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by

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CONTENTS

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FOREWORD

The beef cattle industry is experiencing a significant increase in demand for feeder cattle. Current difficulties in obtaining sufficient numbers of feeder cattle on a continuing basis have put pressures on the feeder cattle marketing system that did not exist in the past. Feedlot operators, growers (backgrounders), and cow-herd operators are looking for ways and means of improving the system. Innovations are being tested. Those circumstances prompted personnel of the Agricultural Experiment Stations of Kansas and Nebraska to undertake a joint study of cattle marketing under a Regional Research Project.

Structural and Operational Characteristics of Nebraska and Kansas Feeder-Cattle-Growing Operations

INTRODUCTION

This study examines the growing operation as a separate stage of cattle production, particularly as a separate stage of cattle marketing.

In this study, growing is used to denote a production stage from time of weaning until cattle are placed on a high-concentrate ration for finishing.

Other terms sometimes used for this stage are: backgrounding, warming-up, limited feeding, and conditioning (not to be confused with pre-conditioning, a management practice designed to eliminate stress and resulting death loss, sickness, or poor performance when calves are weaned or transported). As used in this study, growing is more inclusive than those counterpart terms; it includes grazing and wintering as well as limited grain feeding.

OBJECTIVES

Little research has been done on marketing practices of the feeder cattle grower and the extent of vertical coordination between the growing stage of production and other stages of production anywhere in the United States. However, the feeder cattle growing operation is an important part of the cattle feeding industry in Kansas and Nebraska. This study is intended to provide information needed to determine what operators in this stage of production are doing.

The recognized stages of cattle production are the cow-calf, growing, and feedlot operations. This study includes, as part of what feeder cattle growers are doing, investigation of vertical coordination practices occurring between the grower and the cow-calf operator and between the grower and the feedlot operator.

Vertical coordination includes, but is not limited to, ownership or control of two or more stages of production (e.g. a grower who also operates a cow herd or feedlot-vertical integration). It also includes formal (e.g. forward contract buying and selling, custom feeding) or informal (e.g. pre-conditioning and certain other management practices) cooperation among independent stages of production.

Specific objectives of this study are to describe:

1. Physical and economic characteristics of procurement of feeder cattle by the feeder cattle grower in Kansas and Nebraska.
2. Physical and economic characteristics of selling of feeder cattle by the feeder cattle grower in Kansas and Nebraska.

3. Extent of vertical coordination of the cow-calf, growing, and finishing stages of production (from the viewpoint of the feeder cattle grower) to include:
   a. Grower owning his own cow herd.
   b. Grower finishing purchased calves.
   c. Custom feeding or growing.
   d. Contracting for procurement or selling of feeder cattle.
4. Wherever possible, the historical and potential future trends in feeder cattle marketing.

METHOD OF STUDY

Data from a mail survey (two mailings—December, 1971, and January, 1972) to determine marketing practices of feeder cattle growers in Kansas and Nebraska provided the basis for this descriptive study.

Because research indicated that Kansas and Nebraska had nearly an equal number of feeder cattle growers and cow-calf operators, equal numbers of questionnaires were mailed in each state. Questionnaires were sent to cattlemen chosen at random from lists of feeder cattle growers, and also cow-calf operators who might carry calves through the growing phase.

Questionnaires were unmarked (to assure confidentiality); follow-up questionnaires were sent to encourage response.

In Kansas, 28.4 percent of the total number of growers sampled returned questionnaires, in Nebraska, 24.4 percent (Table 1). Numbers and percentages of respondents in each state for the various crop-reporting districts are shown in Figure 1.

Responses from each state were grouped by operation size (to divide the sample into groups of growers assumed to have similar marketing practices) and by geographical location. Numbers and percentages of respondents for each group are in Table 2 and Figure 2.

Table 2 shows that the percentage of respondents for each size of operation group was similar for both Nebraska and Kansas. However, Figure 2 shows that respondents were not distributed on a similar geographical basis; the large number of growing operations in western Nebraska, including the Panhandle and a large portion of the Sandhills, was not matched in western Kansas.

It might be hypothesized that one would find trends or differences in the marketing practices of growers according to the size of the growing operation. It might also be expected that similar trends would occur in both states. The same hypothesis is not, however, made for the geographical regions. There is no particular reason to expect that patterns or correlation between one region and any other region should exist, although grower marketing practices might be expected to differ among various regions because of differing agricultural patterns.

Table 1. Number of feeder cattle growers sampled and response rate.

State	Number of growers sampled	Questionnaires returned	Response rate
	(number)	(number)	(percent)
Kansas	2000	568	28.4
Nebraska	2000	489	24.4
Total Sample	4000	1057	26.4

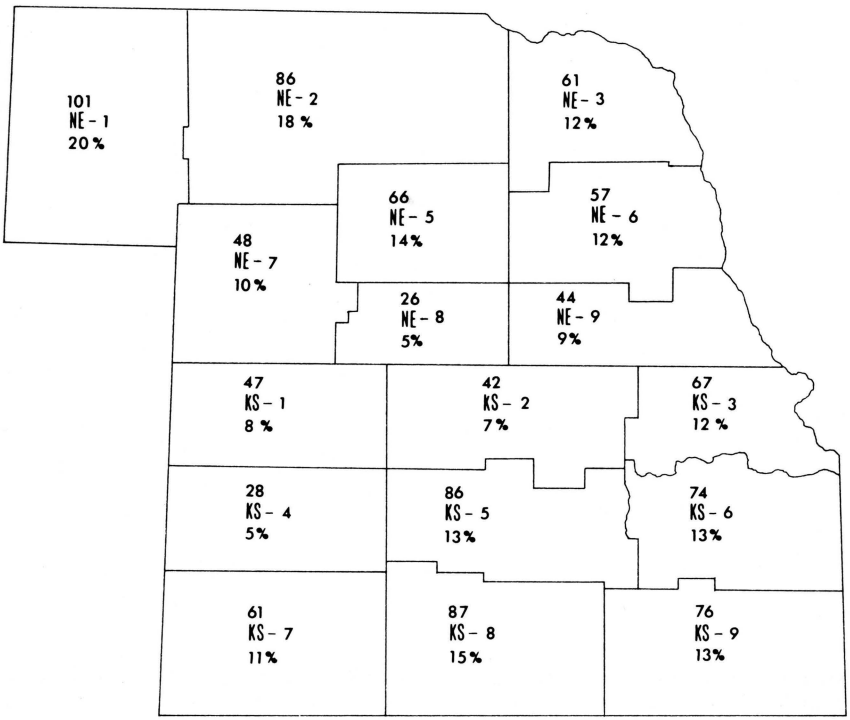

Figure 1. Location of respondents by crop-reporting districts (top item indicates number of respondents; middle item, crop-reporting district; and bottom item, percent of respondents in state).

Information included in the tables of this report is valid only in describing those operations responding to the survey. Because no complete list of feeder cattle growers existed, as the confidentiality of the survey precluded sampling of nonrespondents to determine whether they were different from those who did respond, and because the survey was taken only in 1971, no statement of statistical reliability of the data can be made.

