

# The Texas-Oklahoma Cattle Feeding Industry

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*Structure  
and  
Operational  
Characteristics*

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## Summary

Cattle feeding in the Southern Plains (Texas and Oklahoma) has been characterized by rapidly increasing numbers of large commercial feedlots and has undergone some recent dramatic changes. Numbers of cattle on feed and feedlots with a capacity of 1,000 head or more increased five-fold within the Southern Plains since the mid-1950's. Texas currently occupies the fourth position among cattle feeding states while Oklahoma is ranked 17th. The Southern Plains' cattle feeding industry, similar to most other rapidly expanding industries, is faced with adjustments and major decisions concerning management practices and cattle feeding systems, costs, economies of size and optimum location.

A study of cattle feeding in the Southern Plains was initiated with a random stratified sample survey of 205 feedlots in Texas and Oklahoma in 1967. This study is concerned with a detailed analysis of management practices and cattle feeding systems in Texas and Oklahoma for the period July 1966 to June 1967. Later publications will deal with costs, economies of size and optimum location.

Large, highly mechanized, commercial feedlots are relatively new in the Southern Plains as two-thirds or more of these lots were established during or after 1960. Small feedlots, often integrated with farming and ranching operations, generally represented a slightly older type of feeding operation.

Commercial banks were the single most important source of operating capital for these rapidly expanding feedlots. However, feedlots often relied on more than one source for capital. This was especially true for sources of capital relating to fixed investments.

While 90 percent of the feedlots in the Southern Plains had less than 1,000-head capacity on January 1, 1968, approximately 90 percent of the cattle were fed in lots with more than 1,000-head capacity. Forty percent of the cattle were finished in lots with more than 10,000-head capacity during 1966-67.

The Texas and Oklahoma Panhandle areas are the leading cattle feeding areas within the Southern

Plains. These two areas accounted for about 40 percent of the cattle fed during 1966-67. More recent developments indicate that the Texas Panhandle will be finishing 50 percent or more of the fed cattle in Texas.

English breeds and English crosses accounted for more than 50 percent of the cattle fed; Okies accounted for 25 percent, Brahman and Brahman crosses 17 percent and the remainder consisted of dairy breeds, Santa Gertrudis, Charolais, Mexican cattle and assorted crosses. No distinct patterns were detected among size groups of feedlots relative to kinds of cattle placed on feed. Brahman and Brahman crosses, however, were most prevalent in the Rio Grande Plains of Texas.

Two-thirds of the cattle originated from sources within Texas and Oklahoma. Texas imports originated primarily from states in the Southeast, New Mexico and Oklahoma. Inshipments to Oklahoma originated mostly in Texas and Louisiana-Arkansas.

Feeder cattle moving into Texas feedlots averaged 509 pounds. Those going on feed in Oklahoma averaged 597 pounds. The larger feedlots generally placed relatively more emphasis on heavier feeder cattle than did the smaller lots. Much variation existed among feedlots and feeding areas in the Southern Plains relative to grades of feeder cattle. About 40 percent were estimated to be U. S. Choice, 48 percent U. S. Good and almost 12 percent U. S. Standard.

Cattle marketed from Southern Plains feedlots are relatively light compared to those from most other feeding areas. Forty percent of the fed cattle marketed weighed less than 800 pounds while about one-third weighed more than 1,000 pounds. Slightly more than 50 percent of these cattle were equal in quality to U.S. Choice. Most of the remaining fed cattle were U.S. Good.

Three-fourths of the fed cattle in Texas feedlots were sold to packing plants within Texas. Oklahoma feedlots relied mostly on out-of-state packers. Texas out-of-state shipments went primarily to the

Southeast, New Mexico, California and Oklahoma. Outshipments from Oklahoma feedlots were destined mostly for Texas, Kansas and states in the Southeast.

Almost 100 percent of the fed cattle were sold on a direct basis to packers. Seventy-seven percent were sold on a direct liveweight basis, 11 percent on a grade and carcass weight basis, and 11 percent on a carcass weight basis. There were practically no shipments to public markets.

Length of feeding period varied by size of feedlot and feeding area. About 45 percent of the cattle were marketed after feeding periods of less than 4 months. Common feeding periods in the Texas and Oklahoma Panhandle areas were 120 to 150 days.

About two-thirds of the cattle in the Southern Plains feedlots were finished on a custom basis during 1966-67. The larger feedlots generally fed the highest proportion of custom cattle. Custom feeding was most prevalent in the Texas and Oklahoma Panhandle feeding areas. The majority of the custom cattle in both states was owned by farmers and ranchers.

Feeder cattle placements by sex varied with the size of feedlots. Smaller feedlots were predominantly heifer feeders while the large feedlots fed mostly steers. Steers made up slightly more than fifty percent of the feeder cattle in both states.

Feedlot operators expressed preferences regarding breed, weight, age and sex of feeder cattle as follows:

(1) Breed—approximately 90 percent of the feedlot operators expressed a preference for crossbred feeder cattle. The most common preference was the Hereford-Angus cross.

(2) Weight—approximately two-thirds of the feedlot operators in Texas preferred feeder cattle weighing less than 500 pounds, but approximately two-thirds of the feeders in Oklahoma preferred cattle weighing more than 500 pounds. Weight preference appears to have a direct relationship to size of feedlot operations. Smaller feedlots generally expressed a preference for lighter feeders than did the larger lots. The most common weight range desired for

heifers was 400-500 pounds while the 600-700 weight range was most common for feedlots preferring steers.

(3) Age—more than one-third of the feedlots expressed a preference for feeder cattle between 6 and 8 months of age. Forty percent expressed an age preference ranging from 12 to 20 months. Feeders who preferred younger cattle were predominantly heifer feeders. Those feeding mostly steers generally preferred an older type of feeder animal.

(4) Sex—about 45 percent of the feedlots expressed a preference for steers, 38 percent preferred heifers and 17 percent had no preference. Market conditions and especially price differentials between steer and heifer feeder cattle were cited as governing factors by feeders without a preference relative to steer or heifer feeding.

Considerable variation existed in the amount and kind of ingredients used in rations. Concentrates made up three-fourths of the ration in Texas and about two-thirds of the total in Oklahoma. Grain sorghum or milo, the single most important feed item, represented 60 percent of the ration in Texas compared to about 50 percent in Oklahoma. Silage represented the bulk of the roughage, but other important roughage items were cottonseed hulls, alfalfa hay and green chop.

Sources of feed grain varied by size of feedlot and feeding area. Texas feedlots purchased 95 percent of their feed grain from sources within Texas. Oklahoma feedlots obtained most of their feed grain from sources outside of Oklahoma, chiefly Texas and Kansas.

It appears that much potential exists for further growth and expansion of cattle feeding within the Southern Plains. Realization of this potential, however, may require adjustments in current production and marketing practices by various segments of the livestock and meat industry to further augment the growth of the feedlot industry. Future profit margins, however, may decline. If so, an even more exacting and efficient enterprise may be required as feedlots increase in number and size in the Southern Plains.

# The Texas-Oklahoma Cattle Feeding Industry

## Structure and Operational Characteristics

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Cattle feeding in the Southern Plains has become big business within the last decade. The cattle feeding industry in Texas and Oklahoma is characterized by an upsurge in numbers of large, highly mechanized, commercial feeding operations along with rapid increases in numbers of cattle placed on feed.

Texas and Oklahoma annually produce many of the basic resources necessary for cattle feeding. These include, among others, generally abundant supplies of feeder cattle, feed grains and forage. In addition, feedlots in the Southern Plains enjoy a locational advantage compared to Corn Belt feeders for shipping fed beef to the deficit fed-beef producing areas in the Southeast (5). Texas, the leading beef cattle producing state, accounted for 12 percent of the cattle and calves on farms January 1, 1968. Oklahoma farms and ranches held another 5 percent. Texas also accounts for 40 percent or more of the annual grain sorghum production in the United States.

The emergence of a rapidly growing cattle feeding industry in the Southern Plains has raised numerous questions concerning the competitive potential and current systems of cattle feeding in Texas and Oklahoma. Accordingly, a comprehensive analysis of cattle feeding has been undertaken to provide detailed analyses concerning (1) cattle feeding systems and management practices, (2) costs and economies of size and (3) optimum location of cattle feeding both nationally and within the Southern Plains. This study is designed to provide a detailed descriptive analysis of cattle feeding systems and management practices employed by cattle feedlot operators in Texas and Oklahoma. Work is currently underway on a second manuscript dealing with costs and economies of size in cattle feeding.

Data for this study were obtained through personal interviews of feedlot operators in Texas and Oklahoma for the period July 1966-June 1967. Respondents were selected on a stratified random sample basis as shown in Table 1.

The sampling rates were low for small feedlots as the larger feedlots are feeding an increasingly larger proportion of the cattle in the Southern Plains. By sampling a high percentage of the large lots, the questionnaires completed in Texas represent 76 per-

cent of the cattle fed in Texas from July 1966 through June 1967. In Oklahoma, 61 percent of the cattle fed were included. State and area totals, therefore, essentially represent characteristics and operations of feedlots with a capacity of 1,000 head or more. Approximately one percent of the cattle included in the Texas sample and less than one percent of those in the Oklahoma sample represent feedlots with less than 1,000-head capacity.<sup>1</sup> Data, however, are presented by size of feedlot and feeding area to show relevant characteristics of feedlot operations in the Southern Plains.

The number of completed questionnaires by feeding area in Texas and Oklahoma are presented in Appendix Tables 1 and 2. The small numbers of questionnaires completed in many of these cells are a result of the small number of lots existing in the cell. As shown by the sampling percentages, in many cases nearly all of the large firms completed questionnaires.

Uncompleted questionnaires for a particular stratum or feedlot were generally due to an expansion of feedlot capacities and consequent movement into a higher size classification, a complete shutdown of existing facilities, one-time visits employed during the survey, and noncooperation of three feedlot operators.

<sup>1</sup>The number of active feedlots, as indicated by the survey results, and the number of cattle fed by respondents in the survey are shown in Appendix Tables 3 through 6.

TABLE 1. THE SAMPLING PERCENT, THE NUMBER OF FEEDLOTS IN THE SAMPLE AND THE NUMBER OF COMPLETED QUESTIONNAIRES, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

Feedlot capacity (head)	Texas			Oklahoma		
	Sampling percent	Feedlots in sample	Completed questionnaires	Sampling percent	Feedlots in sample	Completed questionnaires
	Percent	Number	Number	Percent	Number	Number
Less than 1,000	4	46	32	4	28	13
1,000-1,999	25	28	15	33	8	7
2,000-4,999	33	31	34	50	9	8
5,000-9,999	50	21	17	100	5	4
10,000 and over	100	25	22	100	4	4

## STRUCTURAL CHANGES AND SHIFTS IN CATTLE FEEDING

Cattle feeding in the Southern Plains, especially Texas, during the last decade is characterized by large increases in numbers of cattle placed on feed and a rapid growth and expansion of cattle feeding facilities with a capacity of 1,000 head or more. Feedlots with less than 1,000-head capacity have been declining in the Southern Plains and most other major feeding areas.

Numbers of cattle on feed in Texas increased almost sixfold from January 1, 1958, to January 1, 1968, Figure 1. Cattle on feed in Oklahoma during the same period tripled, while cattle on feed in the United States almost doubled, Appendix Table 7.

Shifts in the location and importance of cattle feeding are evident in most feeding areas of the United States, Table 2. The North Central region has been and is the leading cattle feeding region in the United States, Appendix Table 7. Many changes, however, are evident in the pattern of cattle feeding in the North Central and Western regions. Table 2 demonstrates the relative importance of selected states or regions to annual totals of U.S. cattle on feed from 1955 to 1968. Although cattle on feed in the North Central region increased from January 1, 1955 to 1968, the rate of growth in the North Central region has been less than that of the United States. The growth rate of cattle feeding in Texas was three times greater than that for the United States from 1955 to 1968. The growth rate in Oklahoma, Nebraska, Arizona and Colorado was from 9 to 33 percent over the national rate during the same period. Increases in cattle feeding in California lagged slightly behind the U.S. rate during the 1955-68 period, but the California decline is most noticeable since 1963.

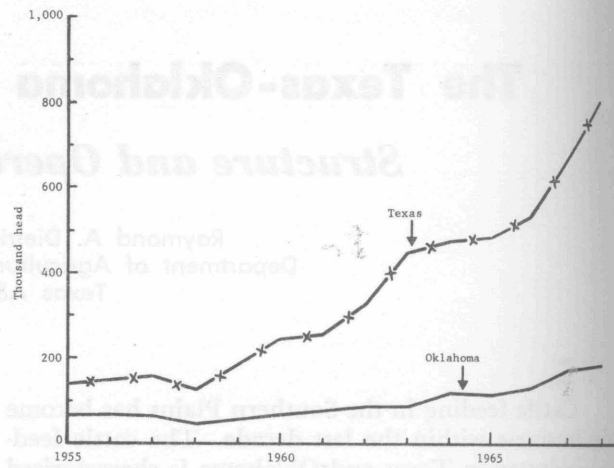


Figure 1. Cattle and calves placed on feed, Texas and Oklahoma, January 1, 1955-68.

The number, size and lot capacity have changed significantly in Texas and Oklahoma since 1955. Texas feedlots with a capacity of 1,000 head or more increased from 61 in 1955 to 275 in 1968, Table 3. The capacity of these lots increased from 160,000 head to 1,299,000 head in 1968. Complete data on number and size of feedlots are not available for Oklahoma since 1955, but lots with a capacity of 1,000 head or more increased from 6 in 1956 (1) to 54 in 1967.

Size of feedlot and numbers of cattle on feed, by size of lot, varied between the Southern Plains, the Midwest and the West, Table 4. Numbers of cattle per lot increased for both size categories, Table 4, but they increased most rapidly for the lots with more than 1,000-head capacity. Small feedlots decreased in all feeding areas except Nebraska from 1964 to 1968. During the same time period, feedlots

TABLE 2. CATTLE AND CALVES ON FEED AS A PERCENT OF UNITED STATES TOTALS, TEXAS AND OKLAHOMA AND SELECTED AREAS, JANUARY 1, 1955-68

Area	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
	Percent													
Southern Plains	3.5	3.6	3.6	2.8	3.6	4.2	4.1	4.8	5.5	6.1	6.0	6.3	7.5	8.7
Texas	2.3	2.5	2.5	2.1	2.8	3.3	3.2	3.8	4.6	4.9	4.9	5.1	6.0	7.1
Oklahoma	1.2	1.1	1.1	.7	.8	.9	.9	1.0	.9	1.2	1.1	1.2	1.5	1.6
North Central <sup>1</sup>	72.4	71.7	72.1	75.0	70.6	64.5	65.1	64.4	62.6	63.6	63.4	63.2	63.4	62.3
Iowa	21.2	20.2	20.8	21.8	21.5	19.9	19.1	18.4	18.0	18.2	18.6	16.8	18.0	16.8
Nebraska	10.8	9.2	9.2	9.2	9.6	8.8	8.7	9.9	9.3	10.4	10.3	11.6	11.6	11.8
Illinois	10.5	10.9	11.4	11.0	9.7	9.1	9.1	9.2	8.8	8.3	7.9	7.6	7.0	6.2
Other North Central	29.9	31.4	30.7	33.0	29.8	26.7	28.2	26.9	26.5	26.7	26.6	27.2	26.8	27.5
Western Region <sup>2</sup>	22.7	23.3	22.8	20.9	24.7	25.4	25.2	24.4	26.4	24.9	25.1	25.3	24.5	24.4
Arizona	2.9	3.5	3.7	3.2	3.2	3.5	3.6	3.6	3.9	3.3	3.5	3.5	3.3	3.4
Colorado	4.8	4.0	4.0	4.2	5.1	5.3	5.2	4.7	5.4	5.1	5.3	5.6	5.4	5.5
California	8.1	8.3	8.2	6.7	7.6	8.8	8.9	9.2	10.3	9.6	9.2	9.0	8.7	7.9
Other Western states	6.9	7.5	6.9	6.8	8.8	7.8	7.5	6.9	6.8	6.9	7.1	7.2	7.1	7.6
Other states <sup>3</sup>	1.4	1.4	1.5	1.3	1.1	5.9	5.6	6.4	5.5	5.4	5.5	5.2	4.6	4.6
United States	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas.

<sup>2</sup>Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Washington, Oregon, California and Nevada.

<sup>3</sup>Data for Georgia, Florida, Kentucky, Tennessee, Alabama and Mississippi were not published until 1960.

Source: Cattle on Feed, U.S. Dept. Agri., Crop. Rpt. Bd., Stat. Rptg. Serv., Selected issues.

TABLE 3. SIZE AND CAPACITY OF TEXAS CATTLE FEEDLOTS, JANUARY 1, 1955-68

Year	1,000 head or more		Less than 1,000 head	
	Feedlots	Total capacity	Feedlots	Total capacity
	Number	1,000 head	Number	1,000 head
1955	61	160	1400	NA
1960	120	350	1750 <sup>1</sup>	NA
1965	234	805	1500	NA
1968	275	1,229	1400	NA

<sup>1</sup>Estimated by authorities in the livestock and cattle feeding industry. Source: Texas Cattle on Feed, U.S. Dept. Agr., Crop Rpt. Bd., Stat. Rptg. Serv., selected issues and Cattle on Feed, U.S. Dept. Agr., Crop Rptg. Bd., Stat. Rptg. Serv., selected issues.

with more-than-1,000-head capacity increased in all areas except Nebraska, California and Arizona. While 90 percent of the feedlots in the Southern Plains had less than 1,000-head capacity on January 1, 1968, almost 90 percent of the cattle were held in lots with more than 1,000-head capacity. Farmer-feeders with less than 1,000-head capacity held almost 60 percent of the cattle on feed in South Dakota, Nebraska and Kansas on January 1, 1968. These small feeders comprised 99 percent of the total feeders in these three states. Large commercial feedlots were more prevalent in California and Arizona as they accounted for 62 percent of the feedlots and 98 percent of the cattle on feed.

### ORGANIZATIONAL CHARACTERISTICS OF THE TEXAS-OKLAHOMA CATTLE FEEDING INDUSTRY

Texas and Oklahoma feeding areas for this study are shown in Figures 2 and 3. Cattle feeding within each state is concentrated most heavily in the Panhandle areas. The Texas Panhandle, which produces about 20 percent of grain sorghum in the United States, accounted for more than 40 percent of the cattle placed on feed in Texas feedlots during 1966-67.<sup>2</sup> The Texas Panhandle and the Southern High Plains areas account for about two-thirds of the grain sorghum production in Texas. Recent feedlot growth and expansion in Texas have been centered in the Panhandle area where feedlots held more than one-half of the Texas cattle on feed April 1, 1968. Cattle feeding in Oklahoma is concentrated most heavily in the Oklahoma Panhandle, Southwestern Oklahoma and Northern Oklahoma.

Feedlots with 10,000-head-or-more capacity accounted for the largest proportion of cattle placed on feed in both states during 1966-67, Table 5. Small farmer-feeders accounted for about 7 percent of the cattle on feed in Texas and more than 20 percent

<sup>2</sup>References to "1966-67" in this study denote the period July 1, 1966, to June 30, 1967.

