50 - 75%	33.98	38.46	31.82	30.00
More than 75%	34.95	12.82	38.64	70.00
% Family Income from Cattle Feeding				
Less than 25%	21.36	41.03	13.64	0.00
25 - 49%	16.50	12.82	22.73	10.00
50 - 75%	27.18	30.77	25.00	25.00
More than 75%	34.95	15.38	38.64	65.00
Age of Respondent (years)				
25 - 35	6.67	7.50	6.67	5.00
35 - 44	19.05	12.50	26.67	15.00
45 - 54	30.48	25.00	31.11	40.00
55 - 64	29.52	40.00	22.22	25.00
65 - 74	11.43	12.50	8.89	15.00
75 or more	2.86	2.50	4.44	0.00
Education of Respondent				
Grade School or Some High School	2.83	5.00	2.22	0.00
High School Graduate	19.81	30.00	8.89	23.81
Some College or Vocational Training	25.47	30.00	26.67	14.29
College Bachelor's Degree	43.40	30.00	48.89	57.14
Graduate Degree	8.49	5.00	13.33	4.76

Cow-calf Survey Results

Size, Type, and Location of Cow-calf Respondents

There were 108 useable cow-calf surveys returned. Not all of the surveys were filled out completely, so frequently table totals do not sum to 108 or some table information was omitted due to incomplete responses. The size, location, and type of operation for the 108 respondents are shown in *Table 11*. The average cow herd size, defined as the total number of cows and heifers bred to calve, was 483 head and this varied from as small as 10 head to as large as 4,500 head. The operations were classified by size: small - less than 200 head; medium - 200 to 499 head; and large - 500 head or more. Approximately one third of the operations fell in each of these size classifications. The heart of the Sandhills, Region 2, had over half of the large operations in the survey. In general, fewer respondents were from the eastern one-third of the state and they tended to be smaller cow-calf operations. The average herd size of survey respondents is much larger than the 87 head state average for all beef cattle producers (NASS). It also is larger than the 260 head average for those operations with greater than 100 head (NASS). Therefore, inter-

pretations of the results of this cow-calf survey in a broad context to represent the Nebraska cow-calf industry will likely be bias towards larger operations.

The cow-calf operations also were classified by type of operation: cow-calf, selling the majority of calves at weaning or soon thereafter; cow-calf background, keeping the majority of calves after weaning for a three to four month period and selling them as heavier feeder cattle; cow-calf stocker, keeping the majority of calves on the ranch through the following summer and selling them as yearlings; and cow-calf feedlot, keeping the calves after weaning and feeding them out in a feedlot to a slaughter weight. The largest share, just under 40 percent, of the operations were cow-calf only. Approximately 45 percent of the operations were either a cow-calf background or cow-calf feedlot operation. Five of the responding operations could not be placed in any of these categories.

Calving, Weaning and Marketing

Summary information on calving and weaning is presented in *Table 12*. Respondents were asked to report the total numbers of cows and heifers bred, the number of live calves born, and the number of calves weaned. Based on the reported numbers, the average calf crop born was 92 percent and the average calf

Table 11. Number and Size of Cow-calf Operations by Location and Type in Survey.

	Number	# of Operations by Size			Cows and Heifers Bred (head)		
		< 200	200-499	> 500	Average	Minimum	Maximum
Total	108	33	32	34	483	10	4,500
Region 1	18	4	8	6	498	112	2,300
Region 2	31	8	5	18	793	10	4,500
Region 3	1	1					
Region 4	13	7	4	2	222	14	650
Region 5	10	4	4	2	295	50	570
Region 6	15	1	9	5	411	125	650
Region 7	2	2			47	30	63
Region 8	5	4	1		138	50	240
Region 9	4	2	1	1	285	120	500
Cow-calf	42	22	11	9	309	10	1,200
Cow-calf Stocker	12	2	4	6	972	100	4,500
Cow-calf Background	28	6	10	12	521	63	1,500
Cow-calf Feedlot	20	3	7	10	599	117	1,800
Cow-calf Mixed	5	2	2	1	271	35	500

Table 12. Calving and Weaning Percent and Weaning Weight and Age by Size of Operation as Reported by Respondents.