Table 2. Number and percentage of respondents in sample, stratified by size of growing operation (annual number of feeder cattle grown).

Group	Nebraska		Kansas	
	Number	%	Number	%
0- 99 head	100	21	111	20
100-249 head	150	31	188	33
250 head and over	235	48	265	47
Total sample	485	100	564	100

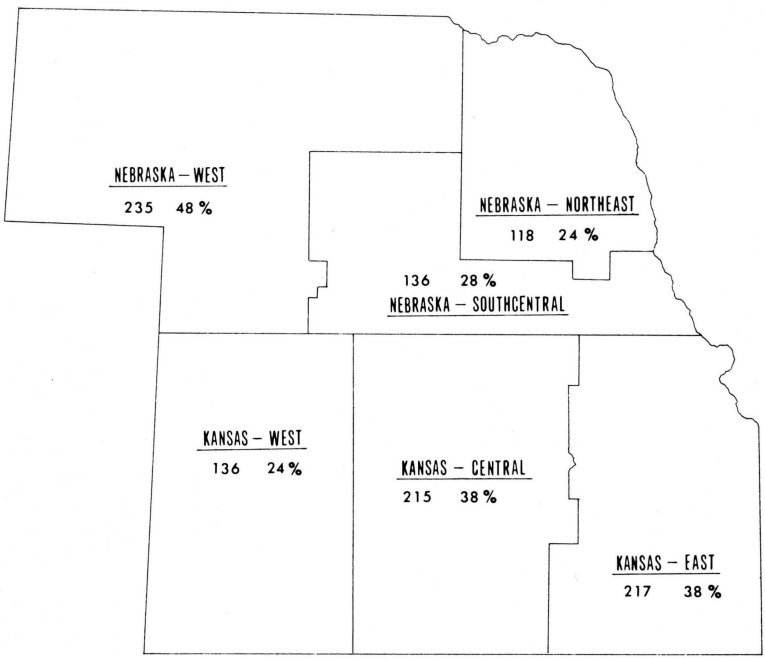

Figure 2. Number and percentages of respondents in sample stratified by geographic location of growing operations (top item, state region; bottom left, number of respondents; bottom right, percent of respondents in state).

DESCRIPTION OF KANSAS-NEBRASKA CATTLE GROWING OPERATION

Class and Sex of Feeder Cattle Handled

Approximately three-fourths of the Kansas-Nebraska growers handled calves; half handled yearlings; some operations included both calves and yearlings (Table 3). Calves were handled by more Nebraska growers; yearlings, by more Kansas growers.

In Nebraska more than half the calves and two-thirds of the

Table 3. Percentage of growers handling calves and yearlings, and sex of those cattle, 1971.[a]

Maturity and sex	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Calves	77	81	80	83	60	77	79	74
Steers	54	50	54	52	59	58	68	62
Heifers	46	50	46	48	41	42	32	38
Yearlings	34	37	56	45	47	37	56	48
Steers	59	65	66	65	65	71	76	73
Heifers	41	35	34	35	35	29	24	27

Maturity and sex	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Calves	77	82	81	83	75	76	71	74
Steers	50	55	55	52	62	61	64	62
Heifers	50	45	45	48	38	39	36	38
Yearlings	48	46	38	45	50	46	49	48
Steers	60	73	69	65	74	75	70	73
Heifers	40	27	31	35	26	25	30	27

[a] Numbers may not add up to 100% because growers may have handled both calves and yearlings.

yearlings handled were steers. But in Kansas nearly two-thirds of the calves and three-fourths of the yearlings were steers, indicating perhaps that the cow-herd operator in Kansas (or in areas that were major origins of feeder calves for Kansas growers) was holding back more heifers for cow-herd expansion. Larger Kansas operators handled fewer heifer calves and yearlings, perhaps because of a desire to specialize in one sex of cattle or because a smaller supply of heifer calves and yearlings was available from cow-calf operators.

Cow Herds

Cow-calf operations were part of a number of feeder cattle growing operations in Kansas and Nebraska (Table 4). More than half the growers in Kansas and Nebraska operated a cow-calf operation as well as a growing operation—especially smaller operations, particularly in Kansas. More growers had cow herds in western Nebraska than in the other two regions of the state. The largest growing operations having cow herds had the largest herds in both Kansas and Nebraska. On the average, the largest cow herds were located in western Nebraska.

Finishing Operations

Approximately 35 percent of Nebraska feeder cattle growers and 43 percent of the Kansas growers finished at least some of the cattle they raised (Table 5). Generally fewer smaller growers finished their feeder animals.

Changes in Growing Operations

Cow-calf operators tended to enter the growing phase of cattle production (Table 6). Slightly less than one-fifth of the growers (both states) were cow-calf operators only before 1967; between that time and 1971 they entered the growing phase also. That was especially true for smaller growers in Kansas. Although only a few growers were in that group, the number may be significant because the change occurred within only five years.

Approximately one-tenth of growers had cow-calf operations before 1967 but none in 1971, indicating that diversification may not have been as strong an incentive to enter the feeder cattle-growing stage of production as was taking advantage of the feedlot demand for heavier cattle.

Over time, growers tended to purchase lightweight feeder animals—a response, one might hypothesize, to the reputed lower-cost gains for cattle at lighter weights. It might also reflect a shortage of heavier-weight replacement cattle. Nearly half the growers in Kansas and

Table 4. Percentage of cattle growers with cow herds and average numbers of cows that calved, 1971.

Item	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
Growers with cow herds, %	62	56	54	56	77	54	48	55
Average number of cows that calved	66	103	346	204	59	86	205	126

	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
Growers with cow herds, %	66	49	44	56	55	54	56	55
Average number of cows that calved	286	105	92	204	157	106	125	126

Table 5. Percentage of cattle growers who finish cattle.

Item	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Growers who finish cattle	30	29	40	35	34	40	48	43

	Geographic location				Geographic location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Growers who finish cattle	17	44	60	35	41	35	52	43

Table 6. Percentage of growers reporting specified growing operation changes during 1967-1971.[a]

Reported change	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Formerly only a cow-calf operator, now background also	20	16	15	16	30	18	15	18
Formerly also a cow-calf operator, now only background	3	12	6	8	18	6	10	10
Change in purchase weight:								
Heavier	12	12	12	12	8	14	14	13
Lighter	11	19	20	17	8	25	31	25
Direction not indicated	12	14	17	15	2	2	3	2

Reported change	Geographic location				Geographic location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Formerly only a cow-calf operator, now background also	18	18	9	16	18	18	18	18
Formerly also a cow-calf operator, now only background	7	10	6	8	12	12	8	10
Change in purchase weight:								
Heavier	12	13	10	12	14	17	8	13
Lighter	12	20	25	17	17	26	29	25
Direction not indicated	11	19	18	15	4	1	2	2

[a] Percentages do not total 100% because negative responses are not reported.

Nebraska have changed the weight at which they purchase feeder cattle. For most sizes of growing operations and for most geographic areas (both states), more growers now buy lighter than buy heavier cattle.