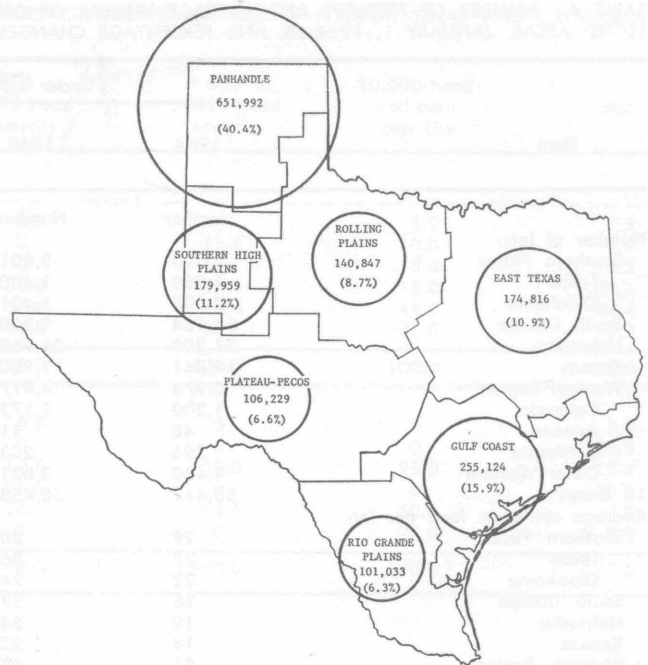


Figure 2. Number of cattle placed on feed and percentage of cattle fed, by feeding area, Texas, July 1966-June 1967.

of the cattle in Oklahoma feedlots during the same period.

### Longevity of Present Feedlots

Large, highly mechanized, commercial feedlots are relatively new in Texas and Oklahoma. Fifty percent or more of the current feeding facilities in the Southern Plains were constructed during or after 1960, Table 6.<sup>3</sup> Many feedlots with less than 1,000-head capacity, or small feedlots, are integrated with farming or ranching operations. In general, more of these small lots remain at original capacity or technological levels than do feedlots with a capacity

<sup>3</sup>State totals in Tables 6 through 11 represent the feedlot population in Texas and Oklahoma as derived in Appendix Table 3. State totals in all other tables are actual survey results.

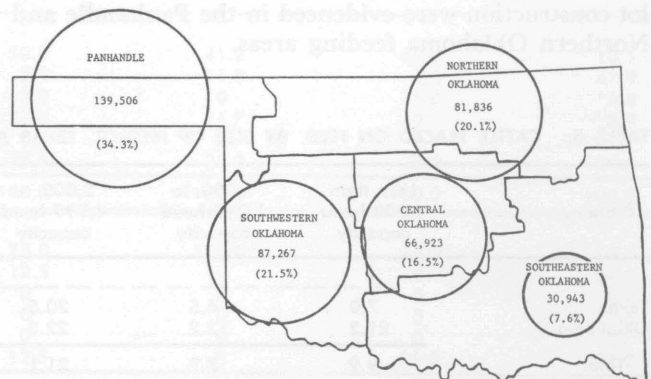


Figure 3. Number of cattle placed on feed and percentage of cattle fed, by feeding area, Oklahoma, July 1966-June 1967.

TABLE 4. NUMBER OF FEEDLOTS AND AVERAGE NUMBER OF CATTLE ON FEED, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, AND SELECTED AREAS, JANUARY 1, 1964-68, AND PERCENTAGE CHANGES 1964-68

Item	Under 1,000 head			Over 1,000 head		
	1964	1968	Percentage change 1964-68	1964	1968	Percentage change 1964-68
	Number	Number	Percent	Number	Number	Percent
<b>Number of lots:</b>						
Southern Plains	3,550	2,801	-21.1	238	324	36.1
Texas	1,550	1,400	-9.7	203	275	35.5
Oklahoma	2,000	1,401	-29.9	35	49	40.0
South Dakota	11,184	9,380	-16.1	16	20	25.0
Nebraska	21,300	21,960	3.1	830	400	-51.8
Kansas	14,441	11,900	-17.6	59	100	69.5
Western Region <sup>1</sup>	5,974	4,417	-26.1	714	721	1.0
Colorado	1,200	1,172	-2.3	80	94	17.5
Arizona	48	11	-77.1	77	65	-15.6
California	296	203	-31.4	317	288	-9.1
Other Western	4,430	3,031	-31.6	240	274	14.2
16 States <sup>2</sup>	56,449	50,458	-10.6	1,857	1,565	-15.7
<b>Average cattle on feed per lot:</b>						
Southern Plains	29	30	3.4	2,063	2,802	35.8
Texas	37	36	-2.7	2,069	2,764	33.6
Oklahoma	22	24	9.1	2,029	3,020	48.8
South Dakota	26	39	50.0	1,688	2,050	21.4
Nebraska	19	34	78.9	488	1,532	213.9
Kansas	14	23	64.3	3,102	3,380	9.0
Western Region <sup>1</sup>	86	97	12.8	2,725	3,286	20.6
Colorado	157	154	-1.9	4,025	4,862	20.8
Arizona	188	273	45.2	4,091	5,877	43.7
California	78	69	-11.5	2,912	3,083	5.9
Other Western	67	77	14.9	1,608	2,343	45.7
16 States <sup>2</sup>	27	37	37.0	1,644	2,728	65.9

<sup>1</sup>Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon and California.

<sup>2</sup>Includes eleven Western States, South Dakota, Nebraska, Kansas, Oklahoma and Texas.

Source: Cattle on Feed, Mt. An. 2-1 (1-64 and 1-68), U.S. Dept. Agr., Crop Rptg. Bd., Stat. Rptg. Serv., January 1964 and January 1968.

of 1,000 head or more since they are often a supplementary enterprise. However, feedlots of all sizes, have been and are expanding their feeding facilities as their capital position and management practices improve sufficiently for making decisions and accepting the responsibilities associated with increasingly larger feeding operations.

Texas feeding areas with the greatest proportion of feedlot construction after 1964 include the Panhandle, the Southern High Plains and the Rio Grande Plains. Nevertheless, feeding in the Rio Grande Plains, as well as in East Texas, has been declining. In Oklahoma, generally higher levels of recent feedlot construction were evidenced in the Panhandle and Northern Oklahoma feeding areas.

### Legal Form of Ownership

Type of ownership among feedlots in Texas and Oklahoma is related directly to the size of feedlots, Table 7. The single proprietor form of ownership is most common in the Southern Plains since a high percentage of the feedlots in Texas and Oklahoma are small commercial feedlots. Incorporated feedlots, which accounted for about 45 percent of the cattle fed in the Southern Plains during 1966-67, were found mostly among feedlots with a capacity of 10,000 head or more. Partnerships were most common among feedlots with 1,000-9,999-head capacity.

Legal forms of ownership among feeding areas exhibited no distinct patterns. In Texas, single proprietorships were most common in the Gulf Coast

TABLE 5. CATTLE PLACED ON FEED, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, JULY 1966-JUNE 1967

State	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total	Total placed on feed <sup>1</sup>
	Percent						Head
Texas	7.0	6.5	20.8	21.9	43.8	100.0	1,610,000
Oklahoma	21.2	12.2	22.3	12.8	31.5	100.0	406,475
Total	9.9	7.7	21.1	20.1	41.2	100.0	2,016,475

<sup>1</sup>From data reported by the Crop Reporting Board, U.S. Department of Agriculture at Austin, Texas, and Oklahoma City, Oklahoma. The other data were developed from the feedlot survey data.



TABLE 6. YEAR IN WHICH PRESENT TYPE OF FEEDING OPERATIONS WERE ESTABLISHED, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and year	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
Texas:						
	Percent					
Before 1945	8.8	0	5.9	0	5.0	7.5
1945-49	11.8	0	0	11.8	10.0	9.9
1950-54	5.9	0	0	11.7	5.0	5.2
1955-59	20.6	40.0	32.3	29.4	15.0	23.1
1960-64	44.1	46.7	50.0	29.4	45.0	44.4
After 1964	8.8	13.3	11.8	17.7	20.0	9.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Before 1945	7.7	14.3	12.5	0	0	8.0
1945-49	30.7	0	0	0	0	28.5
1950-54	15.4	14.3	12.5	50.0	25.0	15.4
1955-59	15.4	14.3	25.0	0	0	15.6
1960-64	23.1	28.5	50.0	50.0	50.0	24.3
After 1964	7.7	28.6	0	0	25.0	8.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 7. LEGAL FORMS OF OWNERSHIP, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA 1966-67

State and type of ownership	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
Texas:						
	Percent					
Single proprietor	79.4	53.3	35.3	23.4	35.0	70.9
Partnership	17.7	40.0	32.3	29.4	5.0	20.6
Corporation	2.9	6.7	32.4	47.2	60.0	8.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Single proprietor	84.6	28.6	25.0	50.0	0	80.6
Partnership	15.4	42.8	50.0	50.0	0	17.3
Corporation	0	28.6	25.0	0	100.0	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 8. PRINCIPAL BUSINESS OF FEEDLOT OWNERS, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and principal business	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
Texas:						
	Percent					
Feedlot	5.9	20.0	50.0	41.2	60.0	13.1
Farmer or rancher	55.9	40.0	2.9	11.8	5.0	47.9
Meat packer	0	6.7	3.0	0	5.0	0.8
Feed company	2.9	6.7	8.8	11.7	0	3.9
Feedlot-feed co.	5.9	6.6	0	0	0	5.1
Other <sup>1</sup>	29.4	20.0	35.3	35.3	30.0	29.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Feedlot	0	28.6	75.0	100.0	75.0	3.7
Farmer or rancher	61.5	14.3	12.5	0	0	58.2
Meat packer	0	14.2	0	0	0	0.4
Feed company	0	14.3	0	0	0	0.5
Feedlot-feed co.	0	0	0	0	0	0
Other <sup>1</sup>	38.5	28.6	12.5	0	25.0	37.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Primarily combinations of cattle feeding, farming and ranching.

TABLE 9. TYPE OF FEEDING FACILITIES USED BY TEXAS AND OKLAHOMA FEEDLOT, BY SIZE OF FEEDLOT, 1966-67

State and feeding facilities	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
----- Percent -----						
Texas:						
Fence line bunk or trough	41.2	53.4	73.5	70.6	80.0	46.4
Self-feeders	55.9	33.3	23.5	11.8	5.0	49.1
Other <sup>1</sup>	2.9	13.3	3.0	17.6	15.0	4.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Fence line bunk or trough	46.2	28.6	37.5	100.0	75.0	45.7
Self-feeders	53.8	71.4	50.0	0	25.0	54.0
Other <sup>1</sup>	0	0	12.5	0	0	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Primarily combinations of fence line bunk or trough and self-feeders.

and Rolling Plains feeding areas. Partnerships were most prevalent in the Southern High Plains, while corporations were of least importance in the Gulf Coast and Rolling Plains. In Oklahoma, most of the incorporated feedlots were in the Panhandle area where more of that state's larger feedlots are located.

#### Principal Business of Feedlot Owner

Large commercial feedlots, which generally require large capital outlays and a high degree of specialized management and labor, confined their business activities primarily to feeding in the Southern Plains, Table 8. Small feeders, in contrast, often depend on cattle feeding to supplement their farming and ranching enterprises.

Since most feedlots in the Southern Plains are relatively small, farming and ranching or combinations of cattle feeding, farming and ranching were

fairly common in Texas and Oklahoma during 1966-67, Table 8. However, when actual numbers of cattle placed on feed are considered, three-fourths or more of the cattle were finished in lots where cattle feeding was considered the primary business enterprise. Farming and ranching were considered of equal importance to feeding in lots which finished about one-third of the cattle. Commercial feed companies who also engaged in cattle feeding were more prominent in Texas than Oklahoma. Feeding by packers was limited to only a few firms in both Texas and Oklahoma. Although none of the feedlots interviewed were associated with retailing firms, several arrangements of this type do exist within the Southern Plains.

#### Type of Feeding Facilities

Fence line bunk and trough were the most important type of feeding facilities among large feed-

TABLE 10. PRIMARY SOURCE OF FINANCING FOR OPERATING CAPITAL, BY SIZE OF FEEDLOT AND NUMBER OF CATTLE PLACED ON FEED, TEXAS AND OKLAHOMA, 1966-67

State and source of financing	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
----- Percent -----						
Texas:						
Commercial banks	44.1	53.4	75.0	82.3	80.0	75.2
PCA	8.8	13.3	6.3	5.9	0	4.1
National Finance Credit Corp.	0	6.7	3.1	5.9	10.0	6.7
Insurance company	3.0	0	9.4	0	0	2.2
Individual	0	13.3	0	0	0	0.9
Private firm	0	0	3.1	0	0	0.6
Other <sup>1</sup>	44.1	13.3	3.1	5.9	10.0	10.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Commercial banks	23.1	57.1	12.5	25.0	75.0	41.5
PCA	7.7	0	75.0	25.0	25.0	29.4
National Finance Credit Corp.	0	0	0	0	0	0
Insurance company	7.7	28.6	0	25.0	0	8.3
Individual	0	0	0	0	0	0
Private firm	0	0	0	0	0	0
Other <sup>1</sup>	61.5	14.3	12.5	25.0	0	20.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Includes financing by the feedlot owner and various combinations of the above sources.

lots, Table 9. This type of feeding facility generally offers economies and ease of distributing feed with mechanized equipment. Many smaller feeders find self-feeders better adapted to their type of operation. Self-feeders provide protection from the weather elements and often require less frequent distribution of feed. Most of the cattle finished in the Southern Plains during 1966-67 were fed in fence line bunk or trough facilities, Appendix Table 8.

Fence line bunks or troughs were common in the Texas Panhandle, the Southern High Plains and West Texas among Texas feeding areas. Bunk or trough facilities are more prevalent in these areas because of a dry climate and, in addition, large commercial lots are fairly common throughout the Texas Panhandle and the Southern High Plains. Self-feeders were most popular in all Oklahoma feeding areas with the exception of Southwestern Oklahoma.

#### Source of Financing for Operating Capital

Most feedlots are dependent on several sources for operating capital. However, commercial banks were cited as the primary source of capital for buying and finishing three-fourths of the cattle in Texas feedlots and more than two-fifths in Oklahoma during 1966-67, Table 10. Commercial banks, who financed the purchase of most of the feeder cattle and feed, are usually staffed with personnel who are well informed relative to feeding programs and market conditions for feeder cattle and fed cattle. The second most important source in Oklahoma was the Production Credit Association (PCA) as compared to various combinations of sources in Texas. Insurance companies and others were also cited as important sources, but they generally were not considered as primary sources by most feedlot operators.

#### Source of Financing for Fixed Investments

Commercial banks were the single most important source of capital for purchasing land, milling equipment and other necessary equipment and materials. But the majority of the capital requirements for fixed investments were obtained from various combinations of sources in both Texas and Oklahoma, Table 11. Numerous feedlots who listed three or four sources of capital for fixed investments stated that no single source could be considered primary for their method of operation.

#### KIND AND SOURCE OF CATTLE PLACED ON FEED

Type of cattle placed on feed and sources of feeder cattle, by geographic origin and type of buyer, varied by size of feedlot and feeding area in Texas and Oklahoma during 1966-67.

#### Kinds of Cattle Placed on Feed

English breeds and English crosses comprised about 50 percent of the cattle placed on feed in Texas and Oklahoma feedlots during 1966-67, Table 12. "Okies" were the second most important type of cattle placed on feed. Brahman and Brahman crosses, which were more important in Texas than Oklahoma, ranked third in both states. Okies are often classified as number 1, 2 or 3 by cattle buyers and feedlot operators. These cattle contain mixed breeding consisting mostly of beef, dairy and Brahman bloodlines. Number 1 Okies, which generally compare favorably to English crossbreds, are often referred to as "black-baldies" by numerous feeders. Mexican cattle, cattle originating from Mexico, were relatively more important in Oklahoma than in Texas. Many of these cattle are similar in appearance to Herefords.

TABLE 11. PRIMARY SOURCE OF FINANCING FOR FIXED INVESTMENTS, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and source of financing	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
Percent						
Texas:						
Commercial banks	32.3	40.0	65.6	62.5	60.0	37.3
PCA	11.8	6.7	6.3	6.3	0	10.5
National Finance Credit Corp.	0	0	3.1	0	5.0	0.3
Insurance company	0	0	0	6.2	5.0	0.3
Individual	0	13.3	0	0	0	1.0
Private firm	0	0	6.2	6.3	10.0	0.9
Other <sup>1</sup>	55.9	40.0	18.8	18.7	20.0	49.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Commercial banks	23.1	71.4	50.0	50.0	50.0	25.8
PCA	7.7	0	37.5	25.0	25.0	8.4
National Finance Credit Corp.	0	0	0	0	0	0
Insurance company	0	0	0	0	0	0
Individual	0	0	0	0	0	0
Private firm	0	0	0	0	0	0
Other <sup>1</sup>	69.2	28.6	12.5	25.0	25.0	65.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Includes financing by the feedlot owner or various combinations of the above sources.

TABLE 12. KIND OF CATTLE PLACED ON FEED, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and breed	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head- and-more capacity	Total	Percent					
Texas:												
English breeds and English crosses <sup>1</sup>	68.0	57.8	51.6	62.3	51.4	53.6						
Brahman and Brahman crosses	21.5	27.4	28.4	21.4	16.1	19.4						
Okies	7.6	13.0	17.0	13.9	27.9	23.1						
Dairy breeds and dairy crosses	1.5	1.8	1.5	.8	1.3	1.3						
Santa Gertrudis, Charolais, and crosses	1.4	0	1.4	1.6	2.6	2.2						
Mexican cattle	0	0	.1	0	.7	.4						
Total	100.0	100.0	100.0	100.0	100.0	100.0						
Oklahoma:												
English breeds and English crosses <sup>1</sup>	75.2	54.0	56.1	22.6	53.6	47.4						
Brahman and Brahman crosses	4.3	11.7	6.9	11.6	6.2	7.7						
Okies	14.3	32.2	29.7	60.9	30.7	37.1						
Dairy breeds and dairy crosses	6.2	0	4.4	4.9	4.3	4.2						
Santa Gertrudis, Charolais, and crosses	0	2.1	2.9	0	1.4	1.4						
Mexican cattle	0	0	0	0	3.8	2.2						
Total	100.0	100.0	100.0	100.0	100.0	100.0						

<sup>1</sup>Primarily Hereford-Angus or F1 crosses.

English breeds and English crosses were most prevalent in all Texas feeding areas with the exception of the Rio Grande Plains, Table 13. Brahman and Brahman crosses are well adapted to the Texas coastal area and are the predominant type of cattle fed in the Rio Grande Plains feeding area. They also

represent a substantial portion of the cattle finished in the Gulf Coast feeding area.

In Oklahoma, English breeds and crosses were most prominent in the Panhandle, Northern Oklahoma and Southwestern Oklahoma feeding areas, Table 14. Okies, however, were important in all

TABLE 13. KIND OF CATTLE PLACED ON FEED, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Breed	Feeding area							Total
	Panhandle	Southern High Plains	Plateau- Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
Percent								
English breed and English crosses <sup>1</sup>	48.8	68.5	50.6	69.8	60.1	54.1	14.7	53.6
Brahman and Brahman crosses	6.7	21.5	21.4	13.7	13.8	43.2	75.6	19.4
Okies	40.4	2.7	26.0	7.5	24.7	.4	9.0	23.1
Dairy breeds and dairy crosses	1.2	3.7	1.0	.3	.6	.2	.1	1.3
Santa Gertrudis, Charolais and crosses	2.0	3.5	.3	8.7	.8	2.0	.6	2.2
Mexican cattle	.9	.1	.7	0	0	.1	0	.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Primarily Hereford-Angus or F1 crosses.