	Total	Size of Cow-calf Operation		
		Small	Medium	Large
Calving Percent	92	95	95	91
Weaning Percent	89	93	94	87
Length of Calving Season (days)	73	73	78	69
Weaning Weight (lbs)				
Steers	538	545	548	523
Heifers	506	511	521	491
Weaning Age (days)	211	228	211	198

crop weaned was 89 percent. Small and medium size herds appeared to have a slight advantage in these important measures of productivity. Over 60 percent of operations started calving between February 15 and March 15. The large majority of calves were born in February, March and April. About 85 percent of these calves were weaned in October or November at approximately seven months of age. Average weaning weights were 538 and 506 pounds for steers and heifers, respectively. These measures of productivity are remarkably similar to those reported from a survey of Sandhills cattle ranches in 1990. Coady and Clark reported a calving and weaning percent of 92.9 and 89.6, reported an average starting calving date of February 27, reported that approximately 95 percent of calves were born by the end of April, and reported calf weaning weights of 547 and 515 pounds for steers and heifers respectively.

Information on marketing age and weight for steers and heifers is presented in *Table 13*. Operations that were basically cow-calf, sold calves about one week after weaning. Those operations that backgrounded their calves kept them just over 100 days and sold them at just under 700 pounds. The cow-calf

stocker operations kept calves about 290 days past weaning and typically sold them in August and September following a summer grazing program. These yearling steers and heifers averaged about 800 pounds at that time. Cow-calf operations that retained ownership of calves in a finishing feedlot up to a slaughter weight, owned the calves an additional 212 days on average. Steers and heifers weighed 1,255 and 1,099 pounds, respectively at the time of sale.

The most frequently used marketing methods varied by size and type of operation (*Table 14*). On average producers responding to the survey sold 53 percent of their cattle through auction barns. Smaller operations sold 69 percent and cow-calf only operations sold 74 percent through the auction barns. Cow-calf stocker operations sold over half their yearlings direct from the ranch. Not surprising, most of the finished cattle sales were direct from the feedlot. From the 1990 survey of the Sandhills ranches, Clark and Coady reported that 31 percent of the operations sold cattle directly from the ranch and that 75 percent of the operations used auction barns to sell calves and yearlings.

Table 13. Market Age and Weight for Steers and Heifers by type of Operation.

	Wean Age (days)	Market Steers		Market Heifers	
		Age (days)	Weight (lbs)	Age (days)	Weight (lbs)
All Operations	211	310	755	316	694
Cow-calf	228	234	568	237	557
Cow-calf Background	207	308	697	323	696
Cow-calf Stocker	190	474	826	487	776
Cow-calf Finish	197	435	1255	383	1099

Table 14. Marketing Methods Used by Size and Type of Operation (Percentage).

	<i>Auction Barn</i>	<i>Direct Sale Farm/Ranch</i>	<i>Video Auction</i>	<i>Direct Sale Feedlot</i>	<i>Other</i>
All Operations	53	24	1	17	5
Small	69	17	2	7	6
Medium	45	32	0	16	7
Large	45	22	1	29	8
Cow-calf	74	23	2	1	0
Cow-calf Background	59	25	1	8	7
Cow-calf Stocker	43	53	0	3	1
Cow-calf Finish	8	6	0	73	12

Cow and Calf Rations

Cow and calf rations varied based on the feed resources that were available. However, because a smaller number of respondents answered the question on their rations, no comparisons were made by region. The average feed resources used for a cow for a year in Nebraska was composed of 57 percent native range, 26 percent hay, about 11 percent corn stalks, silage and grain, and just under 2 percent supplements (Table 15). This is probably not a representative ration for any particular cow herd. It is simply the average feed used by beef cows in Nebraska as reported by survey respondents. Some survey respondents relied exclusively on native range while others drylotted their cows and fed them hay 12 months out of the year. Some respondents with access to corn stalks reported utilizing them for up to 50 percent of the cows annual feed needs.