PROCUREMENT OF FEEDER CATTLE

Procurement of Feeder Cattle

Feeder cattle for growing operations were generally obtained from the grower's cow herd or purchased at auctions, through terminal markets, direct from cow-herd operators or other feeder-cattle growers, or on contract from cow-herd operators or other feeder-cattle growers. Percentages of cattle originating from the grower's cow herd and of feeder cattle purchased are given in Table 7.

In Nebraska 60 percent and in Kansas 68 percent of the feeder cattle grown in 1971 were purchased. Only operators who grew fewer than 100 head and operators in western Nebraska raised more of their own feeder calves than they purchased. Larger operations relied more upon purchases than upon their own cow herds to supply the numbers of feeder cattle they needed, which may have been because their cow-calf operations were not large enough to supply the calves for their growing operations; or, as already noted, because large growing operations were less likely to exist in conjunction with cow-herd operations.

In Nebraska about half of the feeder cattle purchased by growers were bought by the grower—half through an order buyer (Table 8). In Kansas nearly two-thirds of the feeder cattle purchases were made through an order buyer. In both states, smaller operators tended to make a greater share of their own purchases than did large operations.

In Kansas, three-fourths of the feeder cattle were purchased at auctions either by the grower or through an order buyer. Almost all of the remaining cattle were purchased directly from a cow-herd operator, either by the grower or through an order buyer. That was also the general pattern for Nebraska operations.

However, larger operations in Nebraska did not obtain as large a percentage of their feeder cattle from auction markets. They and their order buyers purchased more than half the cattle direct from cow-herd operators or other feeder cattle growers, or on contract from cow-herd operators or other feeder cattle growers.

Contracts were used more often by order buyers than by the growers themselves in both states. Approximately 10 percent of the cattle purchased by Nebraska growers who grew more than 250 head of cattle annually were bought on contract through order buyers—only half of the purchases were on contract by the growers themselves.

Table 7. Percentage of feeder cattle grown, by procurement source, 1971.

Source	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
From own herd	53	42	36	40	64	33	18	32
Purchased	47	58	64	60	36	67	82	68

Source	Geographic location				Geographic location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
From own herd	52	29	28	40	30	29	35	32
Purchased	48	71	72	60	70	71	65	68

Table 8. Percentage of feeder cattle, purchased for growing by buying method, 1971.

Buying method	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Did own buying								
At auction	60	52	24	29	46	41	24	26
Direct from cow-herd operator	06	16	11	11	10	04	04	04
On contract from cow-herd operator	00	04	04	04	00	00	01	01
Direct from another feeder cattle grower	00	01	07	06	01	02	01	01
On contract from another feeder cattle grower	00	01	01	01	00	00	00	00
Order buyer buying								
At auction	14	12	20	19	33	39	52	50

Table 8. Percentage of feeder cattle, purchased for growing by buying method, 1971 (continued).

At terminal	00	01	04	03	05	05	04	04
Direct from cow-herd operator	18	11	12	12	03	05	08	08
On contract from cow-herd operator	00	02	09	08	01	01	03	03
Direct from another feeder cattle grower	00	00	04	03	01	01	02	02
On contract from another feeder cattle grower	02	00	02	02	00	00	00	00
Other	00	00	02	02	00	02	01	01

Buying method	Nebraska				Kansas			
	Geographic location				Geographic location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Did own buying								
At auction	29	27	35	29	19	33	29	26
Direct from cow-herd operator	13	11	06	11	02	03	07	04
On contract from cow-herd operator	05	02	01	04	00	01	02	01
Direct from another feeder cattle grower	10	02	04	06	01	01	02	01
On contract from another feeder cattle grower	00	02	00	01	00	00	01	00
Order buyer buying								
At auction	16	25	16	19	60	42	46	50
At terminal	04	04	01	03	03	05	05	04
Direct from cow-herd operator	07	15	21	12	10	07	05	08
On contract from cow-herd operator	12	03	05	08	03	03	02	03
Direct from another feeder cattle grower	00	05	09	03	01	03	01	02
On contract from another feeder cattle grower	00	04	02	02	00	00	00	00
Other	04	00	00	02	01	02	00	01

Grade of Feeder Cattle Purchased

Feeder cattle purchased by Nebraska growers generally were of a higher grade than those purchased by Kansas growers (Table 9).

Growers were asked to indicate whether or not they purchased feeder cattle of a particular grade. More than one grade of feeder cattle purchased could be indicated. In Nebraska 72 percent and in Kansas 59 percent of the growers purchased some feeder cattle that graded U.S. Choice. However, in Kansas 67 percent and in Nebraska 46 percent of the growers purchased some feeder cattle that graded U.S. Good. For every size and geographical category in Nebraska, more growers indicated that they purchased more Choice than Good feeder cattle. In Kansas generally more growers indicated Good than Choice. In both states, larger operators tended to indicate Choice more often.

Origin of Feeder Cattle Purchased

The origin of feeder cattle purchased was different for Kansas than for Nebraska (Table 10). Nebraska growers relied heavily on Nebraska and Kansas sources for their operations, but other major sources were North and South Dakota, Colorado, and Oklahoma. Kansas growers also relied predominantly on Kansas sources for calves; they purchased almost no calves from Nebraska but did buy calves born in Oklahoma and in southwest and southeast United States. In both states more than one-fifth of those who purchased feeder cattle also raised some of their own calves. Very few feeder cattle were shipped into either state from Canada or Mexico. Large operators tended to procure feeder cattle from more distant locations than did small operators.

Type of Feeder Cattle Purchased

Both straightbred and crossbred cattle were grown extensively by Kansas and Nebraska growers (Table 11). The large number of dual responses to the question on types or type of cattle purchased indicates that growing operations often handled more than one type, generally straightbred and crossbreds. A slightly larger percentage of growers in Kansas checked crossbreds than straightbreds; Nebraska growers checked equal percentages. Approximately one-tenth of growers in both states checked dairy cattle. Okies[1] were more commonly handled by Kansas operations than Nebraska operations, particularly by large operations.

[1]In this study crossbreds were listed separately from "Okie" cattle. As used here crossbreds were strictly crosses of beef breeds (i.e., did not include crosses containing dairy blood). There is no universally accepted definition of Okie cattle, although typically they are cattle of mixed breeding including English breeds, Brahma, and often dairy breeds.

Table 9. Percentage of growers purchasing feeder cattle, by grade, 1971.[a]

Grade	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
U.S. Choice	56	66	82	72	36	59	63	59
U.S. Good	52	49	41	46	64	58	72	67
Standard & commercial	06	07	04	05	10	08	14	12

Grade	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
U.S. Choice	70	72	75	72	53	55	67	59
U.S. Good	42	52	45	46	70	68	63	67
Standard & commercial	06	05	04	05	13	13	09	12

[a] Percentages do not add up to 100% because one operator may have handled more than one grade of feeder cattle.

