

## *Structure and Operational Characteristics . . .*

# THE TEXAS CATTLE FEEDING INDUSTRY

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Cattle feeding in Texas has become "big business" within the past decade. This industry in Texas 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.

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. Accordingly, a comprehensive study of cattle feeding was 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, nationally, and within Texas. The first phase of this project is summarized here and provides a detailed analysis of cattle feeding systems and management practices employed by cattle feedlot operators during 1966-67.

### **Structural Changes in Cattle Feeding**

Numbers of cattle and calves on feed in Texas feedlots increased from 163,000 on January 1, 1958 to 1,075,000 head by January 1, 1969. Numbers of cattle on feed in the United States during this period approximately doubled while increasing almost six-fold in Texas.

The number, size and lot capacity also has changed significantly in Texas since 1955. Texas feedlots with 1,000-or-more head capacity increased from 61 in 1955 to 277 by January 1, 1969. The capacity of these lots increased from 160,000 head to 1,452,350 head in 1969. Feedlots with 1,000-or-more head capacity accounted for 95 percent of the cattle on feed in Texas on January 1, 1969.

Cattle placed on feed for the period analyzed in this study, July 1966-June 1967, totaled 1,610,000. Placements by size of feedlots were as follows: Less than 1,000 head capacity, 7 percent; 1,000 to 1,999 head capacity, 6 percent; 2,000 to 4,999 head capacity, 21 percent; 5,000 to 9,999 head capacity, 22 percent; and 10,000 head and over capacity, 44 percent. However, feedlots with 10,000-or-more head capacity

currently account for more than half of the cattle placed on feed.

### **Organizational Characteristics**

Large, highly mechanized, commercial feedlots are relatively new in Texas as two-thirds of the feedlots with 1,000-or-more head capacity were established during or after 1960. Small feedlots, often integrated with farming and ranching operations, generally represented a slightly older type of feeding operation.

The legal form of ownership among Texas feedlots was found to be closely related to feedlot size. The single proprietor form of ownership was found to be most common since a high percentage of feedlots in Texas are small commercial ones. Incorporated feedlots, which accounted for about 45 percent of the cattle fed during 1966-67, were found mostly among feedlots with 10,000-or-more head capacity. Partnerships were most common among feedlots with 1,000 to 9,999 head capacity.

Most feedlots were dependent on several sources for operating capital, but commercial banks were cited as the primary source for buying and finishing three-fourths of the cattle in Texas feedlots. They were the single most important source of capital for purchasing land, milling equipment and other necessary equipment and materials. But most of the capital requirements for fixed investments were obtained from various combinations of sources.

### **Kind and Source of Cattle**

English breeds and English crosses accounted for 54 percent of the cattle fed; Okies accounted for 23 percent; Brahman and Brahman crosses, 19 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.

Two-thirds of the cattle placed on feed originated from sources within Texas during 1966-67. Texas imports originated primarily from states in the Southeast, New Mexico and Oklahoma. Feedlots

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generally tend to reach out farther for supplies of feeder cattle as they increase in size.

Auctions supplied about two-thirds of the cattle fed in 1966-67. 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 generally are located near or within concentrated production areas and serve as concentration points for many feedlot buyers.

Less than 10 percent of the feeder cattle were contracted for more than 30 days in advance by Texas feedlots during 1966-67. The larger feedlots generally used contracting to a greater extent than did the smaller feedlots.

#### **Weights, Quality and Sex of Placements**

The average weights of cattle placed on feed in Texas are relatively light, compared to most other major cattle feeding areas. Feeder cattle moving into Texas feedlots averaged 509 pounds during 1966-67. Approximately 80 percent of the cattle moving on feed in the Texas Panhandle weighed in excess of 500 pounds. This contrasts with the Gulf Coast and Rio Grande Plains where more than 50 percent of the feeder cattle averaged under 400 pounds.

Grades of feeder cattle placed on feed were U.S. Good, 46 percent; U.S. Choice, 43 percent; and U.S. Standard, 11 percent. Since feedlots with 10,000-or-more head capacity generally placed more emphasis on heavier weight feeder cattle, these lots also placed more cattle on feed grading U.S. Choice than did other size groups.

Although steers accounted for more than 50 percent of the cattle in Texas feedlots, much variation existed among the various sizes of feedlots relative to steer and heifer feeding. Steers made up two-thirds of the cattle fed by feedlots with 10,000-or-more head capacity while heifers made up 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.

#### **Length of Feeding Period**

Feeding programs generally averaged a little less than 120 days in Texas during 1966-67. Approximately 80 percent of the cattle were marketed after feeding periods of 90 to 150 days. Feeding periods for heifers ordinarily varied from 90 to 120 days and from 115 to 135 days for steers.

Feedlots in Texas with 10,000-or-more head capacity generally relied on feeding periods of more than 120 days in contrast to other size groups. These

large lots were predominantly steer feeders. Feedlots with the shortest feeding period were the 2,000 to 4,999 head capacity lots. This group also finished the highest proportion of heifers. Death losses among Texas feedlots averaged slightly more than one percent during 1966-67.