Calf programs from weaning until sale time were quite variable and so were the rations. The specific

rations listed under background, stocker and finish are the average rations for a few operations that followed a similar calf feeding program. The background program is representative of those operations that maintained ownership of the calves for about 100 days following weaning. Most of these cattle were sold in January, February and March. The average ration was 47 percent hay, 33 percent corn silage and 17 percent corn grain. All of the stocker operations sold cattle in August or September as yearlings after a summer grazing season. The winter feeding period consisted of supplementing native range with hay and corn silage. There was a limited amount of grain fed through the winter as well. The finish program is for those calves that are placed directly in a finishing feedlot following weaning. They were typically slaughtered in May, June, and July. These cattle were fed 28 percent hay, 19 percent corn silage, and 50 percent grain.

Table 15. Percentage of the Ration that is from each Feedstuff (dry weight basis) based on Survey Respondents.

	<i>Cow and Calf - birth to weaning</i>	<i>Calf - Weaning to Sale</i>		
		<i>Background</i>	<i>Stocker</i>	<i>Finish</i>
Native Range	56.9	0	61	0
Improved Pasture	3.7	0	0	0
Grass Hay	16.6	9	5	1
Alfalfa Hay	9.4	38	9	27
Corn Stalks	9.0	0	0	0
Corn Silage	1.2	33	12	19
Corn Grain	0.7	17	4	40
Other Grain	0.1	0	4	10
Supplements	1.8	1	5	2
Other	0.5	2	0	1

Cash Cost Per Cow

Survey respondents were asked for their direct cash costs and total costs per cow for a year. They also were asked for estimated break-even selling price for weaned calves. Too few respondents provided information on total costs to be able to report a meaningful value. However, the average reported direct cash cost was \$326 per cow. The average reported break-even value needed for a weaned calf was \$76.55 per cwt. Based on the average weaning weight of 522 pounds and the average weaning percentage of 89 percent, the \$76.55 break-even would be reflective of a direct cash cost of \$356 per cow. These values are consistent with University of Nebraska budget estimates for direct cash costs, excluding labor, of \$302 to \$369 per cow. With labor included, University of Nebraska budget estimates are \$360 to \$411 per cow for total operating costs (Selley, et.al.). The differences in the University of Nebraska budget estimates are for different areas of the state and different management systems.

Membership in Organizations and Participation in Programs

Fifty-one percent of the survey respondents were members of the Nebraska Cattlemen (*Table 16*). Only 27 percent were members of the National Cattlemen's Beef Association. Membership varied by region, with the Sandhills region having a higher percentage of members. Due to lack of completed surveys, no statistics were available for regions 3, 7, 8 and 9. Larger operations were more likely to be members of both Nebraska Cattlemen and the National Cattlemen's Beef Association. The percentage of cow-calf operators that were members of the associations were less than the percentage of feedlot operators that were members.

Only 30 percent of the survey respondents had been Beef Quality Assurance certified. More of the medium and large ranches had been BQA certified compared to the small ranches. The majority of those who had been BQA certified did not report any major management changes. Those who did list changes, generally reported injection location and record keeping as their main changes following BQA certification. Only 13 percent of the respondents had ordered tags for the Nebraska Corn-fed Beef program and 9 percent had retained ownership of the calves and sold them through the NCFB program. The other 4 percent who had purchased tags sold the calves to another producer who participated in the NCFB program. Carcass information obtained through participation in the NCFB program was being used to evaluate cow and bull performance and select bulls with specific EPD traits. One respondent was unsure how best to use the carcass information in making management decisions. There were several operations, which had been BQA certified, but were uncertain as to whether or not their BQA certified calves were later entered into the NCFB program. The larger cow-calf producers were much more likely to have been BQA certified and to have participated in the NCFB program.

Risk Management

Survey respondents were asked about their usage of the CME Feeder Cattle Futures and their knowledge of and willingness to use the new CME Stocker Cattle Futures. Only 20 percent of the respondents have used the feeder cattle futures to hedge their calves. Almost half, 47 percent, of the respondents were aware of the new CME Stocker Cattle Futures and 41 percent responded that they would consider using the stocker contract to hedge calves.