TABLE 14. KIND OF CATTLE PLACED ON FEED, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Breed	Feeding area					Total
	Panhandle	Northern Oklahoma	South- eastern Oklahoma	Central Oklahoma	South- western Oklahoma	
Percent						
English breeds and English crosses <sup>1</sup>	54.6	49.4	10.9	32.4	44.3	47.4
Brahman and Brahman crosses	6.3	1.8	5.7	9.0	14.0	7.7
Okies	32.3	47.6	83.4	54.1	24.5	37.1
Dairy breeds and dairy crosses	2.7	.2	0	1.6	13.0	4.2
Santa Gertrudis, Charolais, and crosses	0	1.0	0	2.9	4.2	1.4
Mexican cattle	4.1	0	0	0	0	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Primarily Hereford-Angus or F1 crosses.

TABLE 15. GEOGRAPHIC SOURCE OF FEEDER CATTLE BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and geographic source	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total	Percent								
Texas:															
Texas	95.2	76.0	85.2	70.7	59.7	66.5									
Oklahoma	.6	12.4	1.7	7.5	9.5	7.8									
Louisiana-Arkansas	1.7	6.2	3.0	10.8	6.7	6.7									
Mississippi-Alabama	0	2.4	4.3	1.7	7.6	5.9									
New Mexico	1.5	1.0	2.9	9.3	13.3	10.5									
Colorado	1.0	0	.3	0	0	.1									
Kansas	0	0	.6	0	.8	.6									
Other states	0	2.0	1.8	0	2.4	1.9									
Total	100.0	100.0	100.0	100.0	100.0	100.0									
Oklahoma:															
Texas	<sup>1</sup>	14.9	11.2	29.7	17.3	18.8									
Oklahoma	73.7	63.4	81.9	28.0	66.9	60.6									
Louisiana-Arkansas	26.3	2.4	3.1	27.2	6.9	10.6									
Mississippi-Alabama	0	1.3	3.2	1.2	6.0	4.3									
New Mexico	<sup>1</sup>	2.5	0	0	.2	.2									
Colorado	0	2.5	0	0	.2	.2									
Kansas	<sup>1</sup>	10.1	<sup>1</sup>	7.0	.6	2.4									
Other states	0	2.9	.6	6.9	1.9	2.9									
Total	100.0	100.0	100.0	100.0	100.0	100.0									

<sup>1</sup>Less than .05 percent.

feeding areas—especially in Southeastern Oklahoma. Dairy breeds and crosses were found mostly in Southwestern Oklahoma.

#### Geographic Origin of Feeder Cattle

Approximately two-thirds of the cattle placed on feed in the Southern Plains originated from sources within Texas and Oklahoma, Table 15. Feedlots tend to reach out farther for supplies of feeder cattle as they increase in size. Several of the larger feedlots relied on order buyers in such states as Tennessee and Georgia for supplies of feeder cattle.

New Mexico was the most important out-of-state source for Texas feedlots, while Texas was the leading supplier of feeder cattle shipped into Oklahoma. States in the Southeast supplied almost 15 percent of the feeder cattle in both Texas and Oklahoma during 1966-67.

The Texas Panhandle, which is generally characterized by large feedlots, relied heavily on out-of-state

sources for feeder cattle in contrast to other feeding areas in Texas, Table 16. The Gulf Coast and Rio Grande Plains, on the other hand, were dependent almost predominantly on Texas feeder cattle. Northern Oklahoma, similar to the Texas Panhandle feeding area, relied mostly on out-of-state sources for feeder cattle, Table 17. That area received substantial volumes of inshipments not only from Louisiana-Arkansas and Kansas, but also from Nebraska, Missouri, Georgia and Tennessee. Feeder cattle shipped into other Oklahoma feeding areas originated primarily in Texas and Louisiana-Arkansas.

#### Origin of Feeder Cattle by Type of Buyer

Feeder cattle in the Southern Plains feedlots were purchased directly by the feedlot operator through a salaried buyer or order buyers, Table 18. Size of the feedlot was directly related to buying practices and type of buyer used in securing feeder cattle.

TABLE 16. GEOGRAPHIC SOURCE OF FEEDER CATTLE, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Geographic source	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
								Percent
Texas	47.1	76.4	68.8	66.7	79.5	91.8	88.2	66.5
Oklahoma	11.1	9.7	1.8	.9	12.0	.1	0	7.8
Louisiana-Arkansas	10.1	2.4	11.0	3.0	0	7.4	6.0	6.7
Mississippi-Alabama	8.9	3.4	1.4	25.9	2.1	.7	0	5.9
New Mexico	20.7	2.3	15.6	0	4.3	0	0	10.5
Colorado	.2	0	0	0	0	0	0	.1
Kansas	.2	1.5	0	0	2.1	0	0	.6
Other states	1.7	4.3	1.4	3.5	0	0	5.8	1.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 17. GEOGRAPHIC SOURCE OF FEEDER CATTLE, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Geographic source	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
				Percent		
Texas	28.4	0	<sup>1</sup>	12.7	9.7	18.8
Oklahoma	60.1	39.9	69.7	55.5	74.4	60.6
Louisiana-Arkansas	6.7	20.4	30.3	28.1	0	10.6
Mississippi-Alabama	1.0	.6	0	3.7	15.9	4.3
New Mexico	.5	0	0	0	0	.2
Colorado	.5	0	0	0	0	.2
Kansas	.7	20.8	0	0	0	2.4
Other states	2.1	18.3	0	0	0	2.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Less than .05 percent.

Order buyers were the most important type of buyer used for obtaining feeder cattle—especially by the larger feedlots. Order buyers will probably increase in importance as the number and size of feedlots increase and feedlots begin reaching out farther for supplies of feeder cattle. The smaller feedlots are often able to purchase most of their requirements from auctions or producers in local areas. Hence, they are less dependent on order buyers than are the large feedlots. Managers of some of the larger feedlots prefer to select and purchase feeder cattle whenever possible. Many operators believe they can do a better job of selecting feeder cattle for their types of operation than can other types of buyers.

#### Origin of Feeder Cattle by Type of Market

Auctions supplied two-thirds or more of the cattle fed in Texas and Oklahoma feedlots during 1966-67, Table 19. They were the major source for all size groups and especially for the smaller feedlots where the feedlot owner or manager purchased most of the feeder cattle. Auctions are generally located near

or within concentrated production areas and, in effect, serve as concentration points of many feedlot buyers.

Feedlots also bought about one-fourth of their cattle directly from farmers and ranchers. Most feedlot operators prefer to buy directly from producers because feeder cattle are handled less frequently, off feed and water for shorter periods, subject to less bruising and tissue loss, exposed to less disease and sickness, and because the feedlot operator is able to assess and identify reputation producers.

Auctions were the predominant source of feeder cattle for all feeding areas in the Southern Plains except the Texas Panhandle area, Tables 20 and 21. Feeders in the Texas Panhandle purchased slightly more than 50 percent of their cattle directly from farms and ranches. Factors contributing to this buying pattern include the presence of numerous large feedlots which are dependent on order buyers as purchasing agents for a substantial portion of their feeder cattle and relatively large ranching operations both in and adjacent to the Panhandle area.

TABLE 18. SOURCE OF FEEDER CATTLE, BY TYPE OF BUYER AND SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and type of buyer	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
Texas:						
Operator <sup>1</sup>	60.6	53.3	30.8	42.8	25.9	30.6
Salaried buyer	0	0	15.0	2.4	26.8	19.8
Order buyer	39.4	46.7	54.2	54.8	42.2	46.4
Other	0	0	0	0	5.1	3.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Operator <sup>1</sup>	73.7	36.9	39.7	7.6	30.9	27.7
Salaried buyer	0	0	0	27.8	0	6.1
Order buyer	26.3	63.1	60.3	64.6	69.1	66.2
Other	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Owner or manager.

TABLE 19. SOURCE OF FEEDER CATTLE, BY TYPE OF MARKET AND SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and type of market	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total	Percent					
Texas:												
Farm or ranch	20.1	14.1	21.9	26.6	33.5	29.8						
Terminal market	4.3	0	3.5	3.8	5.1	4.5						
Auction	75.6	85.9	74.6	69.6	60.6	65.2						
Other	0	0	0	0	.8	.5						
Total	100.0	100.0	100.0	100.0	100.0	100.0						
Oklahoma:												
Farm or ranch	29.1	10.2	11.9	26.8	28.4	24.6						
Terminal market	0	12.7	1.8	0	7.6	5.2						
Auction	70.9	77.1	86.3	73.2	64.0	70.2						
Other	0	0	0	0	0	0						
Total	100.0	100.0	100.0	100.0	100.0	100.0						

TABLE 20. SOURCE OF FEEDER CATTLE, BY TYPE OF MARKET AND FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Type of market	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
Percent								
Farm or ranch	50.5	23.0	32.3	15.7	7.1	10.9	14.6	29.8
Terminal market	.2	.7	3.3	0	22.5	5.5	0	4.5
Auction	49.3	76.3	57.3	84.3	70.4	83.6	85.4	65.2
Other	0	0	7.1	0	0	0	0	.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 21. SOURCE OF FEEDER CATTLE, BY TYPE OF MARKET AND FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Type of market	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
Percent						
Farm or ranch	37.1	14.2	29.5	.2	13.4	24.6
Terminal market	2.3	2.1	0	4.7	16.0	5.2
Auction	60.6	83.7	70.5	95.1	70.6	70.2
Other	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 22. PERCENT OF FEEDER CATTLE CONTRACTED MORE THAN 30 DAYS IN ADVANCE AND SOURCE OF CONTRACTS BY SIZE OF FEEDLOTS, TEXAS 1966-67

Item	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total	Percent					
Feeder cattle contracted												
	2.1	1.5	4.8	4.7	12.2	9.4						
Source of contracts:												
Ranchers	100.0	100.0	96.9	63.1	84.8	84.7						
Order buyers and dealers	0	0	3.1	36.9	15.2	15.3						
Other	0	0	0	0	0	0						
Total	100.0	100.0	100.0	100.0	100.0	100.0						

TABLE 23. PERCENT OF FEEDER CATTLE CONTRACTED MORE THAN 30 DAYS IN ADVANCE AND SOURCE OF CONTRACTS, BY SIZE OF FEEDLOT, OKLAHOMA, 1966-67

Item	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head- and-more capacity	Total	Percent					
Feeder cattle contracted	0	2.1	1.3	22.1	2.2	6.4						
Source of contracts:												
Ranchers	0	100.0	100.0	27.6	100.0	45.3						
Order buyers and dealers	0	0	0	72.4	0	54.7						
Other	0	0	0	0	0	0						
Total	0	100.0	100.0	100.0	100.0	100.0						

### Feeder Cattle Contracting

Less than 10 percent of the feeder cattle were contracted for more than 30 days in advance by Texas and Oklahoma feedlots during 1966-67, Tables 22 and 23. The larger feedlots, generally, used contracting to a greater extent than did the smaller feedlots. Ranchers were the major source of contracts in Texas as compared to order buyers and dealers in Oklahoma. Contracting may become more prevalent in the Southern Plains as large feedlots increase in number and size.

### WEIGHTS, QUALITY AND SEX OF CATTLE PLACED ON FEED

Much variation existed among size groups of feedlots and among feeding areas relative to weight, grade and sex of cattle placed on feed. The larger feedlots, in general, placed a higher percentage of steers on feed than did the smaller feedlots. More of these feeder cattle, in turn, were equivalent to U. S. Choice and represented slightly heavier weights going on feed.

### Weight of Cattle Placed on Feed

The average weights of cattle placed on feed in the Southern Plains are relatively light as compared to those in most other major cattle feeding areas. During 1966-67, feeder cattle moving into Texas feedlots averaged 509 pounds as compared to 597 pounds in Oklahoma, Table 24. In comparison, cattle placed on feed in Colorado feedlots averaged in excess of 650 pounds during 1964 (3). Almost 50 percent of the Texas placements weighed less than 500 pounds in contrast to Oklahoma where approximately 80 percent averaged over 500 pounds.

In both Texas and Oklahoma, feeder cattle going on feed in the larger lots were substantially heavier than those going on feed in the smaller feedlots, Table 24. Placement cattle in Oklahoma feedlots with a capacity of 10,000 head or more average 643 pounds as compared to 488 pounds for the smaller farmer-feeders. In Texas, they averaged 533 pounds in the large lots and 461 pounds in the farmer-feeder lots.

In the Texas Panhandle feeding area, 80 percent of the feeder cattle weighed in excess of 500

TABLE 24. WEIGHT OF CATTLE PLACED ON FEED, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and weight (pounds)	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head- and-more capacity	Total	Percent					
Texas:												
Under 300	1.9	4.1	6.4	11.7	2.7	4.8						
300-399	34.2	22.2	26.9	25.9	13.8	18.4						
400-499	32.3	18.3	40.6	17.9	22.0	24.5						
500-599	16.9	38.4	15.3	16.0	29.4	24.9						
600-699	12.3	15.7	8.9	23.2	24.3	21.2						
700-799	2.4	1.3	1.9	5.3	7.8	6.2						
800 and over	0	0	0	0	0	0						
Total	100.0	100.0	100.0	100.0	100.0	100.0						
Oklahoma:												
Under 300	4.1	1.5	0	0	0	.1						
300-399	3.6	19.1	6.7	3.5	1.5	3.6						
400-499	46.5	36.5	32.6	26.1	8.5	17.6						
500-599	44.8	17.4	31.4	53.4	23.0	30.8						
600-699	0	19.4	23.3	11.4	31.2	24.9						
700-799	0	6.1	6.0	5.6	33.9	21.9						
800 and over	1.0	0	0	0	1.9	1.1						
Total	100.0	100.0	100.0	100.0	100.0	100.0						



TABLE 25. WEIGHT OF CATTLE PLACED ON FEED, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Pounds	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
	Percent							
Under 300	1.2	.6	8.1	5.2	3.2	12.5	26.5	4.8
300-399	7.4	13.5	18.3	29.9	25.3	41.3	31.7	18.4
400-499	11.3	30.0	41.0	24.6	32.6	39.4	27.4	24.5
500-599	35.6	39.6	21.4	16.1	6.2	6.8	10.0	24.9
600-699	37.2	13.8	10.4	24.0	13.1	0	4.4	21.2
700-799	7.3	2.5	.8	.2	19.6	0	0	6.2
800 and over	0	0	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

pounds. This contrasts with the Gulf Coast and Rio Grande Plains areas where more than 50 percent of the cattle average under 400 pounds, Table 25. The prevalence of light weight feeder cattle in South and Southeast Texas can generally be attributed to several factors. Many of the feedlots in the Gulf Coast and Rio Grande Plains feeding areas feed cattle for the baby beef market in the major consumption centers along the Gulf Coast. In addition, most of the placement cattle in the Gulf Coast and Rio Grande Plains are from 5 to 8 months of age with substantial amounts of Brahman bloodlines. Feeder cattle in most other Texas feeding areas are

often English breeds or English crosses which average from 8 to 14 months of age.

Feedlots in the Oklahoma Panhandle and Central Oklahoma placed more emphasis on heavier weight feeder cattle than did feedlots in other Oklahoma feeding areas, Table 26. Feedlots in Southeastern Oklahoma concentrated their feeding programs primarily on lighter weight Okie feeder cattle.

#### Grades of Cattle Placed on Feed

During 1966-67, feedlots in Texas and Oklahoma placed on feed a higher proportion of cattle equivalent to U. S. Good than any other grade, Table 27.

TABLE 26. WEIGHT OF CATTLE PLACED ON FEED, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Pounds	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
	Percent					
Under 300	0	.2	2.4	0	0	.1
300-399	1.0	2.2	21.6	1.8	9.8	3.6
400-499	12.2	27.5	62.4	8.3	26.7	17.6
500-599	38.6	39.8	13.6	22.5	14.0	30.8
600-699	29.0	13.6	0	7.5	36.6	24.9
700-799	19.2	16.7	0	52.4	12.8	21.9
800 and over	0	0	0	7.5	.1	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 27. U. S. GRADE EQUIVALENTS OF CATTLE PLACED ON FEED, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and U. S. grade	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
	Percent					
Texas:						
U. S. Choice	26.4	32.3	24.4	35.6	50.1	42.8
U. S. Good	52.7	38.2	56.6	53.4	41.2	45.8
U. S. Standard	20.9	27.6	19.0	10.6	8.5	11.2
U. S. Utility	0	1.9	0	.4	.2	.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
U. S. Choice	21.2	15.5	30.9	8.4	37.7	29.1
U. S. Good	63.6	39.7	61.7	71.9	53.4	58.1
U. S. Standard	15.2	43.1	7.4	19.7	8.9	12.7
U. S. Utility	0	1.7	0	0	0	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 28. U.S. GRADE EQUIVALENTS OF CATTLE PLACED ON FEED, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

U.S. grade	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
	Percent							
U.S. Choice	50.5	59.8	35.3	47.2	44.9	12.8	10.7	42.8
U.S. Good	40.3	33.4	52.8	49.1	42.5	74.2	46.0	45.8
U.S. Standard	8.8	6.8	11.9	3.7	12.6	13.0	42.4	11.2
U.S. Utility	.4	0	0	0	0	0	.9	.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

However, feedlots with a capacity of 10,000 head or more placed on feed more cattle grading U. S. Choice than did other size groups. Table 24 also shows that large feedlots generally place more emphasis on heavier weight feeder cattle than do smaller feedlots. Smaller feedlot operators can often be fairly selective in their buying since their operations are better suited for buying in small lots. They are often able to take advantage of bargains and, consequently, place relatively more cattle on feed grading U. S. Standard than do the large feedlots.

Since feedlots in the Texas Gulf Coast and Rio Grande Plains feed a high proportion of relatively light Brahman or Brahman crosses, placements in these areas graded predominantly U. S. Good or U. S. Standard during 1966-67, Table 28. Feeder cattle in other areas of Texas are mostly English breeds and crosses or better quality Okies which are equivalent primarily to U. S. Choice or U. S. Good.

Variations existed among Oklahoma feeding areas relative to the proportion of feeder cattle grading U. S. Choice or U. S. Good. But 80 percent or more of the cattle moving into Oklahoma feedlots were equivalent to U. S. Good or higher grades, Table 29. Feeder cattle grading U. S. Utility were virtually nonexistent in Oklahoma as well as in Texas feedlots.

#### Placements by Sex

Although steers accounted for more than 50 percent of the cattle in Texas and Oklahoma feedlots during 1966-67, much variation existed among various sizes of feedlots relative to steer and heifer feeding, Table 30. Steers made up almost two-thirds of the cattle fed by feedlots with a capacity of 10,000 head or more while heifers made up almost two-thirds of the cattle finished by lots with less than 1,000-head capacity. The proportion of steers to heifers tended to increase as feedlots increased in size.

TABLE 29. U.S. GRADE EQUIVALENTS OF CATTLE PLACED ON FEED, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

U.S. grade	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
	Percent					
U.S. Choice	19.2	10.5	33.4	39.4	56.8	29.1
U.S. Good	68.6	69.1	62.1	45.6	32.9	58.1
U.S. Standard	12.2	20.4	4.5	14.4	10.3	12.7
U.S. Utility	0	0	0	.6	0	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 30. PLACEMENTS, BY SEX AND SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and type of cattle	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
<b>Texas:</b>						
Steers	38.4	38.1	30.9	42.4	61.0	52.2
Heifers	61.6	61.9	69.1	57.6	39.0	47.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
<b>Oklahoma:</b>						
Steers	35.2	22.6	39.9	52.0	68.3	58.0
Heifers	64.8	77.4	60.1	48.0	31.7	42.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 31. PLACEMENTS, BY SEX AND FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Sex and type of cattle	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
	Percent							
Steers	71.7	46.0	40.1	57.4	46.3	18.3	31.3	52.2
Heifers	28.3	54.0	59.9	42.6	53.7	81.7	68.7	47.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 32. PLACEMENTS BY SEX AND FEEDING AREA, OKLAHOMA, 1966-67

Sex and type of cattle	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
	Percent					
Steers	62.6	26.9	40.1	67.5	56.5	58.0
Heifers	37.4	73.1	59.9	32.5	43.5	42.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Placements by sex among Texas and Oklahoma feeding areas reflect the prominence of large feedlots in various feeding areas, Tables 31 and 32. Both the Texas and Oklahoma Panhandle areas, as well as the Central Oklahoma feeding area, represent areas where large feedlots account for much of the cattle feeding activity. These areas also contained the highest proportion of steers.<sup>4</sup>

#### LENGTH OF FEEDING PERIOD, PLACEMENT PATTERNS AND DEATH LOSS

Although feedlots attempt to utilize available capacities whenever feasible, placement patterns tend to vary with seasonality of feeder cattle production.