Table 10. Percentage of growers purchasing feeder cattle by state, region, or county of origin.[a]

Origin	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Raised own calves	20	22	24	22	28	20	22	22
U.S.A.:								
Nebraska	91	83	58	72	02	01	04	03
Kansas	67	71	60	65	58	68	53	58
Colorado	06	09	18	13	09	05	08	07
Wyoming	06	05	05	05	00	02	04	03
Dakotas	12	15	26	20	02	01	00	01
Oklahoma	06	12	15	13	16	20	24	22
Missouri	04	04	06	05	12	07	11	10
Southwest	02	01	05	04	02	09	23	15
Southeast	02	00	04	03	12	12	22	17
Total U.S.A.	92	96	95	95	93	98	98	98
Mexico	00	00	01	01	00	02	04	03
Canada	00	01	01	01	00	01	00	01

Origin	Nebraska				Kansas			
	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Raised own calves	30	23	11	22	21	22	24	22
U.S.A.:								
Nebraska	80	73	58	72	04	02	03	03
Kansas	64	73	56	65	43	64	63	58
Colorado	02	25	16	13	16	05	03	07
Wyoming	05	06	06	05	03	04	01	03
Dakotas	35	06	15	20	00	01	01	01
Oklahoma	09	05	28	13	20	25	21	22
Missouri	02	05	10	05	06	07	16	10
Southwest	02	02	08	04	25	10	15	15
Southeast	02	04	02	03	23	15	15	17
Total U.S.A.	94	93	98	95	100	96	98	98
Mexico	02	00	00	01	03	02	03	03
Canada	01	00	01	01	01	00	01	01

[a] Percentages may not total 100% because an operator may have acquired feeder cattle from more than one origin.

Table 11. Percentage of growers who purchase feeder cattle, by type of cattle.[a]

Type of cattle	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Straightbred	69	73	85	79	64	64	61	63
Crossbred	67	74	85	79	58	77	78	76
Dairy	11	11	10	10	07	13	13	12
Okies	02	03	07	05	13	15	40	29

Type of cattle	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Straightbred	79	78	78	79	53	65	66	63
Crossbred	76	79	81	79	73	77	76	76
Dairy	08	17	07	13	06	16	16	12
Okies	03	05	07	05	38	26	26	29

[a] Percentages may not total 100% because an operator may have purchased more than one type of cattle.

Average Weight of Feeder Cattle Purchased

The average weight of feeder cattle purchased was quite similar for growing operations responding in Kansas and Nebraska (Table 12). In Nebraska steers purchased by the average growing operation weighed 461 pounds; in Kansas, 452 pounds. Heifers purchased by the average Nebraska grower weighed 421 pounds; by the average Kansas grower, 420 pounds. Growers in Nebraska who grew fewer than 100 head annually purchased relatively heavier cattle.

When Feeder Cattle Are Purchased

Nearly three-fourths of the Kansas and Nebraska feeder cattle operators purchased cattle in the fall; nearly one-fifth, in the winter and in the spring; and approximately one-fifth, continuously. Larger operations, particularly in Kansas, purchased cattle continuously during the year, more often than did smaller operations (Table 13).

Operator Transportation of Cattle Purchased

In Nebraska 37 percent of the growers and in Kansas approximately half of the growers transported feeder cattle in their own truck (Table 14). On the average, in both states, 80 percent used a straight-bed truck, 15 percent used a pickup, and 5 percent used a semi-trailer. Small operations were slightly more likely to use a pickup; and large operations, a semi-trailer. That was not unexpected, considering the number of cattle transported and distance transported by small and larger operations, respectively.

Shrink in Feeder Cattle Purchased

Growers in Nebraska reported a lower average shrink in feeder cattle purchased than did growers in Kansas (Table 15). In Nebraska the average shrink reported for feeder cattle purchased was 3.8 percent, compared with 4.5 percent reported in Kansas. Large operations reported greater shrink than did smaller operations, probably because the larger operations shipped feeder cattle longer distances (as indicated by their sources of feeder cattle). Average shrink in feeder cattle purchased by growers in western and south-central Nebraska was lower than in the other areas of Nebraska and Kansas.

Pencil-Shrink on Feeder Cattle Purchased

Pencil-shrink, a percentage negotiated by the buyer and seller, is used to adjust sales weight of cattle before shipping. Adjusted weight is used in lieu of the actual weight as basis for payment.

Table 12. Average weight of feeder cattle purchased by Kansas and Nebraska cattle growers, 1971.

Sex	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	pounds				pounds			
Steers	494	449	460	461	460	448	452	452
Heifers	447	408	418	421	425	416	422	420

Sex	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	pounds				pounds			
Steers	431	477	483	461	431	456	463	452
Heifers	390	422	448	421	417	430	411	420

Table 13. Percentage of growers who purchased feeder cattle, by season of the year.[a]

Season	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Fall	53	77	69	70	76	86	64	73
Winter	20	21	27	24	29	20	23	22
Spring	26	25	18	22	14	16	21	18
Summer	06	03	07	06	05	10	05	07
Continuously	16	11	23	18	05	10	32	22

Season	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Fall	82	58	62	70	62	76	77	73
Winter	27	28	17	24	22	24	21	22
Spring	21	20	24	22	17	23	15	18
Summer	02	06	10	06	05	06	10	07
Continuously	05	26	27	18	33	19	16	22

[a] Percentages may not total 100% because an operator may have purchased feeder cattle during more than one time of the year.

Table 14. Percentage of growers who transported own cattle purchased and type of truck used.

Item	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Growers who transported feeder cattle purchased	42	45	30	37	68	51	44	49
Growers transporting purchased cattle by type of truck used:								
Pick-up	20	20	06	14	22	09	12	14
Semi-trailer	00	02	08	04	00	09	06	06
Straightbed	80	78	86	82	78	82	82	80

Item	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Growers who transported feeder cattle purchased	37	39	32	37	41	46	57	49
Growers transporting purchased cattle by type of truck used:								
Pick-up	14	18	10	14	17	06	16	14
Semi-trailer	03	05	07	04	07	07	06	06
Straightbed	83	77	83	82	76	87	78	80

Table 15. Average shrink of feeder cattle purchased by percentage of feeder cattle growers purchasing cattle (with pencil-shrink and average reported pencil-shrink), 1971.

Item	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Average shrink	3.1	3.5	4.1	3.8	3.9	4.0	4.8	4.5
Growers who purchased feeder cattle purchasing with a pencil-shrink	8.0	9.0	25.0	17.0	9.0	8.0	25.0	18.0
Average percent pencil-shrink	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7

Item	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Average shrink	3.4	3.7	4.2	3.8	4.8	4.4	4.2	4.5
Growers who purchased feeder cattle purchasing with a pencil-shrink	9.0	18.0	27.0	17.0	16.0	19.0	18.0	18.0
Average percent pencil-shrink	2.8	2.5	2.7	2.7	2.4	2.8	2.7	2.7

Slightly less than one-fifth of the growers in either Kansas or Nebraska had purchased feeder cattle with a pencil-shrink (Table 15). Less than 10 percent of the growers who grew fewer than 100 head annually had purchased feeder cattle with a pencil-shrink; however, one-fourth of the largest operations in both states had purchased with a pencil-shrink. The average pencil-shrink reported, 2.7 percent in both states, was considerably lower than the amount of actual shrink reported by all categories of growers.

Financing Feeder Cattle Purchases

Credit availability had no influence on the operations of two-thirds of the feeder cattle growers (Table 16). It is assumed that for these growers credit was easily available or no credit was needed. Approximately one-fourth of the growers reported that credit availability influenced the number and/or type of cattle purchased by the remaining growers.