Table 16. Memberships, BQA Participation and NCFB Participation by Survey Cow-calf Respondents.

	<i>Nebraska Cattlemen</i>	<i>National Cattlemen</i>	<i>BQA Certified</i>	<i>Ordered NCFB tags</i>	<i>Sold Calves NCFB</i>
	----- % of Respondents -----				
All Ranches	51	27	30	13	9
Region 1	44	28	39	29	13
Region 2	61	42	38	19	15
Region 4	38	8	23	0	0
Region 5	40	20	40	13	10
Region 6	80	47	29	8	8
Small	25	9	11	4	3
Medium	53	26	34	4	0
Large	74	45	43	31	23

Demographic Data

The demographic characteristics of the cow-calf survey respondents are reported in *Table 17*. Three-fourths of the respondents received at least half of their total farm income from the cow-calf enterprise. For the large cow-calf operations, 87 percent received over 75 percent of total farm income from the cow-calf operation. By contrast, for 40 percent of the small operations less than 25 percent of their total family income was from the cow-calf operation. The age of the respondents varied from 25 to over 75 years. About one-third were between the age of 45-54. Just over 31 percent of the respondents had a college bachelor's or graduate degree. There did not appear to be a big difference in the formal education of the small, medium, or large cow-calf producers. Ninety-four percent of the respondents were male.

Summary

In August, 1999, surveys were sent to 1,000 feedlot and 1,000 cow-calf operators. They were asked a number of questions to determine their current management practices and to determine their participation in and knowledge of the Nebraska Corn-Fed Beef program. There were 119 feedlot surveys returned and 116 cow-calf surveys returned. Thirteen of the feedlot and eight of the cow-calf surveys were returned blank and the respondents indicated they were no longer feeding or raising cattle.

Feedlots varied in size from those who fed less than 100 head to those who fed over 50,000 head. Over half of the cattle were placed in the three months of September, October and November. Calves were placed at all weights, but over one-third were less than 600 pounds at placement. Corn grain and corn

Table 17. Demographic Characteristics of Cow-calf Survey Respondents.

	<i>All Operations</i>	<i>Size of Operation</i>		
		<i>Small</i>	<i>Medium</i>	<i>Large</i>
% Farm Income from Cow-calf Operation				
Less than 25%	8.41	20.00	2.94	2.63
25 - 49%	16.82	34.29	14.71	2.63
50 - 75%	11.21	5.71	20.59	7.89
More than 75%	63.55	40.00	61.76	86.84
% Family Income from Cow-calf Operation				
Less than 25%	20.56	40.00	14.71	7.89
25 - 49%	14.02	22.86	14.71	5.26
50 - 75%	14.02	8.57	20.59	13.16
More than 75%	51.40	28.57	50.00	73.68
Age of Respondent (years)				
25 - 35	4.63	5.56	2.94	5.26
35 - 44	18.52	30.56	14.71	10.53
45 - 54	32.41	19.44	41.81	36.84
55 - 64	22.22	19.44	20.59	26.32
65 - 74	14.81	16.67	8.82	18.42
75 or more	7.41	8.33	11.76	2.63
Education of Respondent				
Grade School or Some High School	3.70	2.78	2.94	5.26
High School Graduate	27.78	30.56	20.59	31.58
Some College or Vocational Training	37.04	38.89	44.12	28.95
College Bachelor's Degree	25.00	25.00	20.59	28.95
Graduate Degree	6.48	2.78	11.76	5.26

silage accounted for 57 to 80 percent of the ration, with the percentage increasing as placement weight increased. Furthermore, the percentage of corn grain, as compared to corn silage increased with placement weight. There did not appear to be any difference in the ration for those feedlots that were feeding calves for the Nebraska Corn-Fed Beef program.