<sup>4</sup>Preferences of feedlots relative to grade, weight and sex will be discussed in a later section.

Feeding programs in the Southern Plains are governed by various factors among which steer versus heifer feeding is one of the more important. Heifers ordinarily require fewer days on feed than do steers to reach a comparable finish.

#### Length of Feeding Period

Feeding programs generally averaged a little less than 120 days in the Southern Plains during 1966-67, Table 33. Eighty percent or more of the cattle were marketed after feeding periods of 90 or more days. Feeding periods ordinarily vary from 90 to 120 days for heifers and from 115 to 135 days for most steers. Fed cattle which are marketed with fewer than 90 days on feed are often finished for baby beef markets or are cattle with prior backgrounding.

TABLE 33. LENGTH OF FEEDING PERIOD, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and days on feed	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
	Percent					
Texas:						
Under 60	0	.6	0	1.0	.1	.2
60 - 90	5.9	9.8	16.6	10.7	7.3	9.5
91 - 120	44.5	36.5	49.6	37.5	26.8	32.8
121 - 150	42.4	44.8	24.8	35.9	57.5	48.0
151 - 180	5.3	4.6	8.5	13.0	6.6	7.9
Over 180	1.9	3.7	.5	1.9	1.7	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Under 60	0	.8	0	0	0	.1
60 - 90	12.8	24.6	4.7	8.3	4.7	6.4
91 - 120	42.9	60.3	58.7	50.7	41.1	46.8
121 - 150	41.5	14.3	34.0	41.0	49.5	43.6
151 - 180	2.8	0	2.6	0	4.1	2.8
Over 180	0	0	0	0	.6	.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 34. LENGTH OF FEEDING PERIOD, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Days on feed	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
	Percent							
Under 60	.2	0	.2	0	.3	.9	0	.2
60 - 90	1.0	2.4	17.4	39.2	26.3	11.5	6.8	9.5
91 - 120	15.5	25.0	52.1	29.6	44.9	54.8	76.0	32.8
121 - 150	65.9	64.1	21.9	30.5	25.4	32.1	17.2	48.0
151 - 180	14.3	8.0	5.7	.6	3.0	.7	0	7.9
Over 180	3.1	.5	2.7	.1	.1	0	0	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Feedlots in Texas and Oklahoma with capacities of 10,000 or more head generally relied on feeding periods of more than 120 days in contrast to other size groups, Table 33. These large lots were also predominantly steer feeders, Table 30. Feedlots with the shortest feeding period in Texas were the 2,000-4,999-head capacity lots. In Oklahoma, they were the 1,000-1,999-head capacity lots. These size groups also finished the highest proportion of heifers.

The Texas and Oklahoma Panhandle feeding areas, which encompass most of the large commercial feedlots in the Southern Plains, are predominantly steer feeders as evidenced by the longer feeding periods in these areas, Tables 34 and 35. Since the

Rio Grande Plains, Gulf Coast and East Texas feeding areas produce much of the lighter weight fed beef consumed in nearby Gulf Coast consumption centers, common feeding periods in these areas are from 90 to 120 days. Relatively short feeding periods were also common in the Plateau-Pecos area. Northern and Southeastern Oklahoma feedlots fed a high proportion of heifers and consequently utilized short feeding periods.

#### Placement Patterns

October and March were the most important months for placing cattle on feed in Texas feedlots during 1966-67, Table 36. Placement patterns in

TABLE 35. LENGTH OF FEEDING PERIOD, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Days on feed	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
	Percent					
Under 60	0	0	.7	0	0	.1
60 - 90	.6	21.0	21.9	21.6	.1	6.4
91 - 120	26.3	74.7	55.7	67.1	72.6	46.8
121 - 150	69.1	4.1	20.6	4.5	27.3	43.6
151 - 180	4.0	.2	1.1	4.5	0	2.8
Over 180	0	0	0	2.3	0	.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 36. PLACEMENTS BY MONTH AND SIZE OF FEEDLOT, TEXAS, 1966-67

State and month	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
January	5.1	5.8	7.2	7.1	7.0	7.0
February	9.1	5.9	7.5	7.0	7.9	7.6
March	9.5	8.5	10.1	8.9	11.9	11.0
April	9.2	8.5	7.9	8.2	7.0	7.4
May	4.4	8.3	7.5	7.8	6.8	7.1
June	5.2	6.1	6.8	6.4	6.8	6.7
July	6.5	6.4	6.4	7.4	7.4	7.2
August	4.8	10.7	7.5	7.6	6.6	7.0
September	10.2	11.2	8.6	10.1	8.8	9.1
October	16.9	11.1	11.3	10.6	13.1	12.4
November	11.5	11.1	10.0	10.8	8.7	9.4
December	7.6	6.4	9.2	8.1	8.0	8.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 37. PLACEMENTS BY MONTH AND SIZE OF FEEDLOT, OKLAHOMA, 1966-67

Month	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head- and-more capacity	Percent	
January	6.1	6.9	7.1	6.5	6.7	6.7	6.7
February	3.1	6.9	7.0	6.4	6.6	6.6	6.6
March	3.3	5.4	8.4	6.4	9.5	8.4	8.4
April	3.1	5.3	8.6	6.3	9.6	8.5	8.5
May	3.2	5.2	8.5	8.1	9.4	8.8	8.8
June	3.2	6.7	6.7	7.9	6.4	6.8	6.8
July	5.9	6.6	6.6	8.2	6.5	6.9	6.9
August	7.3	6.3	7.3	10.8	6.7	7.7	7.7
September	21.5	13.1	10.0	11.9	10.2	10.8	10.8
October	33.0	16.1	11.7	9.3	10.4	10.7	10.7
November	3.7	13.0	10.7	9.2	10.4	10.2	10.2
December	6.6	8.5	7.4	9.0	7.6	7.9	7.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Oklahoma tended to peak in September, October and November, Table 37.

Since most feedlots in Texas with a capacity of 10,000 head and over are located in or adjacent to the Panhandle wheat producing area, these lots fed substantial numbers of cattle which were wintered on wheat pastures. These cattle are often preferred by feedlots since they generally received supplemental feeding and tend to go on full feed faster than do other types of feeder cattle. In addition, cattle which are backgrounded or preconditioned require shorter feeding periods to achieve a desired grade and finish.

The smaller feedlots in both Texas and Oklahoma tended to place most emphasis on placements during the September-November period. This placement pattern generally complements the farming or ranching operations of many smaller feedlot owners.

Placement patterns in the Texas Panhandle and Rolling Plains reflect the importance of nearby winter wheat pastures, Table 38. This was also true for the Southwestern Oklahoma feeding area, Table 39. Placements were considerably higher in fall for all feeding areas in Texas except the Rio Grande

Plains and Gulf Coast areas. Feedlots in these two areas purchase feeder cattle primarily from nearby Texas sources. The Rio Grande Plains and Gulf Coast areas ordinarily enjoy relatively long growing periods and favorable grazing conditions throughout the year.

Feedlots in the Oklahoma Panhandle and Central Oklahoma areas also placed fewer cattle on feed in the fall than did other Oklahoma feeding areas. One of the larger feeder cattle markets in the United States is located in Central Oklahoma where adequate supplies of feeder cattle are generally available on a year-round basis. Feedlots in the Oklahoma Panhandle stressed the importance of utilizing capacities at fairly high and even levels throughout the year. Whether these feedlots can maintain this placement pattern in the face of competition for feeder cattle from other rapidly expanding feedlots remains to be seen.

#### Death Loss

Feedlots in both Texas and Oklahoma reported death losses equivalent to about one percent during 1966-67, Table 40. While small variations in death

TABLE 38. PLACEMENTS BY MONTH AND FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Month	Feeding area							Total
	Panhandle	Southern High Plains	Plateau- Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
January	6.2	7.6	9.7	3.3	7.4	7.8	7.9	7.0
February	7.1	7.8	6.0	13.8	7.6	7.8	8.3	7.6
March	14.6	8.1	7.9	15.7	7.4	7.9	8.3	11.0
April	7.7	8.1	5.4	4.2	7.4	7.9	7.9	7.4
May	6.9	7.8	5.8	3.9	7.8	7.7	7.9	7.1
June	6.2	7.5	5.3	2.6	7.9	7.6	7.9	6.7
July	7.6	7.6	5.3	2.5	7.5	7.7	7.8	7.2
August	6.4	7.8	7.2	2.6	7.6	8.1	8.1	7.0
September	8.7	12.1	7.3	2.8	9.7	9.3	9.2	9.1
October	13.0	9.7	17.5	24.7	10.6	9.6	9.0	12.4
November	8.3	8.1	11.9	16.2	10.3	9.4	8.9	9.4
December	7.3	7.8	10.7	7.7	8.8	9.2	8.8	8.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 39. PLACEMENTS BY MONTH AND FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Month	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
				Percent		
January	7.5	6.6	6.0	7.8	3.7	6.7
February	7.6	6.4	6.0	7.9	3.6	6.6
March	7.4	6.4	6.1	7.9	3.2	6.4
April	7.4	7.0	6.1	7.8	13.1	8.5
May	8.2	6.3	6.0	7.8	13.0	8.8
June	7.9	6.4	5.2	7.7	3.5	6.8
July	7.9	7.1	5.7	7.7	3.4	6.9
August	8.3	12.1	7.5	7.8	3.8	7.7
September	9.5	15.4	13.5	9.1	12.8	10.8
October	9.8	11.6	14.1	9.8	12.6	10.7
November	9.7	8.1	13.6	9.6	12.7	10.2
December	8.8	6.6	10.2	9.1	4.6	7.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

loss existed among various sizes of feedlots, slightly higher death losses existed among lots in the intermediate size group. Small feedlots are often able to detect sick cattle faster than are larger feedlots since their feeding pens are usually somewhat smaller. However, large feedlots have personnel available who are constantly inspecting cattle for sickness or disease. The larger feedlots often retain personnel, such as trained or practical veterinarians, who are capable of providing immediate medication and other necessary aid.

Death loss among feeding areas in the Southern Plains was generally lowest in feeding areas which placed both heavier and more mature cattle on feed. Losses were below average in the Panhandle feeding areas and Southwestern Oklahoma.

### WEIGHTS AND GRADES OF FED CATTLE MARKETED

#### Weights of Fed Cattle Marketed

Fed cattle marketed from Southern Plains feedlots are considerably lighter than those marketed from feedlots in most other major feeding areas. During 1966-67, cattle marketed out of Oklahoma feedlots averaged 935 pounds while those sold by Texas feedlots averaged 860 pounds, Table 41. Approximately 40 percent of the cattle sold from Oklahoma feedlots weighed in excess of 1,000 pounds as compared to 33 percent of the total from Texas feedlots.

Feedlots with a capacity of 10,000 head or more, which also fed the highest proportion of steers in each state, finished cattle at heavier weights than did any of the other size groups, Table 41. For example, more than 50 percent of the cattle finished in large feedlots in Oklahoma weighed in excess of 1,000 pounds compared to more than 40 percent in Texas. Feedlots with the highest proportion of heifers—the 2,000-4,999 size group in Texas and the 1,000-1,999 size group in Oklahoma—also marketed fed cattle at lighter weights than did other size groups.

The Gulf Coast and Rio Grande Plains feeding areas, which usually place a relatively high proportion of light weight heifers on feed, marketed fed cattle averaging less than 700 pounds during 1966-67, Table 42. While a small proportion of these cattle received additional feeding in other lots, almost all of these light weight cattle went directly to slaughter to satisfy the baby beef market. Fed cattle marketed from the Texas Panhandle area feedlots averaged about 975 pounds. They averaged slightly over 1,000 pounds in the Oklahoma Panhandle, Table 43. Finished cattle in all other Texas and Oklahoma feeding areas averaged at least 100 pounds less than in the Panhandle areas.

#### Grades of Fed Cattle Marketed

Oklahoma feedlots, which fed cattle to slightly heavier weights than Texas feedlots, also marketed a higher proportion of fed cattle equivalent to U.S. Choice, Table 44. Two-thirds of the cattle sold from Oklahoma feedlots were estimated to be U.S. Choice

TABLE 40. DEATH LOSS, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
				Percent		
Texas	1.1	1.0	1.3	1.0	1.0	1.1
Oklahoma	.6	1.7	1.3	1.2	.9	1.1

TABLE 41. WEIGHT GROUPS OF FED CATTLE MARKETED, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and Pounds	Feeding area					Total
	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	
Texas:						
Under 600	9.2	9.0	7.6	20.8	6.6	9.2
600 - 699	42.8	23.3	40.5	24.4	11.4	19.1
700 - 799	12.3	14.3	27.8	11.5	14.1	15.9
800 - 899	6.3	19.8	6.0	7.7	12.0	10.4
900 - 999	4.6	13.9	4.1	14.6	12.7	11.5
1,000 - 1,099	7.4	15.4	11.4	9.1	37.2	27.4
1,100 - 1,199	17.3	4.3	2.4	9.6	5.5	5.8
1,200 and over	.1	0	.2	2.3	.5	.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Under 600	5.9	3.3	0	0	1.5	1.1
600 - 699	11.4	31.7	13.6	8.3	2.2	6.7
700 - 799	43.8	26.2	36.7	33.4	3.2	16.3
800 - 899	13.8	14.8	12.5	7.1	15.2	13.0
900 - 999	21.5	6.5	17.7	10.7	27.0	21.0
1,000 - 1,099	2.5	11.5	18.5	26.1	38.7	31.4
1,100 - 1,199	1.1	4.3	1.0	13.0	11.2	9.6
1,200 and over	0	1.7	0	1.4	1.0	.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 42. WEIGHT GROUPS OF FED CATTLE MARKETED, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Pounds	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
Percent								
Under 600	1.2	3.7	6.8	26.5	23.1	18.1	13.6	9.2
600 - 699	5.3	7.9	13.4	12.5	28.4	53.0	57.7	19.1
700 - 799	8.6	29.1	30.5	17.7	5.8	24.4	20.5	15.9
800 - 899	10.5	17.0	33.7	13.6	.2	3.0	2.1	10.4
900 - 999	16.4	9.4	9.9	11.6	14.3	.9	2.1	11.5
1,000 - 1,099	46.1	29.7	4.9	7.1	23.9	.6	2.9	27.4
1,100 - 1,199	10.2	3.2	.8	11.0	4.3	0	.8	5.8
1,200 and over	1.7	0	0	<sup>1</sup>	0	0	.3	.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Less than .05 percent.

TABLE 43. WEIGHT GROUPS OF FED CATTLE MARKETED, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Pounds	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
Percent						
Under 600	0	0	3.1	.6	4.5	1.1
600 - 699	2.5	6.4	22.6	6.5	15.6	6.7
700 - 799	3.4	59.0	52.3	17.6	23.7	16.3
800 - 899	14.7	5.0	11.0	16.9	9.6	13.0
900 - 999	16.0	2.9	11.0	44.9	27.3	21.0
1,000 - 1,099	46.9	7.7	0	13.5	19.2	31.4
1,100 - 1,199	15.5	14.9	0	0	.1	9.6
1,200 and over	1.0	4.1	0	0	0	.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 44. U.S. GRADE EQUIVALENTS OF FED CATTLE MARKETED, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and U.S. grade	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total	Percent					
Texas:												
U.S. Prime	0	.2	1.0	1.1	.1	.4						
U.S. Choice	37.8	47.9	31.5	38.8	57.2	49.4						
U.S. Good	55.8	45.7	56.6	55.7	36.7	43.6						
U.S. Standard	6.4	6.2	10.9	4.4	5.9	6.5						
U.S. Commercial and lower	0	0	0	0	.1	.1						
Total	100.0	100.0	100.0	100.0	100.0	100.0						
Oklahoma:												
U.S. Prime	0	1.8	.1	0	.8	.6						
U.S. Choice	43.9	39.4	50.7	66.8	72.0	65.9						
U.S. Good	52.8	55.5	44.7	33.0	20.8	28.9						
U.S. Standard	3.3	3.3	4.5	.2	6.4	4.6						
U.S. Commercial and lower	0	0	0	0	0	0						
Total	100.0	100.0	100.0	100.0	100.0	100.0						

compared to fifty percent of the fed cattle sold from Texas lots. Most of the remaining fed cattle graded U. S. Good. A small percentage of the cattle marketed from Southern Plains feedlots graded U. S. Standard, but less than one percent qualified for U. S. Prime.

The smaller feedlots in Texas and Oklahoma generally sold a higher proportion of cattle grading U. S. Good than U. S. Choice, while the reverse was true for the large feedlots. Feedlots with the highest percent of heifers also sold the highest proportion of cattle grading U. S. Good and lower.

Two-thirds of the cattle in all Oklahoma feeding areas were estimated to be U. S. Choice with the exception of Southeastern Oklahoma where two-thirds of the fed cattle graded U. S. Good, Table 45. Among Texas feeding areas, the Panhandle and Southern High Plains areas finished the highest proportion of cattle grading U. S. Choice, Table 46. This contrasts with the Gulf Coast and Rio Grande Plains feeding areas where about 90 percent of the fed cattle graded U. S. Good or lower. Almost 40 percent of the cattle finished in the Rio Grande Plains were equivalent in quality to U. S. Standard during 1966-67.

TABLE 45. U.S. GRADE EQUIVALENTS OF FED CATTLE MARKETED, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

U.S. grade	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
Percent						
U.S. Prime	.9	.9	0	0	0	.6
U.S. Choice	72.0	61.4	31.0	59.7	61.7	65.9
U.S. Good	24.4	37.3	67.4	31.3	29.1	28.9
U.S. Standard	2.7	.4	1.6	9.0	9.2	4.6
U.S. Commercial and lower	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 46. U.S. GRADE EQUIVALENTS OF FED CATTLE MARKETED, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

U.S. grade	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
Percent								
U.S. Prime	.7	.1	2.0	.3	0	.1	0	.4
U.S. Choice	68.9	60.9	50.2	42.3	35.3	11.1	7.9	49.4
U.S. Good	25.1	35.5	42.9	52.5	60.1	82.1	54.9	43.6
U.S. Standard	5.1	2.5	4.9	4.9	4.6	6.7	37.2	6.5
U.S. Commercial and lower	.2	0	0	0	0	0	0	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0



TABLE 47. GEOGRAPHIC AREA OF FED CATTLE SALES, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and sales area	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Percent	
Texas:							
Texas	86.5	82.4	91.4	65.6	74.6		76.2
Oklahoma	2.8	6.6	1.2	6.5	4.0		4.0
New Mexico	0	.3	1.5	5.0	3.5		3.3
Arkansas - Louisiana	.7	1.5	1.9	6.6	2.2		2.9
Mississippi - Alabama - Georgia - Florida	1.7	3.0	2.3	3.5	7.3		5.7
Colorado	2.6	1.1	0	6.8	.4		1.4
California	0	0	.2	2.9	5.3		3.9
Other states	5.7	5.1	1.5	3.1	2.7		2.6
Total	100.0	100.0	100.0	100.0	100.0		100.0
Oklahoma:							
Texas	0	4.9	31.7	13.6	18.3		18.6
Oklahoma	75.4	78.2	50.1	42.2	31.7		39.2
New Mexico	0	0	0	0	0		0
Arkansas - Louisiana	0	0	.5	6.4	6.9		5.4
Mississippi - Alabama - Georgia - Florida	0	0	4.0	13.0	17.3		13.4
Colorado	0	0	0	1.2	0		.3
California	0	0	0	.7	0		.2
Other states <sup>1</sup>	24.6	16.9	13.7	22.9	25.8		22.9
Total	100.0	100.0	100.0	100.0	100.0		100.0

<sup>1</sup>Primarily Kansas.