Ninety-one percent of Kansas and 87 percent of Nebraska growers depended on a loan for at least part of the financing of feeder cattle purchases (Table 17). The average operator (both states) financed approximately 75 percent of his purchases. Few operations were run on an all-cash basis, but small operations were much more likely to be run on an all-cash basis than were larger operations, and a larger percentage of Nebraska than Kansas operations were run on an all-cash basis. (The grower who raised all his own calves might also be considered to operate on an all-cash basis, but is not included here).

The small, local bank, the most important source of loans for all growers, was especially important in Kansas, where nearly three-fourths of the growers obtained financing from that source (Table 18). The Production Credit Association and large city banks were slightly more important to growers in Nebraska than in Kansas as sources of loans. Large operations, particularly in Kansas, often looked to sources other than the small, local banks for funds to finance their operations.

The term of the typical loan ranged from just over 5 months for the average small operation in Kansas to just over 8 months for the average small and medium-sized operation in Nebraska (Table 19). The term was longer in western Nebraska than in other geographical areas of either state, perhaps because of the high percentage of growing operations in conjunction with cow-herd operations there.

The interest rate of a typical loan was 7.5 percent in Nebraska and 7.6 percent in Kansas (Table 19). Average interest rate reported by Kansas operations (all sizes) was slightly higher than that reported by Nebraska operations of corresponding size. The average small operation paid slightly higher interest rates than did the average

Table 16. Percentage of cattle growers purchasing feeder cattle as related to the influence of credit availability.

Influence of credit availability	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
No influence	74	60	64	65	84	63	61	66
Influences number purchased	20	30	24	25	13	20	27	23
Influences type of cattle purchased	03	05	05	04	00	06	05	05
Influences both type and number of cattle purchased	03	05	07	06	03	06	07	07

Influence of credit availability	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
No influence	68	69	56	65	63	63	70	66
Influences number purchased	22	21	36	25	26	24	20	23
Influences type of cattle purchased	05	05	01	04	03	05	06	05
Influences both type and number of cattle purchased	05	07	07	06	08	08	04	07

Table 17. Percentage of growers who purchased feeder cattle, by method and extent of financing.

Item	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Method of financing:								
All cash	26	14	09	13	18	11	05	09
All loan	50	60	51	54	41	56	48	50
Partial loan	24	26	40	33	41	33	47	41
Extent of financing:								
Average % partial loan	65	60	61	61	56	59	62	61
Average % loan	66	76	75	74	64	75	77	75

Item	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Method of financing:								
All cash	12	16	11	13	05	07	13	09
All loan	51	51	60	54	46	59	43	50
Partial loan	37	33	29	33	49	34	44	41
Extent of financing:								
Average % partial loan	61	60	63	61	65	64	54	61
Average % loan	74	71	78	74	78	81	67	75

Table 18. Sources of credit for feeder cattle purchased by number of cattle backgrounded, Nebraska and Kansas, 1971.

Source of loans	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Production Credit Association	22	16	17	18	8	8	14	12
Local bank	65	68	65	67	89	86	62	73
Large city bank	10	13	15	14	3	5	20	13
Individual	3	2	3	3	0	1	3	2
Other	0	0	0	0	0	0	1	0

Source of loans	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Production Credit Association	20	18	11	18	16	12	8	12
Local bank	64	61	74	67	61	73	80	73
Large city bank	13	17	11	14	18	12	10	13
Individual	2	4	4	3	2	1	0	0
Other	1	0	0	0	2	1	0	0

Table 19. Conditions of financing feeder cattle purchase loans.

Item	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
Average term of loan (number of months)	8.1	8.1	7.7	7.9	5.3	6.5	6.9	6.6
Typical interest rate (percent)	7.6	7.5	7.5	7.5	7.7	7.6	7.6	7.6
Security needed other than mortgage (percent of growers who secure loans)	21	26	20	21	08	16	25	20
No other security (percent of growers who secure loans)	79	74	80	79	92	84	75	80

Item	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
Average term of loan (number of months)	9.1	6.8	7.4	7.9	7.5	6.6	5.9	6.6
Typical interest rate (percent)	7.4	7.5	7.6	7.5	7.6	7.7	7.6	7.6
Security needed other than mortgage (percent of growers who secure loans)	23	17	21	21	18	26	14	20
No other security (percent of growers who secure loans)	77	83	79	79	82	74	86	80

large operations. Of all geographical areas in both states, western Nebraska had the lowest interest rate, perhaps because of the longer term of the loan.

Only one-fifth of the growers in either state needed security other than a cattle mortgage to secure a loan (Table 19). Other securities needed most often by those operators included feed and equipment, crop insurance, or all property.

SALE OF FEEDER CATTLE

Sale of Feeder Cattle

Fall was the most important season for selling feeder cattle for Nebraska growers; spring, for Kansas growers (Table 20). In Nebraska 59 percent of the growers sold feeder cattle in the fall; 30 percent, in the spring. In Kansas 48 percent of the growers sold feeder cattle in the spring; 41 percent, in the fall. Winter and summer selling was considerably less important, but in the sample, large operations (particularly in Kansas) were likely to sell feeder cattle continuously.

How Feeder Cattle Are Sold

Most feeder cattle were sold through auctions by Nebraska and Kansas feeder cattle growers (Table 21). Trends in feeder cattle sales were similar to trends in feeder cattle purchases. Operations of different sizes sold feeder cattle in different ways, though auctions were the single most important market. In western Nebraska, feeder cattle sale practices differed from those in the rest of the state.

In Nebraska, 52 percent and in Kansas 39 percent of the feeder cattle grown were sold through auctions. Auction selling was particularly important to small operations. For larger operations in both states direct selling to feedlots and order buyers was also important. More cattle were sold by forward contract in Kansas than in Eastern and Central Nebraska. As in purchasing feeder cattle, most of these contracts were with order buyers.

Average Weight of Feeder Cattle Sold

Average weight of feeder cattle sold by Kansas and Nebraska feeder cattle growers differed considerably (Table 22). The average weight of steers and heifers sold was higher for Kansas operations than for Nebraska operations of corresponding size and for every Kansas geographical region compared with every Nebraska geographical region.

The average weight of steers and heifers sold by the average Nebraska grower was 693 and 629 pounds, respectively; by the Kansas

Table 20. Percentage of growers selling feeder cattle, by season of year.[a]

Season	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Fall	53	55	64	59	37	47	38	41
Winter	25	18	11	16	17	09	18	15
Spring	30	37	26	30	52	58	38	48
Summer	11	06	10	09	11	12	19	15
Continuously	04	05	13	09	04	06	25	13

Season	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Fall	69	50	33	59	31	40	50	41
Winter	11	26	23	16	18	17	10	15
Spring	26	31	43	30	42	56	43	48
Summer	08	06	13	09	14	12	19	15
Continuously	05	15	12	09	25	14	08	13

[a] Percentages may not total 100% because an operator may have sold feeder cattle during more than one time of the year.

Table 21. Percent of all feeder cattle sold, by method, 1971.