Small feedlots owned a larger share of the cattle in their lots than large feedlots, who tended to do more custom feeding. The majority of fed cattle sold by responding feedlots were priced on a dressed weight basis. It did not appear that pricing method was impacted by size of feedlot. However, pricing method was influenced by region with more of the feedlots in the west using live weight pricing.

Over 95 percent of the large feedlots were members of the Nebraska Cattlemen compared to only 60 percent of the small feedlots. Just over 76 percent of the large feedlots had been BQA certified compared to 42 percent and 22.5 percent of the medium and small feedlots, respectively. Less than 15 percent of the responding feedlots had sold cattle through the NCFB program. However, a few of the responding feedlots were selling a majority of their cattle through the NCFB program. Only 20 percent of the feedlots who sold cattle through the NCFB program reported any management changes. Those who did report making changes, did not change feeding practices but only changed marketing practices. The typical change was to sort the cattle into different sales groups rather than sell the entire pen at one time.

Cow-calf operations that responded to the survey varied in size from under 50 head of cows to over 4,000 head. The Sandhills region had a larger share of the large herds in the state. On average calves were retained about 100 days from weaning to sale. However, this varied considerably depending upon the type of ranch organization. Those operations that were basically cow-calf only, sold calves about one week after weaning. Those operations that backgrounded their calves, kept them just over 100 days and sold them at just under 700 pounds. The cow-calf-stocker operations kept calves about 290 days past weaning and typically sold them in August and September following a summer grazing program. For cow-calf operations that retained ownership of calves in a finishing feedlot up to a slaughter weight, they owned the calves an additional 212 days on average and sold steers at 1,255 pounds and heifers at 1,099 pounds.

On average responding cow-calf producers sold 53 percent of their cattle through auction barns. Smaller operations sold 69 percent and cow-calf only operations sold 74 percent through the auction barns. Cow-calf stocker operations sold over half their

yearlings direct from the ranch. Not surprising, most of the finished cattle sales were direct from the feedlot.

Fifty-one percent of the cow-calf survey respondents were members of the Nebraska Cattlemen. Membership varied by region, with the Sandhills region having a higher percentage of members. Larger operations were more likely to be members of both Nebraska Cattlemen and the National Cattlemen's Beef Association. The percentage of cow-calf operators that were members of the associations were less than the percentage of feedlot operators that were members.

Only 30 percent of the survey respondents had been Beef Quality Assurance certified. More of the medium and large ranches had been BQA certified compared to the small ranches. Only 13 percent of the respondents had ordered tags for the Nebraska Corn-fed Beef program and 9 percent retained ownership of the calves and sold them through the NCFB program. The other 4 percent who had purchased tags sold the calves to another producer who participated in the NCFB program. Carcass information obtained through participation in the NCFB program was being used to evaluate cow and bull performance and to select bulls with specific EPD traits