### GEOGRAPHIC AREA OF SALES, SELLING ARRANGEMENTS AND SHRINKAGE

Fed cattle were sold predominantly to slaughtering plants within the Southern Plains, but substantial volumes were also shipped to states that were deficit in fed beef production. Types of selling agencies and selling arrangements generally varied by size of feedlot and feeding area.

#### Geographic Area of Sales

Three-fourths of the cattle sold by Texas feedlots during 1966-67 went to packing plants within Texas, Table 47. However, nearly two-thirds of the fed cattle in Oklahoma were shipped to slaughter plants in other states. Most of the Texas out-of-state shipments went to the deficit fed beef states in the Southeast and to New Mexico, California and Oklahoma. Texas, Kansas and states in the Southeast

received most of the fed cattle shipped out of Oklahoma.

The larger feedlots in Texas and Oklahoma generally sold higher proportions of their fed cattle to out-of-state buyers than did the smaller feedlots, Table 47. The most important out-of-state markets for Texas feedlots with a capacity of 10,000 head or more were the Southeastern states and California. Important out-of-state markets for the large feedlots in Oklahoma were Texas, the Southeast and Kansas.

Texas feeding areas which sold 90 percent or more of their fed cattle to Texas outlets during 1966-67 included East Texas, Rio Grande Plains, Rolling Plains and the Gulf Coast, Table 48. Texas Panhandle area feedlots, consisting mostly of large lots, sold almost one-half of their cattle to out-of-state buyers during the same period. Southeastern states—

TABLE 48. GEOGRAPHIC AREA OF FED CATTLE SALES, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Sales area	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
Percent								
Texas	56.2	84.7	75.8	92.8	99.3	90.5	94.4	76.2
Oklahoma	9.6	.3	0	1.2	0	0	0	4.0
New Mexico	6.1	4.7	2.2	0	0	0	0	3.3
Arkansas - Louisiana	2.5	0	5.3	5.5	0	6.8	5.6	2.9
Mississippi - Alabama - Georgia - Florida	11.3	6.6	1.7	.5	0	0	0	5.7
Colorado	3.5	0	0	0	0	0	0	1.4
California	5.3	3.1	15.0	0	0	1.2	0	3.9
Other	5.5	.6	0	0	.7	1.5	0	2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 49. GEOGRAPHIC AREA OF FED CATTLE SALES, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Sales area	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
	Percent					
Texas	23.5	0	0	2.1	29.6	18.6
Oklahoma	24.0	83.3	31.9	91.9	21.5	39.2
New Mexico	0	0	0	0	0	0
Arkansas - Louisiana	2.3	3.2	34.1	1.5	13.2	5.4
Mississippi - Alabama						
Georgia - Florida	8.3	6.4	34.0	4.5	33.9	13.4
Colorado	.5	0	0	0	0	.3
California	.3	0	0	0	0	.2
Other <sup>1</sup>	41.1	7.1	0	0	1.8	22.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Primarily Kansas.

including Mississippi, Alabama, Georgia and Florida—were the most important out-of-state market for Panhandle area feedlots. Other important markets were Oklahoma, New Mexico and California. Feedlots in the Plateau-Pecos area shipped a substantial portion of their cattle to California.

Oklahoma feedlots in the Central and Northern Oklahoma feeding areas sold predominantly to Oklahoma outlets during 1966-67 in contrast to other Oklahoma feeding areas, Table 49. Major out-of-state markets for fed cattle in the Oklahoma Panhandle included Texas and Kansas. Southeastern Oklahoma feeders shipped cattle primarily to Arkansas-Louisiana and other states in the Southeast. Feedlots in Southwestern Oklahoma shipped mostly to states in the Southeast and Texas.

### Selling Agencies

In Oklahoma, the feedlot owners and managers accounted for all the fed cattle sales during 1966-67, Table 50. In Texas, however, feedlot owners and

managers sold about two-thirds of the fed cattle, while most of the remaining were sold by feedlot salaried salesmen. Since the feedlot owner or manager in the large feedlot is generally faced with a multitude of daily problems and decisions, salaried salesmen were the primary selling agency in these lots. However, the feedlot owners or managers generally prescribe or adjust the selling policies relative to weight and grade in accordance with current or expected market conditions. Numerous feedlots often "shape" cattle into uniform groups with regard to size or weight, grade, general appearance and other factors in an attempt to attract higher prices.

The importance of feedlot salaried salesmen generally declined as feedlots decreased in size. Dealers and commission men accounted for a small proportion of the Texas sales, but commission selling during 1966-67 was used to a very limited extent and by only a few lots. In contrast, 54 percent of the fed cattle in Colorado were sold on a commission basis in 1964 (3). Auctions were used only by the small

TABLE 50. TYPE OF SELLING AGENCY USED FOR MARKETING FED CATTLE, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and selling agency	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
Texas:						
Owner or operator	93.3	97.7	87.3	91.1	43.2	61.4
Feedlot salaried salesman	0	2.3	11.4	8.9	52.8	35.8
Auction	6.7	0	0	0	0	.1
Terminal market	0	0	0	0	0	0
Other <sup>1</sup>	0	0	1.3	0	4.0	2.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Owner or operator	100.0	100.0	100.0	100.0	100.0	100.0
Feedlot salaried salesman	0	0	0	0	0	0
Auction	0	0	0	0	0	0
Terminal market	0	0	0	0	0	0
Other	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Primarily dealers or commission men.

TABLE 51. TYPE OF SELLING AGENCY USED FOR MARKETING FED CATTLE, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Selling agency	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
					Percent			
Owner or operator	34.0	61.2	60.9	80.1	99.2	100.0	100.0	61.4
Feedlot salaried salesman	62.4	38.7	24.6	19.9	0	0	0	35.8
Auction	0	.1	0	0	.8	0	0	.1
Terminal market	0	0	0	0	0	0	0	0
Other <sup>1</sup>	3.6	0	14.5	0	0	0	0	2.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Primarily dealers or commission men.

farmer-feeders. However, all feedlots occasionally dispose of chronic bloaters or poor performers through auctions or other available outlets.

The feedlot owner or manager accounted for the majority of the fed cattle sales in all Texas feeding areas with the exception of the Texas Panhandle, Table 51. Although salaried salesmen were the predominant sales agency in the Panhandle, they were also important in the Southern High Plains, the Plateau-Pecos and Rolling Plains feeding areas. Dealer or commission selling was of most importance in the El Paso area in the Plateau-Pecos feeding area.

#### Selling Arrangement

Approximately three-fourths of the fed cattle were sold direct to packers on a liveweight basis during 1966-67, Table 52. Most of the remaining cattle were also sold direct on either a grade and carcass weight or carcass weight basis. The predominant method of selling on a carcass basis in Oklahoma was grade and carcass weight compared to the carcass weight method in Texas. Consignment selling was not used by any of the feedlots interviewed.

Carcass weight selling refers to the method of sale whereby buyer and seller negotiate on live animals and agree to settle on the basis of carcass weights and prices without regard to grade. In grade and carcass weight selling, grades also become an important negotiating factor. Most feedlots agreed that carcass grade and weight selling is an equitable method of selling fat cattle, but many feedlots who sold cattle through this method expressed considerable dissatisfaction with carcass identification, grading, shrinkage assessments and methods of payment at the packer level.

Larger feedlots in both Texas and Oklahoma sold a considerably higher proportion of their fed cattle on a direct liveweight basis than did the smaller feedlots, Table 52. Smaller feedlots, who sold cattle on a carcass basis, were generally dependent on local packers and locker plants. Numerous smaller feedlots preferred the carcass method of selling, provided they restricted this method of selling to local packers who had won the confidence of local feedlots. Feedlot operators often prefer to inspect the carcasses from their cattle to gain a better insight of their

TABLE 52. TYPE OF SELLING ARRANGEMENT USED FOR MARKETING FED CATTLE, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and selling arrangement	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999 head capacity	10,000-head-and-more capacity	Total	Percent					
Texas:												
Direct-liveweight	63.9	51.7	71.6	80.0	80.1	77.8						
Grade and carcass weight	13.4	17.3	16.9	2.2	7.8	8.7						
Carcass weight	4.9	19.8	9.8	17.6	12.0	12.6						
Consignment	0	0	0	0	0	0						
Terminal or auction	13.6	11.2	1.7	.2	.1	.8						
Other	4.2	0	0	0	0	.1						
Total	100.0	100.0	100.0	100.0	100.0	100.0						
Oklahoma:												
Direct-liveweight	44.8	34.4	54.2	74.3	80.3	72.7						
Grade and carcass weight	0	39.2	7.1	25.7	19.7	19.8						
Carcass weight	39.4	13.4	38.1	0	0	6.7						
Consignment	0	0	0	0	0	0						
Terminal or auction	15.8	13.0	.6	0	0	.8						
Other	0	0	0	0	0	0						
Total	100.0	100.0	100.0	100.0	100.0	100.0						

TABLE 53. TYPE OF SELLING ARRANGEMENT USED FOR MARKETING FED CATTLE, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Selling arrangement	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
	Percent							
Direct-liveweight	90.2	90.8	66.3	75.0	32.3	81.0	83.4	77.8
Grade and carcass weight	6.8	6.7	17.2	24.4	8.4	9.3	2.0	8.7
Carcass weight	2.8	2.2	15.0	.5	58.7	5.9	14.6	12.6
Consignment	0	0	0	0	0	0	0	0
Terminal or auction	.2	0	1.5	.1	.6	3.8	0	.8
Other	0	.3	0	0	0	0	0	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

feeding program relative to grade, yield, marbling and so forth. Feedlots with less than 2,000-head capacity sold slightly less than 15 percent of their cattle through auctions or terminals during 1966-67. Auctions or terminals were used only occasionally by the larger feedlots.

Direct liveweight selling was of greatest importance in the Texas Panhandle and Southern High Plains, Table 53. The method of selling fed cattle in the Panhandle and surrounding areas may change with the recent construction of several large shipper-type beef slaughtering plants in or adjacent to these areas. Carcass methods of selling were relatively more important in the East Texas, Plateau-Pecos and Roll-

ing Plains feeding areas than in other areas. Carcass methods of selling were most important in East Texas since several of the larger feedlots in that area are affiliated with slaughtering plants.

Direct-liveweight selling was the predominant method of selling fed cattle in all Oklahoma feeding areas, Table 54. However, sales on a carcass basis were also important in all Oklahoma feeding areas—especially in Southeastern and Southwestern Oklahoma.

#### Cattle Sales Prior to Shipment

Almost all fed cattle in the Southern Plains were sold within 10 days prior to shipment, Table 55. This

TABLE 54. TYPE OF SELLING ARRANGEMENT USED FOR MARKETING FED CATTLE, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Selling arrangement	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
	Percent					
Direct-liveweight	76.8	76.8	56.9	75.5	59.9	72.7
Grade and carcass weight	21.2	11.4	22.7	7.0	29.3	19.8
Carcass weight	2.0	4.2	19.4	17.4	10.7	6.7
Consignment	0	0	0	0	0	0
Terminal or auction	0	7.6	1.0	.1	.1	.8
Other	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 55. NUMBER OF DAYS CATTLE SOLD PRIOR TO SHIPMENT, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and days	Feeding area					Total
	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	
	Percent					
Texas:						
0 - 10	81.3	87.1	80.2	89.7	90.2	88.3
11 - 20	4.1	5.9	7.6	8.0	6.1	6.6
21 - 30	11.4	4.7	7.5	2.2	2.0	3.1
31 and over	3.2	2.3	4.7	.1	1.7	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
0 - 10	100.0	89.1	100.0	100.0	100.0	99.5
11 - 20	0	10.9	0	0	0	.5
21 - 30	0	0	0	0	0	0
31 and over	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 56. NUMBER OF DAYS CATTLE SOLD PRIOR TO SHIPMENT, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Days	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
0 - 10	92.5	87.2	75.0	53.3	96.2	92.1	71.9	88.3
11 - 20	6.2	6.5	19.5	12.6	.5	6.7	4.7	6.6
21 - 30	.9	.8	5.5	12.0	3.0	1.2	23.4	3.1
31 and over	.4	5.5	0	22.1	.3	0	0	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

was especially true in Oklahoma. In Texas, approximately 10 percent of the cattle were held for more than 10 days after sales were negotiated. In the absence of prior arrangements by the buyer for cattle left in feedlots more than 7 to 10 days past the specified sales or delivery date, feedlots either weighed the cattle and assessed the buyer the customary custom feeding charges or simply required the buyer to pay for the additional gain at the original sales price. Feedlots which sold cattle more than 10 days prior to shipment generally entered into an oral agreement with the buyer relative to price, delivery date and other conditions.

Texas feeding areas with the highest proportion of sales more than 10 days prior to shipment included the Plateau-Pecos, the Rolling Plains and the Rio Grande Plains feeding areas, Table 56. These sales, for the most part, were negotiated on the basis of an agreed price and future delivery date.

#### Shrinkage Assessments

Cattle sold on a direct liveweight basis are ordinarily assessed a standard 4-percent shrink FOB the feedlot when weighed at 7:00 a.m. after an overnight stand. The live shrink assessment varied occasionally

depending on weighing conditions, the distance to scales if cattle were not weighed at the feedlot, length of time off feed and water, time of weighing and sorting privileges. Cattle weighed during the afternoon or evening are often assessed more than a 4-percent shrink. If sorting privileges are granted by the seller or if cattle are weighed on non-feedlot scales, shrinkage assessments on a live basis are ordinarily less than 4 percent.

The most common shrink assessment for selling on a carcass basis was 2 to 2½ percent during 1966-67, Table 57. Prior to the current USDA regulations governing packer buying of livestock on a carcass basis, methods of assessing shrink varied considerably among packers.<sup>5</sup> These regulations are designed to provide, among other things, standard carcass weighing and payment procedures. With the establishment of uniform weighing procedures, wide variations in carcass shrinkage assessments as shown in Table 57 may lessen.

<sup>5</sup>Section 201.99 of the Packers and Stockyards Act regulates the buying of livestock by packers on a carcass basis. Copies of this regulation are available upon request from the Livestock Procurement Branch, Packer and Poultry Division, Packers and Stockyards Administration, South Agriculture Building, Washington, D. C. 20250.

TABLE 57. SHRINKAGE ASSESSMENTS BY PACKERS FOR FED CATTLE SOLD ON A CARCASS BASIS, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and carcass shrinkage assessment (percent)	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total	Percent					
Texas:												
0 - 1.49	9.1	12.5	0	0	0	3.1						
1.50 - 1.99	18.2	0	5.0	30.0	12.5	12.3						
2.00 - 2.49	27.3	12.5	35.0	10.0	50.0	30.8						
2.50 - 2.99	9.1	25.0	25.0	40.0	18.7	23.1						
3.00 and up	36.3	50.0	35.0	20.0	18.8	30.7						
Total	100.0	100.0	100.0	100.0	100.0	100.0						
Oklahoma:												
0 - 1.49	0	0	0	0	0	0						
1.50 - 1.99	0	0	14.2	33.3	0	9.1						
2.00 - 2.49	100.0	50.0	42.9	66.7	33.3	54.6						
2.50 - 2.99	0	16.7	28.6	0	66.7	22.7						
3.00 and up	0	33.3	14.3	0	0	13.6						
Total	100.0	100.0	100.0	100.0	100.0	100.0						

TABLE 58. OWNERSHIP OF CATTLE ON FEED, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and type of ownership	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total	Percent					
Texas:												
Feedlot	94.3	84.0	78.6	45.2	32.2	43.8						
Members of feedlot corporation	0	0	3.4	8.0	10.3	8.4						
Not feedlot owned	5.7	16.0	18.0	46.8	57.5	47.8						
Total	100.0	100.0	100.0	100.0	100.0	100.0						
Oklahoma:												
Feedlot	100.0	87.3	86.1	43.6	21.1	39.7						
Members of feedlot corporation	0	0	0	0	3.0	1.7						
Not feedlot owned	0	12.7	13.9	56.4	75.9	58.6						
Total	100.0	100.0	100.0	100.0	100.0	100.0						

### OWNERSHIP OF CATTLE ON FEED AND CUSTOM FEEDING ARRANGEMENTS

Custom feeding is becoming more prevalent in the Southern Plains as large commercial feedlots increase in number and size (6). The increasing importance of custom feeding directly affects the ownership patterns of cattle on feed and requires daily decision making concerning the financing and selling of custom cattle as well as the methods of assessing custom feeding charges.

#### Ownership of Cattle on Feed

During 1966-67, almost 60 percent of the cattle in Southern Plains feedlots were finished on a custom basis, Table 58. Cattle fed on a custom basis were

owned predominantly by individuals or firms not affiliated with the feedlots. However, 15 percent of the custom cattle in Texas were owned by members of feedlot corporations. These members were assessed the usual custom feeding charges.

The proportion of cattle fed on a custom basis varied directly with the size of feedlots with the larger feedlots generally feeding the highest proportion of custom cattle, Table 58. Numerous feedlots with a capacity of 10,000 head or more fed almost entirely on a custom basis during 1966-67. Many feedlot operators stated that as large feedlots increase in size and number, the proportion of cattle fed on a custom basis will tend to increase in the Southern Plains.

TABLE 59. OWNERSHIP OF CATTLE ON FEED, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Type of ownership	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
Percent								
Feedlot	25.4	27.7	53.7	12.7	86.3	64.3	82.5	43.8
Members of feedlot corporation	14.7	5.1	6.6	18.8	1.3	<sup>1</sup>	1.9	8.4
Not feedlot owned	59.9	67.2	39.7	68.5	12.4	35.7	15.6	47.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Less than .05 percent.

TABLE 60. OWNERSHIP OF CATTLE ON FEED, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Type of ownership	Feeding area				Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	
Percent					
Feedlot	41.7	55.6	69.7	22.4	34.3
Members of feedlot corporation	.8	0	0	0	6.4
Not feedlot owned	57.5	44.4	30.3	77.6	59.3
Total	100.0	100.0	100.0	100.0	100.0

TABLE 61. OWNERSHIP OF CUSTOM FED CATTLE, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and type of owner	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total	Percent					
Texas:												
Packer	0	0	27.5	22.3	9.6	12.7						
Retailer	0	0	2.2	.3	.1	.2						
Rancher	9.5	98.1	46.4	35.6	63.5	58.1						
Other <sup>1</sup>	90.5	1.9	23.9	41.8	26.8	29.0						
Total	100.0	100.0	100.0	100.0	100.0	100.0						
Oklahoma:												
Packer	0	6.6	0	32.9	5.5	11.1						
Retailer	0	0	0	0	0	0						
Rancher	0	33.3	83.6	57.2	49.1	51.9						
Other <sup>1</sup>	0	60.1	16.4	9.9	45.4	37.0						
Total	0	100.0	100.0	100.0	100.0	100.0						

<sup>1</sup>Including cattle buyers and dealers and various speculators such as doctors and lawyers.