#### **Weights and Grades of Fed Cattle Marketed**

Fed cattle marketed from Texas feedlots averaged 860 pounds. Approximately a third of them weighed in excess of 1,000 pounds. Fed cattle marketed from the Texas Panhandle area feedlots, where a relatively high proportion are steers, averaged about 975 pounds. Cattle marketed from the Gulf Coast and Rio Grande Plains feeding areas generally averaged less than 700 pounds during 1966-67. These areas usually place a relatively high proportion of light-weight heifers on feed.

About 50 percent of the fed cattle marketed from Texas feedlots were equivalent to U.S. Choice. Another 44 percent were estimated to be U.S. Good and most of the remainder were equal to U.S. Standard. The smaller feedlots 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 percentage of heifers also sold the highest proportion of cattle grading U.S. Good and lower.

#### **Geographic Sales Area and Selling Arrangements**

Three-fourths of the cattle sold by Texas feedlots went to packing plants within Texas. Most out-of-state shipments went to the deficit fed beef states in the Southeast, to New Mexico, California and Oklahoma.

More than three-fourths of the fed cattle were sold direct to packers on a live-weight basis. Most of the remaining cattle also were sold direct on either grade and carcass weight or carcass weight basis.

#### **Shrinkage**

Cattle sold on a direct live-weight basis were ordinarily assessed a standard four percent shrink f.o.b. the feedlot when weighed at 7 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. The most common shrink assessment for selling on a carcass basis was 2 to 2½ percent.

#### **Ownership of Cattle**

During 1966-67, almost 60 percent of the cattle in Texas feedlots were finished on a custom basis.



The proportion of cattle fed on a custom basis varied directly with the size of feedlots. Numerous feedlots with 10,000 head or more capacity fed almost entirely on a custom basis.

### Custom Feeding Arrangements

More than 55 percent of the cattle fed on a custom basis were owned by farmers and ranchers. Almost a third of the custom cattle were owned by cattle buyers, cattle dealers and other types of investors. In addition, more than 10 percent of the cattle fed on a custom basis were owned by packers.

Custom feeding charges generally were assessed as follows: (1) a basic feed charge varying from \$42 to \$50 per ton; (2) a mark-up above feed cost ranging from \$4 to \$8 per ton to cover handling, grinding and labor cost; and (3) an assessment of \$1.50 to \$3 per head to cover vaccination, medication, branding, dehorning and dipping.

### Feeder Cattle Preferences of Feedlots

Approximately 90 percent of the feedlot operators expressed a preference for cross-bred feeder cattle with the most popular being the Hereford-Angus cross. Numerous feedlot operators, who stated a preference for the Hereford-Angus cross, also indicated that a Hereford-Angus cross with one-eighth to one-sixteenth Brahman bloodlines would be desirable. 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.

Two-thirds of the feedlot operators expressed a preference for feeder cattle weighing less 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. The most common weight range desired for heifers was 400 to 500 pounds while the 600 to 700-pound weight range was most common for feedlots preferring steers.

More than 40 percent of the feedlots expressed a preference for feeder cattle between 6 and 8 months of age. Another 40 percent expressed an age preference ranging from 12 to 20 months. Feedlots who preferred the younger feeder cattle were

predominantly heifer feeders. Those feeding mostly steers generally preferred an older type of feeder animal.

About 36 percent of the Texas feedlots expressed a preference for steers, 40 percent preferred heifers and 24 percent had no preference. However, 45 percent of the feedlots with 10,000 head and over capacity, who account for an increasingly larger proportion of the cattle fed, expressed a preference for steers.

### Type and Source of Feed

Concentrates made up three-fourths of the total feed ration during 1966-67. Grain sorghum or milo represented about 60 percent of the total ration. Barley and corn were relatively unimportant in Texas. Pre-mix or a commercially prepared batch supplement containing protein, minerals, vitamins, feed additives and urea was the second most important concentrate and represented about five percent of the ration. Molasses and animal or vegetable fat were other important concentrate items.

Silage, either corn or grain sorghum, represented the bulk of the roughage. Most of the remaining roughage consisted of cottonseed hulls and alfalfa hay. Lesser important roughage items were beet pulp, green chop and rice hulls.

With the exception of the smaller feedlots, the Texas cattle feeding industry was dependent almost entirely on commercial sources for feed grain supplies during 1966-67. Texas feedlots purchased 95 percent of their feed grain from sources within Texas. Another 2 percent was purchased from sources in Kansas, Oklahoma or other states.

Feedlots purchased about 70 percent of their roughage requirements. About 55 percent of the roughage items were purchased from sources within Texas.

*This fact sheet summarizes information contained in "The Texas-Oklahoma Cattle Feeding Industry—Structure and Operational Characteristics," Bulletin 1079. Copies of this publication are available from the Department of Agricultural Information, Texas A&M University, College Station, Texas 77843.*

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