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Appendix A

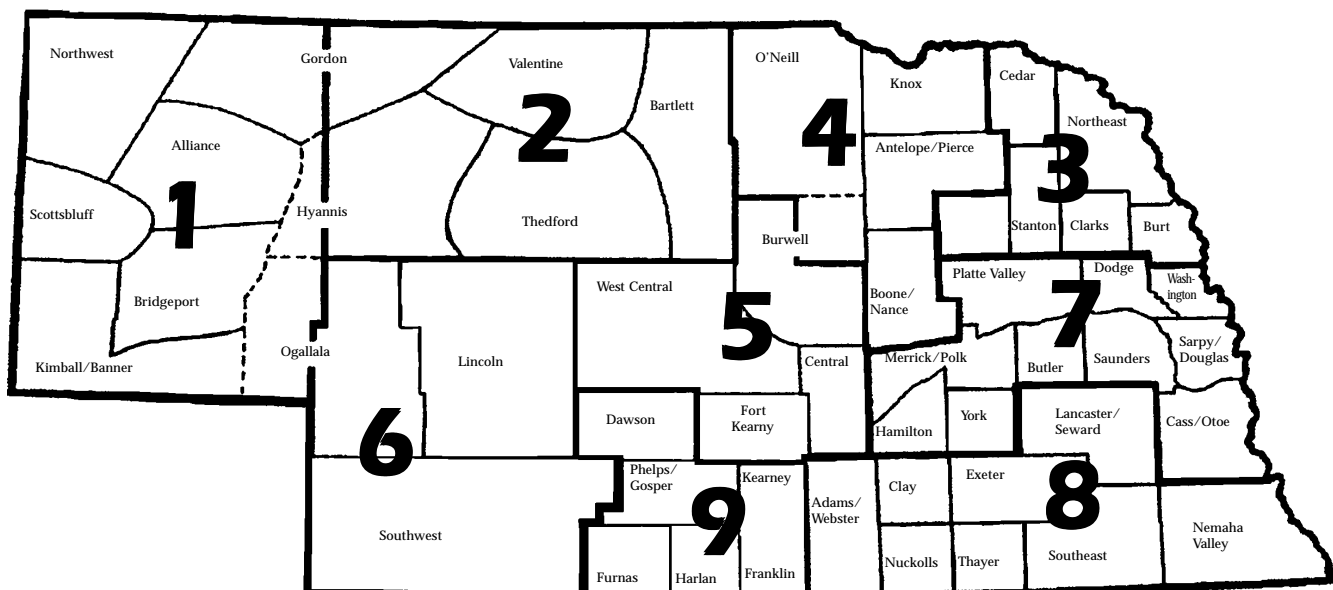
Cow-Calf Survey

Nebraska Cow-Calf Survey

1. Please describe your cattle operation (check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> Cow-calf | Sell calves at weaning or within one month after weaning |
| <input type="checkbox"/> Cow-calf-Stocker | Calves retained through a summer grazing program |
| <input type="checkbox"/> Cow-calf-Background | Calves retained and sold as heavier feeder cattle |
| <input type="checkbox"/> Cow-calf-Finish | Calves retained and sold as fed cattle |
| <input type="checkbox"/> Other | _____ |

2. Using the map below, please **circle the number** representing the region in which you live:



3. How long have you been raising cattle? _____ Years
4. How many cows and replacement heifers were bred to calve in 1998? _____ # of Cows and Heifers
5. How many calves were born alive in 1998? _____ # of Calves
6. How many calves were weaned in 1998? _____ # of Calves
7. What is the approximate date that you begin calving? _____ (Day/Month)
8. What is the length of your calving season? _____ # of days

9. Please complete the following table for calves born in 1998. You may use additional lines if some calves were weaned or marketed at different times.

	Weaned				Marketed				
	Number	Average Age	Average Weight	Month Weaned	Number	Average Age	Average Weight	Average Price (\$/cwt)	Month Marketed
Steers									
Heifers									

10. How were your calves sold (please indicate by percent)?

	% Sold
Auction barn	_____ %
Direct sale from farm/ranch	_____ %
Video Auction	_____ %
Direct sale from feedlot	_____ %
Other _____	_____ %
Total	100 %

11. What is (are) the dominant breed(s) of your cows and bulls?

Cows		Bulls	
Breed	% of Herd	Breed	% of Bulls
_____	_____ %	_____	_____ %
_____	_____ %	_____	_____ %
_____	_____ %	_____	_____ %
_____	_____ %	_____	_____ %
Total	100 %	Total	100 %

12. Please indicate the percentage of the ration (dry weight basis) that is from the following feed stuffs.

Cow (for the year)

Calf (birth-weaning)

- _____ Native Range Grass
- _____ Improved Pasture
- _____ Grass hay
- _____ Alfalfa Hay
- _____ Corn stalks
- _____ Corn Silage
- _____ Corn Grain
- _____ Other grain _____
- _____ Supplements: _____

Calf (from weaning to sale)

- _____ Native Range Grass
- _____ Improved Pasture
- _____ Grass hay
- _____ Alfalfa Hay
- _____ Corn stalks
- _____ Corn Silage
- _____ Corn Grain
- _____ Other grain _____
- _____ Supplements: _____