The pattern of ownership varied greatly among feeding areas in Texas, Table 59. Approximately 75 percent of the cattle in the Panhandle, Southern High Plains and Rolling Plains feedlots were fed on a custom basis during 1966-67. The Panhandle area alone accounted for about one-half of the custom feeding in Texas. Cattle owned by members of feedlot corporations were most prominent in the Panhandle and Rolling Plains feeding areas. Custom feeding was of least importance in East Texas and the Rio Grande Plains.

Although feedlots in Central Oklahoma fed the highest proportion of custom cattle in that state, the most important custom feeding area in Oklahoma was the Panhandle area, Table 60. The Oklahoma Panhandle area, similar to the Texas Panhandle area, accounted for more than 50 percent of the cattle fed on a custom basis in Oklahoma. Most of the cattle in Northern and Southeastern Oklahoma feedlots were fed on a non-custom basis.

#### Ownership of Custom Fed Cattle

The majority of the cattle fed on a custom basis in the Southern Plains were owned by farmers or ranchers, Table 61. A substantial proportion of the custom cattle were also owned by cattle buyers, cattle dealers and other types of investors. More than 10

percent of the cattle fed on a custom basis were owned by packers. However, this understates the number of cattle fed by packers since several packers also owned feedlots (4).

Among feeding areas in Texas, ranchers owned the highest proportion of custom cattle in the Rolling Plains, Panhandle and Southern High Plains feedlots, Table 62. Although packers owned the highest proportion of the custom cattle in the Rio Grande Plains and East Texas feeding areas, feedlots in the Panhandle accounted for almost 40 percent of the cattle fed by packers on a custom basis.

In Oklahoma, ownership of cattle in feedlots by ranchers was most prevalent in the Central, Northern and Panhandle feeding areas, Table 63. Three-fourths of the cattle fed on a custom basis in Southeastern Oklahoma were owned by packers during 1966-67. But, almost two-thirds of the packer-owned cattle in commercial feedlots were fed in the Panhandle feedlots.

#### Financing and Selling Custom Cattle

Feedlots in Texas and Oklahoma who practiced custom feeding during 1966-67 generally did not finance the purchase of feeder cattle for their clients. Two of the large feedlots in Texas financed the pur-

TABLE 62. OWNERSHIP OF CUSTOM FED CATTLE, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Type of owner	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
Percent								
Packer	9.3	2.9	12.2	11.2	53.5	27.0	72.6	12.7
Retailer	.1	.3	0	1.2	0	0	0	.2
Rancher	69.8	61.1	21.5	80.0	18.7	21.8	14.6	58.1
Other <sup>1</sup>	20.8	35.7	66.3	7.6	27.8	51.2	12.8	29.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Including cattle buyers and dealers and various speculators such as doctors and lawyers.

TABLE 63. OWNERSHIP OF CUSTOM FED CATTLE, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Type of owner	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
				Percent		
Packer	13.1	9.5	75.0		2.3	11.1
Retailer	0	0	0		0	0
Rancher	55.3	61.9	25.0		94.5	51.9
Other <sup>1</sup>	31.6	28.6	0		3.2	37.0
Total	100.0	100.0	100.0		100.0	100.0

<sup>1</sup>Including cattle buyers and dealers and various speculators such as doctors and lawyers.

chasing of custom cattle, but these represented only a small proportion of the custom cattle in each lot. However, feedlots carry their customers' feed bills for varying lengths of time.

Most feedlots bill their clients for feed costs either on the first and 15th of each month, at the end of the month or at the ending of the feeding period. Customary billing dates, however, are the first and 15th of each month or at the end of the month. Custom feeders using these more frequent billing methods generally require relatively smaller volumes of short-term capital.

Commercial banks were the primary source of financing for cattle fed on a custom basis. Banks generally require a margin equivalent to or ranging from 0 to 30 percent of the value of the feeder cattle. In addition, banks also make loans to cover feeding charges. Depending on the reputation of the client or buyer of the feeder cattle, banks and other lending institutions may secure only the cattle as collateral for the loan. Banks and other lending institutions may also specify that feeder cattle be hedged on the futures market before negotiating loans. This, however, has not been a general practice. Although most custom feeders were not certain about the hedging practices of their clients, less than 5 percent of the cattle owned by feedlots were hedged during 1966-67. Unfamiliarity with the futures market was the primary reason given for the small volume of hedging.

Selling arrangements for custom fed cattle are generally supervised by the feedlot manager. Most feedlots used the same general selling guidelines and policies for custom cattle as for those owned by the feedlot. Feedlot managers or their representatives are usually in a better position to estimate the weights and grades of cattle on feed than are their clients. They are also more familiar with the type and quality of fed cattle desired by various packer buyers.

Payments for custom cattle are made either directly to the owner of the cattle or to the feedlots depending on prior arrangements between the feedlot and the client. Commercial banks and other lending institutions, however, retain a first lien on the client's cattle. Since finance agencies generally also provide the necessary financing for feed bills and

other expenses, the custom feeder ordinarily is assured of receiving full payment for feed bills and other services rendered. In the event clients have outstanding bills with the custom feeder, feedlots handling payments for their clients are permitted to retain the necessary or available funds after satisfying the first mortgage holder.

#### Methods of Assessing Custom Feeding Charges

Custom feeding charges generally varied among Texas and Oklahoma feedlots. In Texas, custom feeding charges were generally assessed as follows: (1) a basic feed charge varying from \$42.00 to \$50.00 per ton, (2) a markup above feed cost ranging from \$4.00 to \$8.00 per ton to cover handling, grinding and labor costs, and (3) an assessment of \$1.50 to \$3.00 per head to cover vaccination, medication, branding, dehorning and dipping. Specific charges for medication and vaccination depended on the type and amount of drugs or vaccinations required. Typical feeding charges were \$44.00-\$46.00 per ton for feed with a markup of \$6.50-\$7.50 per ton. Specific feed charges varied by feeding area and type of feed.<sup>6</sup> Custom feeding charges on the basis of pounds of gain were used by only a few of the feedlots.

Custom feeding charges in Oklahoma were generally based on a basic feed charge per ton of feed plus an additional charge of 5 to 6 cents per head per day to cover handling, yardage, feed grinding and similar expenses. Some custom feeders in Oklahoma were using methods of assessing feed charges similar to those used by Texas feedlots: that is, charges were based on a basic charge per ton of feed with a markup above the basic feed costs to cover handling, labor and other expenses. Charges for medication, vaccination, branding, dehorning and dipping were similar to those assessed by Texas feedlots. A few of the feedlots in Oklahoma also based custom feeding charges on pounds of gain. Most feedlots in the Southern Plains were not satisfied with this method since considerable variation exists in the ability of feeder cattle to convert feed into pounds of gain.

<sup>6</sup>A detailed analysis of feeding costs by feeding area and size of feedlots will be available in a forthcoming publication dealing with costs and economies of size.



TABLE 64. BREED PREFERENCE FOR FEEDER CATTLE, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and breed or cross	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total	Percent					
Texas:												
Hereford	14.7	8.3	5.9	0	5.0	7.8						
Angus	5.9	16.7	0	6.2	0	4.3						
Hereford X Angus	17.7	25.0	44.1	43.8	45.0	34.5						
Hereford X Brahman	8.8	16.7	8.8	0	0	6.9						
Hereford X Charolais	0	0	2.9	0	5.0	1.7						
Angus X Brahman	14.7	0	5.9	6.3	0	6.9						
Cross-breed <sup>1</sup>	38.2	33.3	32.4	43.7	45.0	37.9						
Total	100.0	100.0	100.0	100.0	100.0	100.0						
Oklahoma:												
Hereford	8.3	16.7	0	0	0	5.9						
Angus	0	0	0	0	0	0						
Hereford X Angus	41.7	33.3	75.0	75.0	100.0	58.8						
Hereford X Brahman	0	0	0	0	0	0						
Hereford X Charolais	0	0	12.5	0	0	2.9						
Angus X Brahman	0	0	0	0	0	0						
Cross-breed <sup>1</sup>	50.0	50.0	12.5	25.0	0	32.4						
Total	100.0	100.0	100.0	100.0	100.0	100.0						

<sup>1</sup>"Okie" or any unspecified cross or crosses.

### PREFERENCES OF FEEDLOTS RELATIVE TO BREED, WEIGHT, AGE AND SEX

A general knowledge of specific feeder cattle characteristics preferred by feedlots is of great importance to the producer who attempts to produce feeder cattle with these desired characteristics. Although feedlots in the Southern Plains often feed cattle which exhibit many different types of characteristics, most feedlot owners or managers expressed definite preferences relative to breed, weight, age and sex. Only those preferences ranked first are considered in this study.

#### Preferred Breeds

Approximately 90 percent of the feedlot operators in the Southern Plains expressed a preference for crossbred feeder cattle, with the most popular being the Hereford-Angus cross, Table 64. Numerous feedlot operators who stated a preference for the Hereford-Angus cross also indicated that a Hereford-Angus cross

with 1/8 to 1/16 Brahman bloodlines would be desirable. According to feedlot operators, combining the Hereford-Angus cross with a small amount of Brahman breeding tends to lessen the incidence of uneven fat deposits and also increases the heat tolerance of feeder animals. A substantial number of feedlots did not indicate a preferred breed; instead they stated that any good cross or "Okie" type of feeder cattle was acceptable. Although variations existed in the specific cross desired by size of feedlot, crossbreeds again were the overwhelming preference of all size groups.

Because of the wide area differences in such factors as climatic conditions and feeding programs, specific breed preferences varied greatly between Texas feeding areas, Table 65. Feedlots in the Gulf Coast and Rio Grande Plains expressed a preference for a higher proportion of feeder cattle possessing Brahman bloodlines or crosses than did other feeding areas. Much of the baby beef consumed in the Gulf

TABLE 65. BREED PREFERENCE FOR FEEDER CATTLE, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Breed or cross	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
Percent								
Hereford	3.2	20.0	20.0	12.5	12.5	0	0	7.8
Angus	6.5	0	10.0	0	0	4.3	10.0	4.3
Hereford X Angus	54.8	20.0	30.0	37.5	20.8	21.7	50.0	34.5
Hereford X Brahman	0	0	0	0	4.2	26.1	10.0	6.9
Hereford X Charolais	0	0	0	0	0	4.4	10.0	1.7
Angus X Brahman	6.5	10.0	0	0	4.2	8.7	20.0	6.9
Cross-breed <sup>1</sup>	29.0	50.0	40.0	50.0	58.3	34.8	0	37.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>"Okie" or any unspecified cross or crosses.

TABLE 66. BREED PREFERENCE FOR FEEDER CATTLE, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Breed or cross	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
	Percent					
Hereford	0	11.1	0	16.7	0	5.9
Angus	0	0	0	0	0	0
Hereford X Angus	77.8	22.2	100.0	33.3	83.3	58.8
Hereford X Brahman	0	0	0	0	0	0
Hereford X Charolais	0	0	0	0	16.7	2.9
Angus X Brahman	0	0	0	0	0	0
Cross-breed <sup>1</sup>	22.2	66.7	0	50.0	0	32.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>"Okie" or any unspecified cross or crosses.

Coast consumption centers is produced in these two areas. Two-thirds of the Panhandle area feedlots, who finish cattle at relatively heavier weights and higher grades, expressed a predominant preference for the Hereford-Angus cross. Feeders in the Plateau-Pecos area also expressed a preference for a higher proportion of English breeds or English crosses than did most other feeding areas.

With the exception of Northern and Central Oklahoma, feedlots in Oklahoma preferred the Hereford-Angus cross, Table 66. The most common preference in Northern and Central Oklahoma were crossbreeds, but no specific preference was indicated relative to breed or cross.

Breed preferences, by sex and size of feedlot for Texas and Oklahoma, are shown in Appendix Tables 9 and 10. Feedlots who preferred steers also preferred a considerably higher proportion of English crosses or English breeds than did those preferring heifers.

### Preferred Weights

Approximately two-thirds of the feedlots in Texas preferred feeder cattle weighing less than 500 pounds in contrast to Oklahoma where approximately two-thirds preferred feeder cattle in excess of 500 pounds, Table 67. Weight preferences appear to have a direct relationship to size of feedlot operations. The larger feedlots preferred heavier weights in contrast to the smaller feedlots which preferred lighter weights.

In both states, however, the commonly preferred weight range for feeder cattle under 500 pounds was the 400-500 pound range. The most common weight preference in the 500-pound-and-over category was the 600-700-pound weight range. Weight preferences, of course, are strongly influenced by the sex preference. The most common weight range desired for heifers was 400-500 pounds while the 600-700 weight range was most common for feedlots preferring steers, Appendix Tables 11 and 12.

TABLE 67. WEIGHT PREFERENCE FOR FEEDER CATTLE, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and weight preference	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
Texas.						
Under 300	0	0	2.9	12.4	0	2.6
300-399	27.3	15.4	17.6	25.0	15.0	20.7
400-499	48.5	38.5	47.1	12.5	25.0	37.9
500-599	12.1	23.1	14.7	6.3	20.0	14.6
600-699	6.1	15.3	11.8	43.8	35.0	19.0
700-799	6.0	7.7	5.9	0	5.0	5.2
800 and over	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Under 300	8.3	0	0	0	0	2.9
300-399	16.7	14.2	0	0	0	8.6
400-499	25.0	42.9	25.0	25.0	0	25.7
500-599	25.0	14.3	12.5	25.0	0	17.1
600-699	8.4	28.6	37.5	50.0	50.0	28.6
700-799	8.3	0	25.0	0	50.0	14.3
800 and over			0	0	0	2.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 68. WEIGHT PREFERENCE FOR FEEDER CATTLE, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Weight preference	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
	Percent							
Under 300	0	0	0	0	0	13.0	0	2.6
300-399	0	0	10.0	14.3	28.0	43.5	50.0	20.7
400-499	16.1	40.0	50.0	28.6	56.0	43.5	40.0	37.9
500-599	9.7	40.0	30.0	57.1	8.0	0	10.0	14.6
600-699	54.8	20.0	10.0	0	8.0	0	0	19.0
700-799	19.4	0	0	0	0	0	0	5.2
800 and over	0	0	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Feeder cattle weight preferences among Texas feeding areas varied from a high of 600-700 pounds in the Panhandle to a low of 300-400 pounds in the Rio Grande Plains, Table 68. Weights preferred by Texas feeding areas follow a definite pattern and tend to decrease rather consistently along a southeasterly line from the Panhandle to the Rio Grande Plains.

Weight preferences among Oklahoma feeding areas varied considerably more than in Texas, Table 69. Feedlots in the Panhandle, Northern Oklahoma and Southwestern Oklahoma feeding areas preferred feeder cattle in excess of 500 pounds. Most Southeastern and Central Oklahoma feedlots expressed a preference for feeder cattle weighing less than 500 pounds. Weight preferences are also affected to a large extent by the type of feeding program employed and market outlets. Cattle produced by feedlots in the Oklahoma Panhandle ordinarily weighed in excess of 1,000 pounds while those produced by Southeastern Oklahoma feedlots were marketed at about 750 pounds. Area differences in weight preferences generally also parallel area marketing weight differences in the Southern Plains.

#### Preferred Age

Age preferences for feeder cattle by Texas and Oklahoma feedlots were generally related directly to weight preferences. Approximately 50 percent of

the feedlots expressed a preference for feeder cattle under 8 months of age, Table 70. At the same time, about one-half of the feedlots preferred feeder cattle weighing less than 500 pounds, Table 67.

Smaller feedlots, which ordinarily market cattle at weights under those of the large feedlots, also preferred a younger type of feeder animal, Table 70. In general, feedlots with a capacity of 10,000 head and more expressed a preference for feeder cattle ranging from 12 to 20 months of age. Medium-size feedlot operators expressed a wide range of age preferences. These feedlots often organize their feeding program to service nearby as well as more distant market outlets.

The pattern of age preferences for feeder cattle among Texas and Oklahoma feeding areas is similar to previously expressed weight preferences. In Texas 80 percent of the Panhandle area feedlots expressed a preference for feeder cattle ranging from 12 to 20 months of age, Table 71. Seventy-five percent of these feedlots also gave a preference for feeder cattle in excess of 600 pounds. The East Texas, Gulf Coast and Rio Grande Plains feedlots who finish cattle at relatively light weights, prefer feeder cattle predominantly in the 6 to 8-month age category.

Oklahoma feedlots in the Panhandle, similar to those in the Texas Panhandle, finish cattle at relatively heavy weights and consequently prefer feeder cattle

TABLE 69. WEIGHT PREFERENCE FOR FEEDER CATTLE, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Weight preference	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
	Percent					
Under 300	0	10.0	0	0	0	2.9
300-399	0	0	50.0	16.7	0	8.6
400-499	0	20.0	50.0	50.0	33.3	25.7
500-599	22.2	20.0	0	16.7	16.7	17.1
600-699	66.7	30.0	0	0	16.7	28.6
700-799	11.1	20.0	0	16.6	16.7	14.3
800 and over	0	0	0	0	16.6	2.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 70. AGE PREFERENCE FOR FEEDER CATTLE, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and age (months)	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
----- Percent -----						
Texas:						
Under 3	0	0	0	0	0	0
3 - 5	0	0	8.8	20.0	0	5.3
6 - 8	65.6	41.7	50.0	20.0	25.0	45.1
9 - 11	18.8	25.0	8.8	13.3	15.0	15.1
12 - 14	9.4	16.7	17.7	13.3	35.0	17.7
15 - 17	0	16.6	5.9	26.7	20.0	10.6
18 - 20	6.2	0	8.8	6.7	5.0	6.2
Over 20	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Under 3	0	0	0	0	0	0
3 - 5	0	0	0	0	0	0
6 - 8	41.7	42.9	0	0	0	22.8
9 - 11	25.0	14.3	37.5	25.0	0	22.9
12 - 14	8.3	28.6	12.5	50.0	75.0	25.7
15 - 17	0	0	25.0	25.0	25.0	11.4
18 - 20	8.3	14.2	12.5	0	0	8.6
Over 20	16.7	0	12.5	0	0	8.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

mostly between 12 and 20 months of age, Table 72. Feedlots in Southeastern Oklahoma, which place lighter cattle on feed, prefer cattle under 12 months of age.

**Preferred Sex**

More than one-half of the Oklahoma feedlots preferred to feed steers during 1966-67, Table 73. In Texas, less than 40 percent of the feedlots stated

TABLE 71. AGE PREFERENCE FOR FEEDER CATTLE, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Age (months)	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
----- Percent -----								
Under 3	0	0	0	0	0	0	0	0
3 - 5	0	0	10.0	0	4.2	18.2	0	5.3
6 - 8	3.2	33.3	10.0	28.6	70.8	77.3	100.0	45.1
9 - 11	16.1	33.4	20.0	42.9	12.5	4.5	0	15.1
12 - 14	35.5	22.2	40.0	14.3	8.3	0	0	17.7
15 - 17	29.0	11.1	10.0	14.2	0	0	0	10.6
18 - 20	16.2	0	10.0	0	4.2	0	0	6.2
Over 20	0	0	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 72. AGE PREFERENCE FOR FEEDER CATTLE, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Age (months)	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
----- Percent -----						
Under 3	0	0	0	0	0	0
3 - 5	0	0	0	0	0	0
6 - 8	11.1	20.0	75.0	33.3	0	22.8
9 - 11	0	20.0	25.0	50.0	33.3	22.9
12 - 14	44.4	20.0	0	16.7	33.3	25.7
15 - 17	22.3	10.0	0	0	16.7	11.4
18 - 20	22.2	10.0	0	0	0	8.6
Over 20	0	20.0	0	0	16.7	8.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 73. PREFERENCE FOR FEEDER CATTLE, BY SEX AND SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and sex preference	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total	Percent					
Texas:												
Steers	44.1	38.5	23.5	31.3	45.0	35.9						
Heifers	32.4	46.1	52.9	37.5	30.0	40.2						
No preference	23.5	15.4	23.6	31.2	25.0	23.9						
Total	100.0	100.0	100.0	100.0	100.0	100.0						
Oklahoma:												
Steers	66.7	16.7	62.5	25.0	100.0	55.9						
Heifers	25.0	83.3	37.5	25.0	0	35.3						
No preference	8.3	0	0	50.0	0	8.8						
Total	100.0	100.0	100.0	100.0	100.0	100.0						

a definite preference for steers. Almost one-fourth of the Texas feedlots did not list a definite preference for steers or heifers. These feedlots stated that market conditions and especially price differentials between steer and heifer feeder cattle were the determining factors. Numerous feedlots stated that a price differential of at least \$3-\$4 per hundredweight between steer and heifer feeder cattle was considered an inducement toward feeding additional heifers. This is especially true if the price differential between steer and heifer feeder cattle is \$4 or more per hundredweight.

