

FIELD DAY REPORT - 1996

TEXAS A&M UNIVERSITY AGRICULTURAL RESEARCH and EXTENSION CENTER at OVERTON

**Texas Agricultural Experiment Station
Texas Agricultural Extension Service**

Overton, Texas

April 18, 1996

Research Center Technical Report 96-1

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FEEDLOT PERFORMANCE OF FOUR BREED TYPES OF STEERS

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Background. This experiment was initiated to compare feedlot performance from the Tuli crossbred with other selected breed type steers. We also wanted to extend the performance database from birth to slaughter. At weaning, Simmental X F1 (Brahman X Hereford) (SIMX), Angus X Brahman (AXB), Tuli X Brahman (TXB), and Brahman (BRM) steers were paired by breed type and randomly assigned to winter pasture at either Overton, TX or El Reno, OK. At completion of the winter pasture grazing period, mid-May, steers from both locations were transported to a commercial feedlot in Hereford, TX. Each breed type was combined across locations and fed in separate pens (n = 4 pens).

Research Findings. The off-truck (pay weight) of the four types of steers at feedlot arrival was 938 (SIMX), 863 (AXB) 716 (TXB), and 663 lbs (BRM) (Table 1). After 126 days on feed, the feedlot out-weights (pay weight) ranged from 1360 lbs for SIMX to 1055 lbs for TXB and BRM. Resultant feedlot average daily gains were 3.85 (AXB), 3.63 (SIMX), 3.30 (BRM), and 2.90 lbs (TXB). The BRM and TXB consumed the least amount of feed on a daily basis (17 to 18 lbs/hd/day) as well as on a percent of body weight (1.99 to 2.11%). The feed:gain (dry) estimates were surprisingly low for the BRM at 4.1:1, followed by 5.1:1 for TXB, 5.7:1 for AXB, and 7.3:1 for SIMX. The resultant total costs/lb gain during this experimental period ranged from \$.3545/lb for BRM to \$.5492 for SIMX. Table 2 shows the feed costs per pound of gain for each of the four breed types using respective feed:gain conversions and various ration costs. As feed grain prices accelerate, ration costs have approached \$200 per ton at the time of this publication. Based on this one-year data, the feed costs alone range from nearly \$.70/lb for SIMX to about \$.40/lb for BRM steers. Thus, the BRM steers in this study fed for about 43% less than the SIMX steers.

Implications. Feedlot performance of all four breed types was acceptable. Although feed consumption and gains were lower for the Tuli-sired and Brahman steers, this level of performance was compensated by their efficiency of gain (feed:gain). The efficiency of gain was attributed to size of steers upon entering the feedlot, feeding period, and potential genotype effects. The overall number of steers of each breed type was relatively small; therefore implications for sire selection based on this one year's data would be premature. It is noteworthy, however, to indicate that performance of the both the SIMX and AXB were both biologically and

economically sound even though these breed types entered the feedlot at about 900 lbs. These data may be especially useful to producers who desire to maintain ownership from birth to slaughter and use forage systems to produce the initial 800 to 950 lb feeder steers. Economic implications should consider feedlot gains, feed:gain efficiencies, and carcass attributes.

Table 1. Feedlot performance of Simmental crossbred (SIMX), Angus X Brahman (AXB), Tuli X Brahman (TXB), and Brahman (BRM) steers.

| Item | Breed type | | | |
|---------------------------|------------|-------|-------|-------|
| | SIMX | AXB | TXB | BRM |
| Feedlot Arrival Wt (lbs) | 938 | 863 | 716 | 663 |
| Final Pay Wt (lbs) | 1360 | 1317 | 1055 | 1056 |
| Days on Feed | 126 | 126 | 126 | 126 |
| Total Gain (lbs) | 459 | 487 | 366 | 417 |
| Avg Daily Gain (lbs) | 3.63 | 3.85 | 2.90 | 3.30 |
| Feed:Gain (dry) | 7.3:1 | 5.7:1 | 5.1:1 | 4.1:1 |
| Avg Consumption, (lbs/da) | 33.45 | 27.63 | 18.71 | 17.12 |
| Avg Daily Intake (% BW) | 2.91 | 2.53 | 2.11 | 1.99 |

Table 2. Feed costs per pound of gain for Simmental crossbred (SIMX), Angus X Brahman (AXB), Tuli X Brahman (TXB), and Brahman (BRM) steers with various ration costs and feed:gain conversions.

| RATION COST | SIMX 7.3:1 | AXB 5.7:1 | TXB 5.1:1 | BRM 4.1:1 |
|-------------|-------------------|--------------|--------------|--------------|
| \$/TON | FEED COST/LB GAIN | | | |
| \$ 100 | .365 | .285 | .255 | .205 |
| 120 | .438 | .342 | .306 | .246 |
| 140 | .511 | .399 | .357 | .287 |
| 160 | .584 | .456 | .408 | .328 |
| 180 | .657 | .513 | .459 | .369 |
| 200 | .730 | .570 | .510 | .410 |
| 210 | .767 | .600 | .536 | .431 |
| 220 | .803 | .627 | .561 | .451 |