Total 100%

100%

13. What are your annual costs per cow?

1. Direct cash cost: _____ \$/cow

2. Do you know your total costs including a return to your land, labor, capital and management?

Yes No

If yes, please provide that information: _____ \$/cow

14. What is your estimated break-even selling price for weaned calves?

1. Direct cash cost: _____ \$/cwt

2. Do you know your total costs including a return to your land, labor, capital and management?

Yes No

If yes, please provide that information: _____ \$/cwt

15. Are you a member of the Nebraska Cattlemen? Yes No

16. Are you a member of the National Cattlemen's Beef Association? Yes No

17. Has your operation been Beef Quality Assurance (BQA) certified? Yes No

If yes, for how many individuals have been certified? _____ Individuals

18. *If you have been BQA certified*, what major changes, if any, have you made in your operation since becoming certified?

Please explain:

19. *If you have been BQA certified*, have your calves sold for a higher price relative to non BQA calves of the same quality?

Yes No Uncertain

If yes, how much higher? _____ \$/cwt

20. Have you purchased tags for the Nebraska Corn Fed Beef (NCFB) program?

Yes No

21. Have you retained ownership of some of your calves and sold them through the NCFB program?

- Yes No

If yes, what type of information about your calves have you received back from the NCFB program?
Please explain:

If yes, based on this information, what kind of changes have you made to your operation?
Please explain:

22. Have you sold BQA certified calves to someone else who has sold the calves through the NCFB program?

- Yes No Uncertain

23. Have you used the Chicago Mercantile Exchange (CME) Feeder Cattle futures to hedge your calves?

- Yes No

24. Are you aware of the new CME Stocker Contract?

- Yes No

25. Would you consider using the Stocker Futures to hedge your calves?

- Yes No Uncertain

26. What percent of your *total farm/ranch income* is from your cattle operation?

- Less than 25% 50 to 75%
 25 to 49% More than 75%

27. What percent of your *total family income* is from your cattle operation?

- Less than 25% 50 to 75%
 25 to 49% More than 75%

28. What is your age?

- Under 25 years 55 to 64 years
 25 to 35 years 65 to 74 years
 35 to 44 years 75 or more years
 45 to 54 years

29. What is the highest level of formal education you have?

- Grade school or some high school
 High school graduate
 Some college or formal vocational training
 College bachelor's degree
 Graduate degree