Only feedlots in the Texas and Oklahoma Panhandle and Southwestern Oklahoma expressed a definite preference for steer over heifer feeder cattle, Tables 74 and 75. Feedlots in most other feeding areas preferred heifers, but a substantial portion of the feedlots in the East Texas, Gulf Coast, Rio Grande Plains and Southeastern Oklahoma feeding areas said that price was the determining factor.

### COMPOSITION OF RATIONS, SOURCE OF FEED AND FEED PURCHASE ARRANGEMENTS

The type and source of feed used by the Southern Plains feedlots varied by feeding area and size of feedlot. Feed purchase arrangements also tend to vary with the size of feedlot operations (2).

#### Composition of Rations

Concentrates made up about three-fourths of the total feed ration in Texas and about two-thirds of the total in Oklahoma during 1966-67, Tables 76 and 77. In Texas, grain sorghum or milo represented 60 percent of the total ration and more than 80 percent of the concentrates. Milo made up slightly more than 50 percent of the feed ration in Oklahoma, but barley and corn accounted for another 6 percent. Barley and corn were relatively unimportant in Texas. Pre-mix or a commercially prepared batch supplement containing protein, minerals, vitamins, feed

TABLE 74. PREFERENCE FOR FEEDER CATTLE, BY SEX AND FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Sex preference	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
Percent								
Steers	64.5	20.0	30.0	37.5	32.0	17.4	20.0	35.9
Heifers	19.4	60.0	60.0	50.0	40.0	52.2	30.0	40.2
No preference	16.1	20.0	10.0	12.5	28.0	30.4	50.0	23.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 75. PREFERENCE FOR FEEDER CATTLE, BY SEX AND FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Sex preference	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
Percent						
Steers	88.9	40.0	33.4	33.3	66.7	55.9
Heifers	11.1	50.0	33.3	50.0	33.3	35.3
No preference	0	10.0	33.3	16.7	0	8.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

additives and urea was the second most important concentrate and represented about 5 percent of the ration in both states. Molasses was relatively more important in Oklahoma than in Texas, but most rations in Texas contained higher proportions of animal or vegetable fat.

Silage, either corn or grain sorghum, represented the bulk of the roughage fed in Texas and Oklahoma. Most of the remaining roughage in Texas consisted of cottonseed hulls and alfalfa hay, compared to green chop and cottonseed hulls in Oklahoma. Cottonseed hulls were often substituted for alfalfa hay and vice versa depending on relative prices of these roughage items. Most feedlots are able to substitute various types of roughage in their rations as represented by the wide range of roughage items fed.

In Texas, the larger feedlots generally fed higher proportions of concentrates than did the smaller feedlots during 1966-67, Table 76. The opposite trend existed in Oklahoma, Table 77. Several of the larger feedlots in Oklahoma produced much of their roughage requirements.

Among Texas feeding areas, the Southern High Plains, the Rolling Plains and East Texas fed the highest proportion of concentrates, Table 78. The

Gulf Coast and Rio Grande Plains feeding areas, which enjoy relatively long growing seasons, fed relatively more silage and green chop than did other feeding areas. The highest levels of concentrates in Oklahoma were fed in the Southwestern and Central Oklahoma feedlots, Table 79. Southeastern Oklahoma feedlots, which also marketed the lightest fed cattle in Oklahoma, included relatively high proportions of roughage in their rations. Feeding areas in Texas and Oklahoma which fed the highest proportion of roughage have several things in common. They are located relatively long distances from the major milo producing areas and are generally faced with a relatively high grain transportation cost compared to most other feeding areas in Texas and Oklahoma.

While the rations previously discussed represent total rations for 1966-67, most feedlots employ feeding programs consisting of starting rations, intermediate or growing rations and finishing rations. Typical starting rations often include about 35 percent milo or grain. The total level of concentrates in these rations is generally around 55 percent. The concentrate level in intermediate rations varies from 65 to 70 percent while concentrates in finishing rations often exceed 90 percent.

TABLE 76. FEED INGREDIENTS, BY SIZE OF FEEDLOT, TEXAS, 1966-67

Type of feed	Less-than 1,000-head Capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head- and-more capacity	Total
Percent						
<b>Concentrates:</b>						
Grain sorghum	53.5	56.8	62.6	60.7	59.6	60.1
Barley <sup>1</sup>	.3	.5	.8	.5	1.1	.9
Corn	1.9	0	.1	0	.4	.3
Bran	0	0	0	0	.2	.1
Pre-mix <sup>2</sup>	4.8	10.8	6.7	4.4	5.1	5.4
Additives and other supplements <sup>3</sup>	8.9	1.9	1.5	1.8	1.4	1.6
Molasses	1.0	.4	1.9	2.3	3.3	2.9
Fat	0	.1	.6	1.0	2.0	1.5
Urea <sup>4</sup>	5	0	5	0	6	5
<b>Total</b>	<b>70.4</b>	<b>70.5</b>	<b>74.2</b>	<b>70.7</b>	<b>73.1</b>	<b>72.8</b>
<b>Roughage:</b>						
Silage	20.7	20.6	13.3	15.9	10.7	12.3
Green chop	0	0	3.0	2.4	.7	1.3
Beet pulp	0	0	.1	0	2.2	1.5
Cottonseed hulls	3.2	4.4	5.5	3.5	6.7	5.8
Rice hulls	0	1.2	.2	2.1	1.1	1.1
Peanut hulls	.5	0	.4	.3	0	.1
Alfalfa hay	.6	2.9	.9	4.0	4.6	3.9
Alfalfa dehy	.6	.2	.8	.9	.9	.9
Other <sup>5</sup>	4.0	.2	1.6	.2	0	.3
<b>Total</b>	<b>29.6</b>	<b>29.5</b>	<b>25.8</b>	<b>29.3</b>	<b>26.9</b>	<b>27.2</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<sup>1</sup>Includes small quantities of wheat.

<sup>2</sup>A commercially prepared "batch" supplement which contains protein, minerals, vitamins, feed additives and urea.

<sup>3</sup>Protein supplements, mineral vitamins and feed additives fed in addition to the pre-mix.

<sup>4</sup>Fed in addition to the urea in the pre-mix.

<sup>5</sup>Less than .05 percent.

<sup>6</sup>Primarily Johnson grass of prairie hay.

## Source of Feed

With the exception of the smaller feedlots, the feeding industry in Texas and Oklahoma was dependent almost entirely on commercial sources for feed grain supplies during 1966-67, Table 80. Texas feedlots purchased 95 percent of their feed grain from sources within Texas. Oklahoma feedlots, in contrast, bought more than one-half of their feed grain from sources outside of Oklahoma, chiefly Texas and Kansas.

Although Southern Plains feedlots purchased most of their roughage requirements, feedlots in both states produced a substantial amount of the roughage fed, Table 81. Roughage items purchased from out-of-state sources consisted mostly of alfalfa hay, alfalfa dehy and cottonseed hulls. Smaller feedlots are often also engaged in farming and ranching operations as evidenced by the relatively large volumes of roughages produced by these feedlots. Roughage items produced by feedlots consisted mostly of silage and green chop. In Texas, the Rio Grande Plains and Gulf Coast feedlots produced two-thirds or more of the roughage fed in their feedlots, Appendix Table 13. This was also true for feedlots in Northern and Southeastern Oklahoma, Appendix Table 14.

## Feed Purchase Arrangements

As large commercial feedlots increase in number and size, and depending upon potential supplies of feed in a given area, competition for adequate quantities and quality of feed tends to increase. More than one-half of the feed grain in Texas and about three-fourths of the roughage in Texas and Oklahoma were obtained on a contract basis during 1966-67, Tables 82 and 83. However, most of the feed grain in Oklahoma was purchased on a cash basis.

While most contracts were for periods of 6 months or less, some feedlots entered into agreements for feed supplies as much as a year in advance of delivery date. Purchase contracts for roughage items were generally made with producers. Contracts for feed grains were generally entered into with producers, grain elevators or other commercial feed companies.

## SOURCE OF PRICE INFORMATION

Most feedlots stated that their primary sources of price information were federal-state live cattle quotations from various major markets, Table 84. Other important sources were U.S. Department of

TABLE 77. FEED INGREDIENTS, BY SIZE OF FEEDLOT, OKLAHOMA, 1966-67

Type of feed	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head- and-more capacity	Total
Percent						
<b>Concentrates:</b>						
Grain sorghum	58.3	31.6	59.1	44.1	56.6	53.1
Barley <sup>1</sup>	6.9	18.7	12.1	.7	0	2.5
Corn	4.9	6.6	.4	14.3	.1	3.6
Bran	0	.3	.2	0	0	.2
Pre-mix <sup>2</sup>	7.1	5.2	6.2	4.5	4.6	4.8
Additives and other supplements <sup>4</sup>	.4	1.2	1.0	.9	.7	.7
Molasses	.3	2.0	1.3	2.4	4.2	3.3
Fat	0	.4	.4	.4	.6	.5
Urea <sup>5</sup>	0	0	.2	0	0	.2
<b>Total</b>	<b>77.9</b>	<b>66.0</b>	<b>80.9</b>	<b>67.3</b>	<b>66.8</b>	<b>68.5</b>
<b>Roughage:</b>						
Silage	11.6	17.3	7.6	15.8	25.7	20.9
Green chop	0	0	1.6	6.4	1.5	2.5
Beet pulp	0	0	.5	0	0	.1
Cottonseed hulls	1.3	5.4	3.9	2.9	2.8	3.1
Rice hulls	0	0	1.4	1.3	0	.5
Peanut hulls	0	0	2.5	0	0	.3
Alfalfa hay	4.4	4.8	.8	1.0	1.5	1.5
Alfalfa dehy	0	0	0	.8	1.7	1.2
Other <sup>6</sup>	4.8	6.5	.8	4.5	.2	1.4
<b>Total</b>	<b>22.1</b>	<b>34.0</b>	<b>19.1</b>	<b>32.7</b>	<b>33.2</b>	<b>31.5</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<sup>1</sup>Includes small quantities of wheat.

<sup>2</sup>Less than .05 percent.

<sup>3</sup>A commercially prepared "batch" supplement which contains protein, minerals, vitamins, feed additives and urea.

<sup>4</sup>Protein supplements, mineral vitamins and feed additives fed in addition to the pre-mix.

<sup>5</sup>Fed in addition to the urea in the pre-mix.

<sup>6</sup>Primarily Johnson grass or prairie hay.

Agriculture carcass quotations and price information from the National Provisioner yellow sheet. Although feedlots generally relied on two to four sources for price information, only a few feedlots listed the live cattle futures market or selling and buying agents as primary sources. Feedlots relying primarily on carcass price quotations or price information from the National Provisioner yellow sheet were generally the larger feedlots.

### IMPLICATIONS FOR FUTURE RESEARCH

Although cattle feeding has increased dramatically within the Southern Plains since the mid-1950's, much potential apparently exists for additional increases in cattle feeding within the area. Generally abundant supplies of feeder cattle and feed, an increasing demand for fed beef and a growing population in the South and Southeast with rising per capita incomes are factors which tend to encourage further feedlot expansion. Large quantities of grain sorghum and roughage items are currently being produced in the Southern Plains. During 1966-67, for example, cattle in Texas feedlots consumed 1,529,500 tons of grain sorghum. Estimated quantities of Texas-produced grain sorghum available for shipment to other states and export to foreign countries

during this period were approximately 6 million tons. The recent construction of large, specialized, shipper-type beef slaughtering plants within and in areas adjacent to the Texas Panhandle area is another inducement to further feedlot expansion.

However, the Southern Plains feeding industry, like any industry undergoing rapid growth and adjustment, is often faced with the problem of making intelligent decisions in the absence of much published information and research. With improved knowledge, decision-makers often can avoid some of the costs and risks associated with adjustments and may realize potentials more quickly and effectively.

Problems facing the feeding industry tend to vary with the introduction of new technology, adjustments required to adapt to new technology, size of feedlot operations, and customary management practices which often lag behind current innovations and available levels of technology. General problems associated with the feeding industry in the Southern Plains include those relating to costs and economies of size as well as to optimum location of cattle feeding given the relevant raw material supplies and costs, slaughter facilities and slaughter costs, transportation costs and market outlets.

TABLE 78. FEED INGREDIENTS, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Type of feed	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
	Percent							
Concentrates:								
Grain sorghum	59.0	66.1	53.3	65.2	64.7	55.5	58.6	60.1
Barley <sup>1</sup>	.9	1.0	3.4	.4	1.0	0	0	.9
Corn	2	2	0	0	2.3	.1	0	.3
Bran	0	0	0	0	2	1.1	0	.1
Pre-mix <sup>3</sup>	4.7	5.6	3.6	7.9	5.8	7.1	7.2	5.4
Additives and other supplements <sup>4</sup>	1.8	1.3	2.9	.8	1.7	.6	.2	1.6
Molasses	3.0	2.7	4.7	3.0	2.6	2.5	0	2.9
Fat	1.8	1.7	1.0	1.8	1.9	.8	0	1.5
Urea <sup>5</sup>	0	0	.3	0	2	0	0	2
<b>Total</b>	<b>71.2</b>	<b>78.4</b>	<b>69.2</b>	<b>79.1</b>	<b>80.0</b>	<b>67.7</b>	<b>66.0</b>	<b>72.8</b>
Roughage:								
Silage	14.4	2.7	14.2	1.8	4.3	23.8	15.9	12.3
Green chop	.1	0	3.1	0	0	4.0	14.2	1.3
Beet pulp	1.4	1.9	0	0	4.4	0	0	1.5
Cottonseed hulls	4.9	9.8	7.4	14.2	6.8	2.0	2.6	5.8
Rice hulls	1.7	0	0	.5	1.9	.8	0	1.1
Peanut hulls	0	0	0	0	.3	.8	0	.1
Alfalfa hay	5.3	5.5	4.2	3.7	.3	.2	0	3.9
Alfalfa dehy	.9	.9	1.6	.2	1.8	0	0	.9
Other <sup>6</sup>	.1	.8	.3	.5	.2	.7	1.3	.3
<b>Total</b>	<b>28.8</b>	<b>21.6</b>	<b>30.8</b>	<b>20.9</b>	<b>20.0</b>	<b>32.3</b>	<b>34.0</b>	<b>27.2</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<sup>1</sup>Includes small quantities of wheat.

<sup>2</sup>Less than .05 percent.

<sup>3</sup>A commercially prepared "batch" supplement which contains protein, minerals, vitamins, feed additives and urea.

<sup>4</sup>Protein supplements, mineral vitamins and feed additives fed in addition to the pre-mix.

<sup>5</sup>Fed in addition to the urea in the pre-mix.

<sup>6</sup>Primarily Johnson grass or prairie hay.



Problems or questions posed by feedlot operators include the following:

(1) Pollution. Several states have specific regulations and policies regarding feedlot waste disposal and runoff into streams, lakes and other areas. Legislation concerned with water and air pollution is currently pending in both the Texas and Oklahoma legislatures. Further research was generally deemed necessary concerning economic systems of waste disposal and control of feedlot runoff in relation to state and federal regulations governing air and water pollution.

(2) Buying practices. Feedlots generally follow established customs and traditions in buying feeder cattle and selling fat cattle. Although feedlots obtained about one-fourth of their feeder cattle directly from farms and ranches, the majority of the feeder cattle were purchased in odd lots consisting of assorted sizes and grades at auctions. This presents problems in terms of both exposure to sickness and disease and acquisition of cattle with diverse backgrounds and breeding which directly affect performance in feedlots. Possibilities could be explored for establishing more specialized feeder cattle sales where animals are sorted relative to breed, age, sex and weight. Feeder cattle with symptoms of disease

or sickness could be excluded from such sales. Other possibilities include sales of feeder cattle at concentration yards specifically organized to fit requirements of feedlot operators.

(3) Marketing practices. Approximately 80 percent of the fed cattle in Southern Plains feedlots were sold on a direct liveweight basis during 1966-67 with a standard shrinkage assessment. Risk and uncertainty are difficult to minimize under the traditional system of selling on a liveweight basis. Further research is required concerning the pricing of fed cattle given various shrink assessments, sorting privileges and weighing conditions. Although weighing procedures and payment schedules are specified by the U. S. Department of Agriculture for cattle sold on a carcass basis, questions remain concerning the effects of sorting privileges, varying carcass shrink and distance to slaughter plants on prices. Important also is the ability of the buyer or seller to accurately judge the carcass grade on a live basis.

(4) Preconditioning feeder calves after weaning. Numerous producers and feedlot operators were concerned with the economics of conditioning feeder calves at the ranch or in specialized feeder calf conditioning lots to minimize death loss and to minimize

TABLE 79. FEED INGREDIENTS, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Type of feed	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
Percent						
Concentrates:						
Grain sorghum	52.4	24.4	30.7	63.7	64.1	53.1
Barley <sup>1</sup>	.2	7.9	.2	3.0	7.8	2.5
Corn	1.1	27.8	12.6	.8	0	3.6
Bran	.1	.1	0	0	0	.2
Pre-mix <sup>3</sup>	4.5	6.0	2.4	2.7	6.3	4.8
Additives and other supplements <sup>4</sup>	.2	.6	3.5	3.9	.7	.7
Molasses	4.3	.3	4.7	2.2	.5	3.3
Fat	.2	0	0	1.5	1.4	.5
Urea <sup>5</sup>	0	0	0	.2	0	.2
Total	63.0	67.1	54.1	78.0	80.8	68.5
Roughage:						
Silage	29.4	14.8	27.7	.7	3.4	20.9
Green chop	3.3	2.9	0	0	2.2	2.5
Beet pulp	0	0	0	0	.7	.1
Cottonseed hulls	.8	5.4	1.2	15.8	5.1	3.1
Rice hulls	.7	0	0	0	0	.5
Peanut hulls	.1	0	0	0	2.4	.3
Alfalfa hay	.1	1.3	10.2	4.7	5.2	1.5
Alfalfa dehy	2.0	0	0	0	0	1.2
Other <sup>6</sup>	.6	8.5	6.8	.8	.2	1.4
Total	37.0	32.9	45.9	22.0	19.2	31.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Includes small quantities of wheat.

<sup>2</sup>Less than .05 percent.

<sup>3</sup>A commercially prepared "batch" supplement which contains protein, minerals, vitamins, feed additives and urea.

<sup>4</sup>Protein supplements, mineral vitamins and feed additives fed in addition to the pre-mix.