Season	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
At auction	83	78	47	52	77	69	33	39
At terminal	02	02	03	03	12	08	02	03
Direct sale to feedlot	02	07	24	21	03	07	17	16
Direct sale to another grower	03	04	02	02	01	01	06	05
Direct sale to order buyer	05	07	13	12	04	09	19	17
Total direct sale	10	18	39	35	08	17	42	38
Contract sale to feedlot	02	00	06	05	01	00	06	05
Contract sale to another grower	02	00	01	01	00	00	01	01
Contract sale to order buyer	01	02	04	04	02	05	15	13
Total contract sale	05	02	11	10	03	06	23	20
Other	00	00	00	00	00	01	01	01

Method	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
At auction	43	77	68	52	36	42	36	39
At terminal	03	00	11	03	00	03	08	03
Direct sale to feedlot	25	13	08	21	12	22	13	16
Direct sale to another grower	02	02	02	02	09	03	02	05
Direct sale to order buyer	14	05	11	12	21	15	16	17

Table 21. Percent of all feeder cattle sold, by method, 1971. (continued)

Method	Nebraska Geographical Location W	SC	NE	Total	Kansas Geographical Location W	C	E	Total
Total direct sale	41	20	21	35	42	40	31	38
Contract sale to feedlot	06	01	00	05	08	02	05	05
Contract sale to another grower	01	00	00	01	00	03	00	01
Contract sale to order buyer	05	02	00	04	13	10	18	13
Total contract sale	13	03	00	10	22	15	25	20
Other	01	00	00	00	01	00	02	01

Table 22. Average weight of feeder cattle sold by Kansas and Nebraska growers, 1971.

Sex	Nebraska Number of cattle grown 0-99	100-249	250+	Total	Kansas Number of cattle grown 0-99	100-249	250+	Total
	pounds				pounds			
Steers	640	693	714	693	700	754	766	750
Heifers	586	632	644	629	613	652	694	661

Sex	Geographical location W	SC	NE	Total	Geographical location W	C	E	Total
	pounds				pounds			
Steers	701	691	663	693	728	743	772	750
Heifers	644	612	589	629	650	660	670	661

grower, 750 and 661 pounds, respectively. That the average Kansas grower, who bought at slightly lower weights, sold at higher weights is particularly significant. The average Kansas grower added more than 25 percent more pounds to feeder steers and nearly 15 percent more pounds to feeder heifers than did the average Nebraska grower.

Shrink in Feeder Cattle Sold

Nebraska growers reported a lower average shrink (2.9 percent) in feeder cattle sold than did growers in Kansas (3.1 percent) (Table 23). Generally, as with shrink in feeder cattle purchased, large operations reported slightly greater shrink in feeder cattle sold than did small operations. Larger operations sold more often at places other than the local auction, meaning greater shipping distances.

These geographic regions reported the greatest shrink: western Nebraska, central Kansas, and eastern Kansas.

Pencil-Shrink on Feeder Cattle Sold

Twenty-eight percent of Kansas and 12 percent of Nebraska growers sold cattle with a pencil-shrink (Table 23). That marketing practice, more common among large than small feeders, was prevalent in the western regions of both states but particularly of Nebraska.

The average pencil-shrink in Nebraska (2.7 percent) was higher than that in Kansas (2.6 percent). The average pencil-shrink percentage was lower than or equal to the average shrink as reported by all grower categories. The greatest difference between actual shrink and average pencil-shrink was in Kansas, which may have been why selling with a pencil-shrink was more common in Kansas than in Nebraska.

VERTICAL COORDINATION

Overview

Vertical coordination differs from vertical integration in that it includes, in addition to control of two or more stages of production (vertical integration), cooperation (formal or informal) between independent stages of production.

Contracting ahead for purchase or sale of feeder cattle would be a form of formal coordination; so would a cattle feeding or growing service (custom feeding). Informal practices of coordination—generally production practices for which the grower might not be adequately paid in the normal marketing channels—include checking performance criteria on feeder-cattle quality and pre-conditionng.

The "good reputaton" of a grower for producing quality feeder cattle (in terms of generally unquantified feedlot performance) generally indicates that the buyers have recognized that the grower

Table 23. Shrink in feeder cattle sold and percentage of growers selling with a pencil-shrink and average percentage pencil-shrink.

Item	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Average shrink reported	2.8	2.9	3.0	2.9	3.1	3.0	3.1	3.1
Growers selling with a pencil-shrink	6.0	17.0	19.0	12.0	9.0	19.0	40.0	28.0
Average pencil-shrink	2.8	2.6	2.7	2.7	2.4	2.6	2.6	2.6

Item	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Average shrink reported	3.1	2.7	2.7	2.9	2.8	3.2	3.2	3.1
Growers selling with a pencil-shrink	19.0	7.0	6.0	12.0	35.0	26.0	24.0	28.0
Average pencil-shrink	2.8	2.2	2.3	2.7	2.6	2.7	2.4	2.6

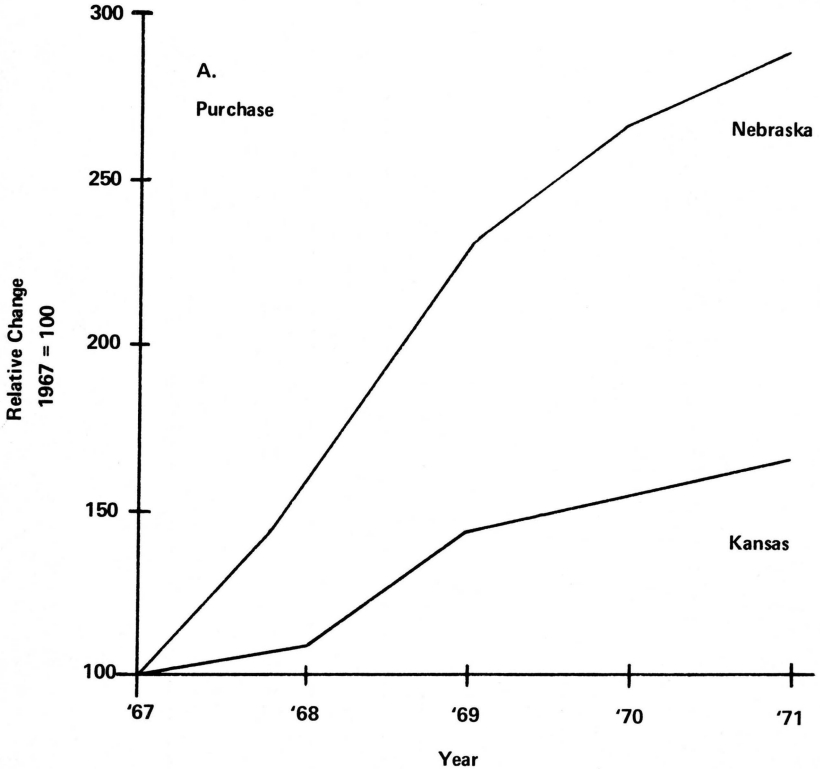

Figure 3. Relative change in extent of contracting by growers for purchase of feeder cattle, 1967 to 1971.

practices "informal coordination." Accordingly, those growers generally receive high prices for their cattle.