30. What is your gender?

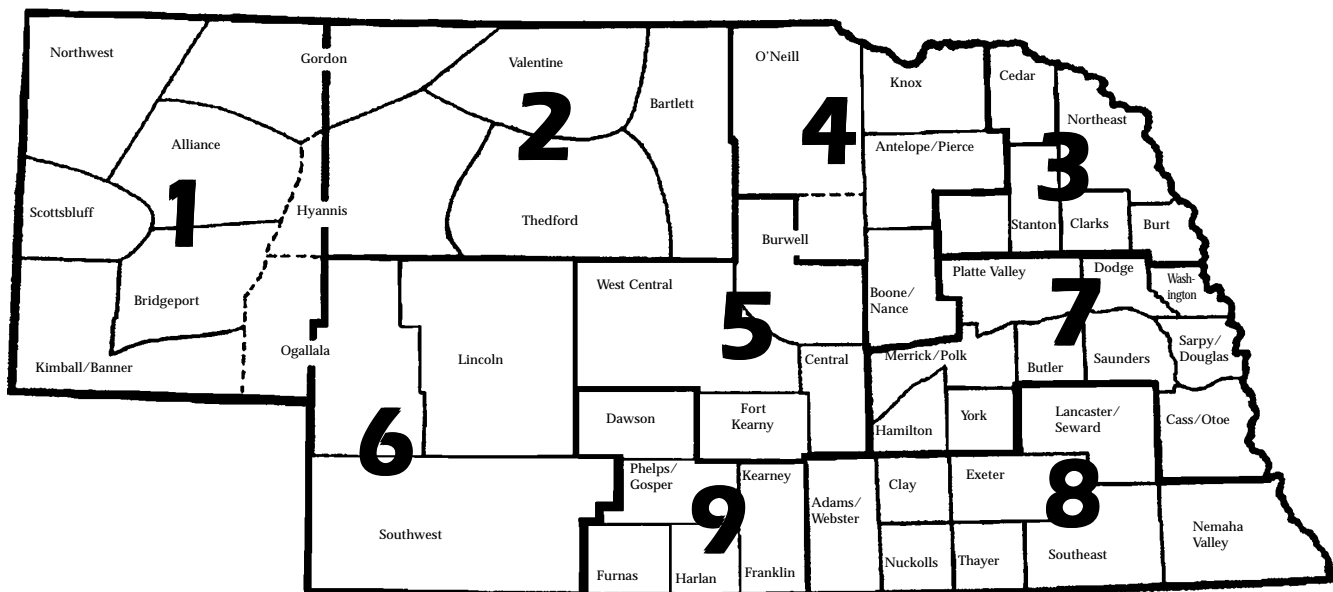
- Female Male

Appendix B

Feedlot Survey

Nebraska Feedlot Survey

1. What is the one time feeding capacity of your feedlot? _____ Head
2. How many cattle did you feed in 1998? _____ Head
3. How long have you been feeding cattle? _____ Years
4. Using the map below, please **circle the number** representing the region in which you live:



5. Please indicate the percent of total cattle placed on feed in a year by month and weight category. (Total should add up to 100%)

Weight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
500-599													
600-699													
700-799													
800-899													
900+													
Total													100%

10. What percent of cattle do you sell on
a live weight price? _____ %
a dressed weight price? _____ %
a grid or formula price? _____ %
an exclusive marketing agreement? _____ %
Total **100** %

11. **If you have sold slaughter cattle on a grid, used a formula, or an alliance**, please specify the alliance or specific packer who has purchased your cattle? Please list:

12. **Excluding** the cost of feed and cattle:

What are your processing costs per head? _____ \$/head

What are your daily lot costs per head? _____ \$/head

13. Are you a member of the Nebraska Cattlemen? Yes No

14. Are you a member of the National Cattlemen's Beef Association? Yes No

15. Has your cattle feeding operation been Beef Quality Assurance (BQA) certified? Yes No

If yes, how many individuals have been certified? _____ Individuals

16. **If you have been BQA certified**, what are the major changes, if any, you have made in your operation since becoming certified?
Please explain:

17. Have you purchased BQA certified calves to feed?

Yes No Uncertain

18. *If you have purchased BQA calves*, relative to non-BQA calves of the same quality, did you pay a higher price?

- Yes No

If yes, how much higher? _____ \$/cwt

19. Have you purchased tags for the Nebraska Corn Fed Beef (NCFB) program? Yes No

20. Have you fed cattle and sold them through the NCFB program? Yes No

21. *If yes*, did you feed or manage the NCFB cattle any differently than your other cattle? Yes No

If yes, please explain:

22. Have you used the Chicago Mercantile Exchange (CME) Live Cattle futures to hedge your fed cattle?

- Yes No

26. What percent of your total farm/ranch income is from your cattle feeding operation?

- Less than 25% 50 to 75%
 25 to 49% More than 75%

23. Have you used the CME Live Cattle Options to place a floor price under your fed cattle?

- Yes No

27. What percent of your total family income is from your cattle feeding operation?

- Less than 25% 50 to 75%
 25 to 49% More than 75%

24. *If you use futures or options*, what percent of your cattle are typically hedged?

- Less than 25% 50 to 75%
 25 to 49% More than 75%

28. What is your age?

- Under 25 Years 55 to 64 years
 25 to 35 years 65 to 74 years
 35 to 44 years 75 or more years
 45 to 54 years

25. Have you used the Chicago Board of Trade (CBT) Corn futures to hedge your feed purchases?

- Yes No

29. What is the highest level of formal education you have?

- Grade school or some high school
 High school graduate
 Some college or formal vocational training
 College bachelor's degree
 Graduate degree

If yes, what percent of your feed purchases are typically hedged?

- Less than 25% 50 to 75%
 25 to 49% More than 75%

30. What is your gender?

- Female Male