<sup>5</sup>Fed in addition to the urea in the pre-mix.

<sup>6</sup>Primarily Johnson grass or prairie hay.

TABLE 80. SOURCE OF TOTAL FEED GRAIN, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and Source	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
----- Percent -----						
Texas:						
Own production	28.8	14.4	6.0	5.7	.6	2.9
Purchased feed:						
Texas	71.2	85.6	93.3	91.0	97.4	95.1
Oklahoma	0	0	.3	3.1	0	.6
Kansas	0	0	0	0	1.0	.7
Other	0	0	.4	.2	1.0	.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Own production	12.1	4.8	2.1	1.7	0	.9
Purchased feed:						
Texas	0	0	34.7	36.0	27.2	28.8
Oklahoma	56.9	75.4	45.0	17.2	48.9	43.2
Kansas	0	19.8	18.2	33.5	23.9	24.6
Other	31.0	0	0	11.6	0	2.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

the period required for feeder calves to adapt to a feedlot ration. Additional research is necessary to determine the least-cost preconditioning rations, specified medication and vaccination levels and the feedlot

demand for preconditioned feeder calves. Price information is currently available at most major markets for feeder calves moving directly from farms and ranches without any prior preconditioning. This is

TABLE 81. SOURCE OF ROUGHAGE, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and source	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
----- Percent -----						
Texas:						
Own production	84.7	74.6	60.7	38.1	18.1	30.5
Purchased:						
Texas	14.4	25.4	39.0	59.0	59.6	55.0
Oklahoma	0	0	0	0	0	0
Kansas	0	0	0	0	2.0	1.3
Other	.9	0	.3	2.9	20.3	13.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Own production	90.6	73.6	52.6	58.9	37.2	45.8
Purchased:						
Texas	0	0	2.4	14.6	7.5	8.6
Oklahoma	9.4	23.8	43.6	19.9	49.9	40.4
Kansas	0	2.6	1.4	1.1	5.4	3.8
Other	0	0	0	5.5	0	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 82. TYPE OF PURCHASE ARRANGEMENT FOR FEED GRAIN, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and type of purchase arrangement	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
----- Percent -----						
Texas:						
Cash	63.8	64.3	46.3	36.4	44.5	43.9
Contract	36.2	35.7	53.7	63.6	55.5	56.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Cash	100.0	36.8	43.5	39.7	76.0	62.4
Contract	0	63.2	56.5	60.3	24.0	37.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 83. TYPE OF PURCHASE ARRANGEMENT FOR ROUGHAGE, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State and type of purchase arrangement	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
Percent						
Texas:						
Cash	88.1	100.0	81.2	37.4	20.7	29.6
Contract	11.9	0	18.8	62.6	79.3	70.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Cash	100.0	100.0	65.3	29.6	20.6	27.0
Contract	0	0	34.7	70.4	79.4	73.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

not generally true for preconditioned feeder calves. Contractual arrangements or agreements between preconditioning lots and feedlots may be desirable.

(5) Backgrounding feeder cattle. Several feedlot operators expressed a preference for feeder cattle with prior backgrounding. Feeding areas which possess a locational disadvantage with respect to major grain sorghum producing areas may find it advantageous to specialize in warmup rather than finishing operations. Requirements for successful warmup operations include, among others, generally abundant supplies of low cost roughage. Data concerning least-cost rations for warmup operations and the type of feeder cattle best adapted for this type of operation are generally inadequate.

(6) Least-cost finishing rations. Computer programs are available which specify least-cost rations consistent with the minimum daily TDN and protein levels to achieve specified minimum gains per day. Most feedlots are not currently using computer programs to develop least-cost rations. Associated with the problems of developing least-cost rations are questions concerning the storage and utilization of high moisture grain sorghum. Computer programs can also be developed for supplying detailed statistics on feeder cattle moving onto feed, cattle currently on feed and fed cattle sold by feedlots.

(7) Performance of specific types and breeds of feeder cattle. Data were generally not available con-

cerning the performance of specific types and breeds of feeder cattle in Southern Plains feedlots. Numerous questions were raised by feedlot operators concerning anticipated daily gains and costs associated with feeding specified weights, types, age and breeds or crosses of feeder cattle.

(8) Optimum feedlot size within a given size range. Feedlot operators also expressed a need for detailed engineering specifications and costs for typical feedlots within specified size ranges. Additional questions were concerned with the minimum and maximum sizes of feedlot operations for specified feed milling equipment and capacities.

(9) Financing. Sources of financing were considered generally adequate for construction, expansion and operation of current feedlot facilities. However, additional research may be required with respect to sources and supplies of operating capital. Such studies could include a detailed analysis of available credit by type of lending agency and geographic source, the effect of varying interest rate structures, various payment rates or schedules and the preparation of adequate portfolios to service the rapidly expanding and growing feedlot industry.

Future research requirements for the Southern Plains cattle feeding industry, as well as for other segments of the livestock and meat industry, will greatly exceed previous research requirements. Changes in the organization, structure and location of cattle feeding, livestock production and slaughtering firms are inevitable. The speed and ease with which opportunities are realized and adjustments occur are dependent to a large extent upon the close cooperation of public agencies and all sectors of the livestock and meat industry.

TABLE 84. PRIMARY SOURCE OF PRICE INFORMATION USED BY TEXAS AND OKLAHOMA FEEDLOTS, 1966-67

Source of price information	Texas	Oklahoma
Percent		
USDA live cattle quotation	81.4	66.7
USDA carcass quotation	7.1	19.4
National Provisioner yellow sheet	6.2	13.9
Futures market	.9	0
Selling or buying agent	.9	0
Other	3.5	0
Total	100.0	100.0

#### ACKNOWLEDGMENT

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## LITERATURE CITED

1. Dietrich, R. A., Williams, W. F. and Miller, J. E., "The Texas-Oklahoma Meat Industry," U. S. Department of Agriculture, Agr. Econ. Rpt. 39, July 1963.
2. McDowell, James and Williams, Willard F., "Feed Use in Oklahoma Commercial Feedlots," Processed Series P-433, Dept. of Agr. Econ., Oklahoma State University, December 1962.
3. Madsen, A. G., Hummels, K. and Capener, W. N., "Colorado's Cattle Feeding Industry," Colorado Agr. Exp. Sta., Popular Bulletin 528S, April 1967.
4. Uvacek, Edward, "Economic Trends of Texas Cattle Feeding," B-1055, Texas Agr. Exp. Sta., College Station, Texas, August 1966.
5. Williams, W. F. and Dietrich, R. A., "An Interregional Analysis of the Fed Beef Economy," U. S. Department of Agriculture, Agr. Econ. Rpt. 88, April 1966.
6. Williams, W. F., "Structure and Conduct of the Commercial Cattle Feeding Industry," Supplement No. 1 to Technical Study No. 1, Organization and Competition in the Livestock and Meat Industry, National Commission on Food Marketing, June 1966.

## APPENDIX TABLES

APPENDIX TABLE 1. COMPLETED QUESTIONNAIRES, BY FEEDING AREA AND SIZE OF FEEDLOT, TEXAS, 1966-67

Size (one-time) capacity)	Feeding area							Total
	Panhandle	Southern High Plains	Plateau- Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
	Number							
Less than 1,000	6	1		3	13	8	3	32
1,000 - 1,999	2	2	3	1	3 <sup>1</sup>	3 <sup>1</sup>	1	15
2,000 - 4,999	6	5	3	2	7 <sup>1</sup>	6	5	34
5,000 - 9,999	9		1		2	5		17
10,000 and over	8	2	3	2	2	2	1	22
<b>Total</b>	<b>31</b>	<b>10</b>	<b>10</b>	<b>8</b>	<b>27</b>	<b>24</b>	<b>10</b>	<b>120</b>

<sup>1</sup>Includes one feedlot also feeding cows or bulls. Data from these feedlots were not included in this study.

APPENDIX TABLE 2. COMPLETED QUESTIONNAIRES, BY FEEDING AREA AND SIZE OF FEEDLOT, OKLAHOMA, 1966-67

Size (one-time) capacity)	Feeding area					Total
	Panhandle	Northern Oklahoma	South- eastern Oklahoma	Central Oklahoma	South- western Oklahoma	
	Number					
Less than 1,000	1	4	2	4 <sup>1</sup>	2	13
1,000 - 1,999	1	4	1	1		7
2,000 - 4,999	3	1		1	3	8
5,000 - 9,999	2	1	1			4
10,000 and over	2			1	1	4
<b>Total</b>	<b>9</b>	<b>10</b>	<b>4</b>	<b>7</b>	<b>6</b>	<b>36</b>

<sup>1</sup>Includes one feedlot also feeding bulls. Data from this feedlot were not included in this study.

APPENDIX TABLE 3. NUMBER OF ACTIVE FEEDLOTS, AS INDICATED BY SURVEY RESULTS, BY SIZE, TEXAS AND OKLAHOMA, 1966-67<sup>1</sup>

State	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head- and-more capacity	Total
	Number					
Texas	774	73	76	35	22	980
Oklahoma	700	25	19	4	4	752

<sup>1</sup>The feedlot population was derived by adjusting feedlot numbers as indicated in the survey for (1) movement into a higher or lower size classification, or (2) exits from cattle feeding prior to or during 1966-67.

APPENDIX TABLE 4. NUMBER OF CATTLE FED BY FEEDLOTS SURVEYED, BY SIZE OF FEEDLOT, TEXAS AND OKLAHOMA, 1966-67

State	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head- and-more capacity	Total
	Head					
Texas	14,559	27,250	203,550	202,857	782,035	1,230,251
Oklahoma	1,238	11,800	38,400	54,000	142,000	247,438

APPENDIX TABLE 5. NUMBER OF CATTLE FED BY FEEDLOTS SURVEYED, BY FEEDING AREA, TEXAS, 1966-67

Item	Panhandle	Southern High Plains	Plateau- Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	Total
	Head							
Cattle fed	504,469	178,250	90,700	57,750	174,429	168,353	56,300	1,230,251

APPENDIX TABLE 6. NUMBER OF CATTLE FED BY FEEDLOTS SURVEYED, BY FEEDING AREA, OKLAHOMA, 1966-67

Item	Panhandle	Northern Oklahoma	Southeastern Oklahoma	Central Oklahoma	Southwestern Oklahoma	Total
	Head					
Cattle fed	131,212	17,511	7,917	36,061	48,487	241,188

APPENDIX TABLE 7. CATTLE AND CALVES ON FEED, TEXAS AND OKLAHOMA, AND SELECTED AREAS, JANUARY 1, 1955-68

Area	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
	1,000 head													
Southern Plains	200	214	218	163	237	317	328	409	537	597	603	667	844	991
Texas	132	148	154	122	184	248	254	323	450	478	488	538	674	810
Oklahoma	68	66	64	41	53	69	74	86	87	119	115	129	170	181
North Central <sup>1</sup>	4,189	4,216	4,375	4,419	4,677	4,887	5,241	5,487	6,073	6,265	6,325	6,687	7,142	7,137
Iowa	1,225	1,188	1,259	1,284	1,425	1,510	1,540	1,571	1,744	1,796	1,850	1,776	2,025	1,924
Nebraska	625	544	560	543	637	665	699	845	898	1,022	1,027	1,227	1,308	1,354
Illinois	609	639	690	649	643	688	729	780	858	815	791	807	791	715
Other North Central	1,730	1,845	1,866	1,943	1,972	2,024	2,273	2,291	2,573	2,632	2,657	2,877	3,018	3,144
Western Region <sup>2</sup>	1,313	1,368	1,384	1,234	1,636	1,925	2,028	2,081	2,562	2,455	2,504	2,677	2,763	2,798
Arizona	169	204	222	190	210	265	293	310	377	324	348	364	373	385
Colorado	275	235	246	251	338	404	414	397	525	508	534	596	609	637
California	467	489	496	393	504	665	716	782	1,000	946	915	952	984	902
Other Western States	402	440	420	400	584	591	605	592	660	677	707	765	797	874
Other States <sup>3</sup>	84	82	90	78	77	445	451	543	530	528	547	551	519	525
United States	5,786	5,880	6,067	5,894	6,627	7,574	8,048	8,520	9,702	9,845	9,979	10,582	11,268	11,451

<sup>1</sup>Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas.<sup>2</sup>Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Washington, Oregon, California and Nevada.<sup>3</sup>Data for Georgia, Florida, Kentucky, Tennessee, Alabama and Mississippi were not published until 1960.

Source: Cattle on Feed, U.S. Dept. Agri., Crop. Rpt. Bd., Stat. Rptg. Serv., Selected issues.

APPENDIX TABLE 8. TYPE OF FEEDING FACILITIES USED BY TEXAS AND OKLAHOMA FEEDLOTS, BY SIZE OF FEEDLOT AND NUMBER OF CATTLE PLACED ON FEED, 1966-67

State and feeding facilities	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
----- Percent -----						
Texas:						
Fence line bunk or trough	41.2	53.4	73.5	70.6	80.0	72.1
Self-feeders	55.9	33.3	23.5	11.8	5.0	15.8
Other <sup>1</sup>	2.9	13.3	3.0	17.6	15.0	12.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma:						
Fence line bunk or trough	46.2	28.6	37.5	100.0	75.0	58.1
Self-feeders	53.8	71.4	50.0	0	25.0	39.1
Other <sup>1</sup>	0	0	12.5	0	0	2.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Primarily combinations of fence line bunk or trough and self-feeders.

APPENDIX TABLE 9. BREED PREFERENCE FOR FEEDER CATTLE, BY SEX AND SIZE OF FEEDLOTS, TEXAS, 1966-67

Sex and preferred breed	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
----- Percent -----						
Heifers:						
Hereford	0	20.0	11.1	0	16.6	8.7
Angus	9.1	0	0	16.7	0	4.3
Hereford X Angus	18.2	0	27.8	50.0	66.7	30.4
Hereford X Brahman	18.2	20.0	11.1	0	0	10.9
Hereford X Charolais	0	0	5.6	0	0	2.2
Angus X Brahman	27.2	0	11.1	0	0	10.9
Cross-bred <sup>1</sup>	27.3	60.0	33.3	33.3	16.7	32.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Steers:						
Hereford	26.7	0	0	0	0	9.5
Angus	6.7	40.0	0	0	0	7.1
Hereford X Angus	20.0	40.0	87.5	60.0	55.6	47.6
Hereford X Brahman	6.7	0	0	0	0	2.4
Hereford X Charolais	0	0	0	0	0	0
Angus X Brahman	6.6	0	0	0	0	2.4
Cross-bred <sup>1</sup>	33.3	20.0	12.5	40.0	44.4	31.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>"Okie" or any unspecified cross or crosses.

APPENDIX TABLE 10. BREED PREFERENCE FOR FEEDER CATTLE, BY SEX AND SIZE OF FEEDLOT, OKLAHOMA, 1966-67

Sex and breed preference	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
----- Percent -----						
<b>Heifers:</b>						
Hereford	0	25.0	0	0	0	9.1
Angus	0	0	0	0	0	0
Hereford X Angus	66.7	0	66.7	100.0	0	45.5
Hereford X Brahman	0	0	0	0	0	0
Hereford X Charolais	0	0	33.3	0	0	9.1
Angus X Brahman	0	0	0	0	0	0
Cross-bred <sup>1</sup>	33.3	75.0	0	0	0	36.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>0</b>	<b>100.0</b>
<b>Steers:</b>						
Hereford	0	0	0	0	0	0
Angus	0	0	0	0	0	0
Hereford X Angus	37.5	100.0	80.0	0	100.0	63.2
Hereford X Brahman	0	0	0	0	0	0
Hereford X Charolais	0	0	0	0	0	0
Angus X Brahman	0	0	0	0	0	0
Cross-bred <sup>1</sup>	62.5	0	20.0	100.0	0	36.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<sup>1</sup>"Okie" or any unspecified cross or crosses.

APPENDIX TABLE 11. WEIGHT PREFERENCE FOR FEEDER CATTLE, BY SEX AND SIZE OF FEEDLOT, TEXAS 1966-67

Sex and preferred weight	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total
----- Percent -----						
<b>Heifers:</b>						
Under 300	0	0	5.6	16.7	0	4.3
300 - 399	45.4	16.7	16.7	16.7	16.6	23.4
400 - 499	36.4	66.7	66.6	16.6	66.7	53.2
500 - 599	9.1	16.6	11.1	16.7	16.7	12.8
600 - 699	0	0	0	33.3	0	4.2
700 - 799	9.1	0	0	0	0	2.1
800 and over	0	0	0	0	0	0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Steers:</b>						
Under 300	0	0	0	0	0	0
300 - 399	14.3	20.0	0	20.0	11.1	12.2
400 - 499	42.9	0	12.5	0	0	17.1
500 - 599	21.4	20.0	12.5	0	11.1	14.6
600 - 699	14.3	40.0	50.0	80.0	66.7	43.9
700 - 799	7.1	20.0	25.0	0	11.1	12.2
800 and over	0	0	0	0	0	0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

APPENDIX TABLE 12. WEIGHT PREFERENCE FOR FEEDER CATTLE, BY SEX AND SIZE OF FEEDLOTS, OKLAHOMA, 1966-67

Sex and preferred weight	Less than 1,000-head capacity	1,000 to 1,999-head capacity	2,000 to 4,999-head capacity	5,000 to 9,999-head capacity	10,000-head-and-more capacity	Total	Percent					
<b>Heifers:</b>												
Under 300	0	0	0	0	0	0						
300 - 399	0	0	0	0	0	0						
400 - 499	66.7	60.0	66.7	0	0	58.4						
500 - 599	33.3	20.0	33.3	100.0	0	33.3						
600 - 699	0	20.0	0	0	0	8.3						
700 - 799	0	0	0	0	0	0						
800 and over	0	0	0	0	0	0						
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>0</b>	<b>100.0</b>						
<b>Steers:</b>												
Under 300	12.5	0	0	0	0	5.3						
300 - 399	25.0	0	0	0	0	10.5						
400 - 499	0	0	0	0	0	0						
500 - 599	25.0	0	0	0	0	10.5						
600 - 699	12.5	100.0	60.0	100.0	50.0	42.1						
700 - 799	12.5	0	40.0	0	50.0	26.3						
800 and over	12.5	0	0	0	0	5.3						
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>						

APPENDIX TABLE 13. SOURCE OF ROUGHAGE, BY FEEDING AREA, TEXAS FEEDLOTS, 1966-67

Source	Feeding area							Total
	Panhandle	Southern High Plains	Plateau-Pecos	Rolling Plains	East Texas	Gulf Coast	Rio Grande Plains	
Own production	17.1	19.7	45.2	2.1	25.6	67.7	86.0	30.5
Purchased:	Percent							
Texas	63.7	55.7	54.8	97.9	49.7	32.3	14.0	55.0
Oklahoma	0	0	0	0	0	0	0	0
Kansas	2.3	0	0	0	0	0	0	1.3
Other	16.9	24.6	0	0	24.7	0	0	13.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

APPENDIX TABLE 14. SOURCE OF ROUGHAGE, BY FEEDING AREA, OKLAHOMA FEEDLOTS, 1966-67

Source	Feeding area					Total
	Panhandle	Northern Oklahoma	South-eastern Oklahoma	Central Oklahoma	South-western Oklahoma	
Own production	42.8	85.9	63.0	2.9	29.2	45.8
Purchased:	Percent					
Texas	2.5	0	30.4	48.7	28.1	8.6
Oklahoma	49.1	3.5	6.6	48.4	40.2	40.4
Kansas	5.2	1.0	0	0	2.5	3.8
Other	.4	9.6	0	0	0	1.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

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