When quantified performance data of the cattle are used as criteria to determine price, for both purchase and sale of feeder cattle by growers, the cow-calf operator or grower should share in the rewards of the informal coordination practices (if the cattle do perform better than they would otherwise). If the grower is not compensated for informal coordination practices, he is not likely to continue them.

Growing Operations in Conjunction with Cow-Herd or Feedlot Operations

More than half the growers sampled in both states managed a cow-calf operation as well as a growing operation; more than one-third of the growers (both states) managed a feedlot operation.

Contracting for Purchase or Sale of Feeder Cattle

Forward contracting for purchase or sale of feeder cattle was not

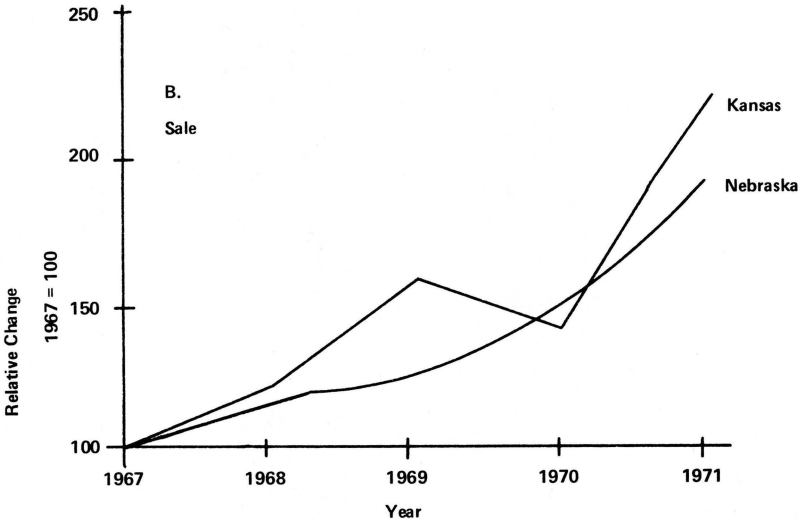

Figure 4. Relative change in extent of contracting by growers for sale of feeder cattle, 1967 to 1971.

a common practice among Kansas or Nebraska growers. For example, only 10 percent of the cattle purchased by growers in Nebraska in 1971 were contracted—only half of those by the grower himself and the remainder by order buyers. Contracting for sale of feeder cattle to feedlots was important, perhaps because of feedlot operators' interest in establishing their sources of feeder cattle well in advance. Nevertheless, contracting for purchase and sale of feeder cattle by Kansas and Nebraska growers increased between 1967 and 1971 (Figures 3 and 4).

Feeder cattle purchased on forward contract in 1971 by Nebraska growers was nearly three times the number purchased in 1967; increase for Kansas growers was more than 50 percent. The number of growers contracting for the sale of feeder cattle grew slightly more rapidly in Kansas than in Nebraska during that time. In total, about twice as many growers contracted for the sale of feeder cattle in 1971 as in 1967.

Custom Growing

Custom growing in Kansas and Nebraska was not a common practice (Table 24). Only 11 percent of Nebraska and 17 percent of Kansas growers did any custom feeding for either cow-herd or feedlot operators. Custom growing was more important in Kansas than in Nebraska, primarily for feedlot operators. Nearly twice as many Kansas growers did custom growing for feedlot operators as did custom growing for cow-herd operators.

Table 24. Percentage of feeder cattle growers engaged in custom feeding.

Custom feeding	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
For cow-herd operators	08	06	02	04	11	06	03	05
For feedlot operators	05	02	06	05	10	07	12	10
For either cow-herd or feedlot operators	02	01	02	02	00	02	02	02
None	85	91	90	89	79	85	83	83

Custom feeding	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
For cow-herd operators	05	02	05	04	04	03	09	05
For feedlot operators	05	04	05	05	12	10	08	10
For either cow-herd or feedlot operators	02	01	02	02	01	02	01	02
None	88	93	88	89	83	85	82	83

Performance Criteria Used for Cattle

Many Kansas and Nebraska feeder cattle growers evaluated the performance of the cattle according to several criteria; gain per day, feed-conversion efficiency, carcass quality grade, dressing percentage, and carcass-yield grade. Some indicate production costs; others are criteria that may effect the selling price of the cattle, particularly when sold direct or on contract.

Weight gain per day was the performance criterion checked most often by Kansas and Nebraska feeder-cattle growers (Table 25). In general, growers in both states tended to use each of the several preformance criteria to the same degree, but operations of different sizes differed widely in use of performance-criteria checks; there was little trend according to geographic divisions.

More than half of the growers in Nebraska and Kansas checked weight gain per day. The third who felt that dressing percentage was an important performance criterion perhaps also managed feedlots. Nebraska and Kansas growers varied widely in the use of feed-conversion efficiency. Kansas growers used this performance check more than did Nebraska growers. Nearly twice as many large as small operators used any particular performance criterion (both states). Each of the performance checks was used more often in northeast Nebraska than in any of the other geographic regions.

Performance as a Price Criterion

One way for the cow-calf operator or feeder-cattle grower to be paid for good production and management practices (those beneficial to the next production stage) is to use cattle performance as a criterion for determining premiums and/or discounts to the sale price. That practice, however, was seldom used by Nebraska and Kansas growers. Less than 2 percent of the growers (both states) purchased or sold feeder cattle when using cattle performance as a criterion for determining cattle settlement price. The large operations (both states) and those in northeastern Nebraska used performance as a price criterion most often.

SUMMARY AND INTERPRETATION

Feeder cattle growers sampled in Kansas and Nebraska had similar marketing practices. There were some differences.

Feeder calves tended to move into Nebraska growing operations from Kansas and from states to the north and west. Kansas growers obtained cattle from south and southeast of Kansas. Kansas growing operations had fewer heifers than did those in Nebraska, perhaps because of increased cow herds in the southern states (a source of

Table 25. Percentage of all growers by use of performance criteria.[a]

Performance criterion	Nebraska				Kansas			
	Number of cattle grown				Number of cattle grown			
	0-99	100-249	250+	Total	0-99	100-249	250+	Total
	%				%			
Gain per day	30	50	57	51	30	42	63	52
Feed conversion efficiency	02	13	23	17	13	19	39	29
Carcass quality grade	15	24	34	28	21	15	34	26
Dressing percent	19	25	42	33	19	25	36	31
Carcass yield grade	06	17	26	21	11	10	20	16

Performance criterion	Geographical location				Geographical location			
	W	SC	NE	Total	W	C	E	Total
	%				%			
Gain per day	44	48	65	51	58	58	41	52
Feed conversion efficiency	15	18	20	17	38	27	26	29
Carcass quality grade	18	32	38	28	22	25	30	26
Dressing percent	20	36	49	33	25	29	36	31
Carcass yield grade	13	22	30	21	14	15	17	16

[a] Percentages may not total 100% because an operator may have used more than one performance criterion.

feeder calves for Kansas growers), where heifers were being held back for replacements.

Kansas growers tended to obtain feeder calves from longer distances than did Nebraska growers, which perhaps explains why order buyers were used more extensively in Kansas than in Nebraska. Order buyers were able to buy cattle at auctions, directly and on contract from many locations over a wide area.

Nebraska growers of feeder cattle handled a slightly higher grade of feeder cattle than did Kansas growers. That supports the belief that feeder calves originating in the Northern Plains are generally of a higher grade than are those from the Southern Plains.

Kansas and Nebraska growers handled mainly straightbred and crossbred cattle (crossbreds were more common in Kansas). Most feeder calves were purchased in the fall in both states, but many calves were also purchased in the winter and spring.

Actual shrink in feeder cattle purchased was "cost" or loss to growers; it was generally higher for the average Kansas grower than for the average Nebraska grower, possibly because of the greater distances cattle were shipped.

In buying or selling cattle direct, pencil-shrink (a before-the-fact estimate of actual shrink) is sometimes used to determine a weight on which to apply the price. Pencil-shrink had not been used extensively by growers in either state, probably because they believed pencil-shrink was greater than actual shrink (and pencil-shrink higher than the actual shrink benefits the buyer). That would explain why a grower does not use pencil-shrink when he is the seller but does when he is the buyer.

However, the actual shrink reported by Kansas and Nebraska growers was higher than the pencil-shrink both for selling and purchasing feeder cattle. Evidently the growers were misinformed on the relation between the average actual shrink experienced over time and the pencil-shrink terms available or the low pencil-shrinks reported were not always available.

The responding Kansas and Nebraska growers appeared to have good relationships with their local bankers; at least most, particularly the smaller operators, had no trouble obtaining needed financing. Most growing operations (all sizes) were heavily financed by loans, which generally, were for the length of time the grower owned the cattle; that time was longer in Nebraska than in Kansas. The interest rate was slightly higher in Kansas, but few growers in either state needed to post security other than a cattle mortgage to obtain a loan.

Feeder cattle purchased by the average Nebraska grower were slightly heavier than those purchased by the average Kansas grower. Feeder cattle sold by the average Nebraska grower weighed slightly less than those sold by the average Kansas grower. Nebraska growers

handled feeder cattle for a longer time, in that they sold feeder cattle in the fall (whereas most Kansas growers did so in the spring). The term of financing loans also pointed to a longer cattle-handling time by Nebraska growers.

For whatever reason (weather, better-quality roughage, winter wheat pasture, management) and in whatever time period, the average Kansas grower sold heavier cattle to feedlots than did the Nebraska grower. That should have lowered the average fixed cost for Kansas feedlots (compared with Nebraska feedlots buying Nebraska feeder cattle) because that would have allowed them to "turn over" a group of feeder cattle. Perhaps the yearlings handled by Kansas growers gained more rapidly than did less mature cattle handled by Nebraska growers.

Performance criteria used indicated some differences in the management practices of Nebraska and Kansas growers, differences that were accentuated for large operations which handled a large percentage of the total number of cattle. More Kansas growers were concerned with weight-gain-per-day and feed-conversion efficiency; more Nebraska growers with carcass quality grade, dressing percent, and carcass yield grade (also more Nebraska growers had feedlots). Management practices may explain why Kansas feeder cattle were heavier, but of a lower grade.

The market institutions used by Kansas and Nebraska feeder-cattle growers for selling feeder cattle were similar to those used for procuring feeder cattle. The auction was the most important; direct selling to feedlots and order buying were also important. In Kansas, order buyers were particularly important for selling feeder cattle, as well as for procuring cattle. Also, many feeder cattle were sold to order buyers by growers in western Nebraska.

The growing phase was relatively new as an independent stage of cattle production. Therefore, it was not surprising to find that many growing operations in Kansas and Nebraska existed in conjunction with a cow-herd or a feedlot operation. Small growing operations most commonly existed in conjunction with a cow-herd operation, large growing operations with a feedlot operation, perhaps because of the total cattle feeding-farming or ranching operation that make cow-herd-grower integration most economical for the small growers and grower-feedlot integration most advantageous to the large growers.

Many cow-herd and feedlot operators tended to enter the growing stage of production, sometimes excluding their former operations. A considerable percentage of growers had added the growing operation to their cow-herd operation between 1967 and 1971; in addition, during that time many growers had dropped the cow-herd operation. However, other operators, not sampled because they were not at the

time engaged in growing calves, may have dropped cow-herd operations within that period.

The structure of the feeding industry appears to encourage and discourage forward contract purchase and sale of feeder cattle. The large numbers of feeder cattle regularly needed may encourage feedlots to contract ahead. However, often the feeder cattle grower does not want to be tied to a contract made as far in advance as the feedlot would like. Because of such uncertainties as weather and its effect on his operation, the feeder cattle grower wants to remain flexible in his program and wants flexible delivery.

Few in either state contracted to purchase or sell feeder cattle, though the number increased between 1967 and 1971. Order buyers did most of the contracting. Little custom feeding (growing) was done by growers in either state. Finally, almost no growers had bought or sold feeder cattle under the conditions that the price would be based in part on cattle performance.

It may be economically advantageous for producers to form some sort of vertical coordination (cooperation) in all three stages of cattle feeding to assure a continued supply, lower death losses, better performence (by pre-conditioning and other production-management practices), and better pricing. Nevertheless, by 1971 Nebraska and Kansas growers had not yet coordinated their efforts meaningfully.

AREAS FOR FURTHER RESEARCH

Analyzing results of this study points up several phenomena that may merit further study. They include unexplained marketing practices in both Kansas and Nebraska and unexpected and unexplained differences between the marketing practices of growers in the two states.

An average pencil-shrink that was lower than the actual shrink reported for buying and selling feeder cattle was unexpected. That situation, which would be advantageous for the seller, explains why few growers purchased feeder cattle on the pencil-shrink basis, but does not explain why so few growers sold on that basis. Further research might alleviate such a condition.

The results indicate that Kansas growers raise feeder calves for a shorter time period than do Nebraska growers and that Kansas growers add more weight to the calves (both steers and heifers). Another paradox exists, however. More yearlings are handled by Kansas than by Nebraska growers, yet the average weight of feeder cattle purchased does not reflect that fact, because the average weight of feeder cattle purchased in Kansas is nearly the same as that in Nebraska. Research on number of days that the average lot of feeder calves were handled by Kansas and Nebraska growers, along with

starting and finishing average weight, would interest many in the cattle business.

Growing is an important stage of cattle production in Nebraska and Kansas. Replies of respondents in our total feeder-cattle marketing study (of which this is a part) indicate that nearly 50 percent of the cattlemen in both states are feeder cattle growers. Results of this study indicate a trend by cow-calf operators to enter the growing stage of production, some of them then dropping the cow-calf operation. However, the number of growers who have entered the cow-calf operation is not known. No similar data are available on the relationship between the growing and finishing stages of production. Research on trends of cattlemen to enter the growing stage of production would help us predict the Kansas-Nebraska cattle industry of the future.

More research on the out-of-pocket purchasing and selling costs incurred by some Kansas and Nebraska feeder cattle growers would be useful. Factors affecting cost differences are now uncertain.

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