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FEEDLOT PERFORMANCE OF MEXICAN STEERS

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Background. Once stocker steers complete the grazing season(s), viable management options are to either sell to a feeder or to maintain ownership through the feedlot. A cooperative experiment between TAES-Overton and TAES-Uvalde was initiated to ascertain the influence of environment and stocker grazing systems on both pasture and feedlot performance. Relatively uniform 1/2 Simmental : 1/4 Hereford : 1/4 Brahman (domestic) and typically diverse breed-type Mexican steers were allocated and grazed on rye-ryegrass pastures from December until June as reported in a companion paper. Nineteen 1/2 Simmental and 108 Mexican steers were transported to Hereford, Texas on June 2, 1992 and fed in a commercial feedlot. The Simmental crossbred, domestic steers were fed for 110 days and the Mexican steers for about 145 days. The shorter feedlot period for the domestic steers was by design so that carcasses would not be discounted for too heavy weights. The economic strategy was to feed the Simmental crossbred steers just long enough to attain a 20 to 35% USDA Choice carcass and eliminate potential USDA Standard carcasses. Previous research by TAES-Overton and TAES-Amarillo has indicated that a 90- to 120-day feeding period for steers that enter the feedlot as heavy-weight (800 lbs) feeders would meet these quality grade criteria.

Research Findings. Transit shrink was relatively low at about 4% for all groups (Table 1). The domestic steers entered the feedlot at 822 lbs and gained 4.54 lbs/day. Both groups of Mexican steers entered the feedlot at about 725 lbs and gained nearly identically at 3.16 lbs/day. The feedlot ration was steam-flaked corn with appropriate premixed protein, mineral, etc. The Simmental crossbred steers had an average daily consumption of 30.4 lbs feedlot ration. The feed:gain on an as-fed basis by the Simmental crossbred steers (18 to 20 months of age at slaughter) was superior to the Mexican steers (6.7:1 vs 8:1). Mexican Groups 1-4 consumed about 27 lbs per day and Groups 5-8 consumed nearly 25 lbs per day. Thus, costs per pound of gain were \$.4166 for domestic steers, \$.4995 for the 0 to <25% Brahman-influenced Mexican steers (Groups 1-4), and \$.5367 for the 25 to >50% Brahman-influenced Mexican steers (Groups 5-8).

Application. Both domestic and Mexican steers which gained about 2 lbs/hd/day for 176-day winter pasture grazing period continued to perform well in the feedlot as indicated by daily gain, feed:gain, and costs per pound of gain. These preliminary results from a one-year study revealed that the feedlot ration and environmental conditions were conducive to very acceptable daily gains by the 1/2 Simmental steers. Certainly, the average daily gains would be expected to

vary with numerous animal factors (weight, age, condition, breed) and feedlot conditions. In addition, the 1/2 Simmental steers would be expected to have higher gains than the "average" or "typical" domestic steer. Gains by the Mexican steers with their breed composition, age, and weight were more than likely representative of this type cattle. Economic incentives for this partially integrated operation depends on feedlot gain, feed:gain conversion and resultant cost per lb gain, absolute price of slaughter cattle, and any discounts from the standards placed on carcasses by the packing industry. The economic feasibility of such an integrated pasture-feedlot operation is presented in a companion paper.

Table 1. Feedlot gains of domestic and Mexican steers.

| Item | Domestic | Mexican ¹ | |
|--|----------|----------------------|------------|
| | | Groups 1-4 | Groups 5-8 |
| Number | 19 | 60 | 48 |
| Brahman, % | 25 | 0 to <25 | 25 to >50 |
| Off Pasture, Wt | 858 | 763 | 739 |
| Feedlot Arrival, Wt | 822 | 726 | 709 |
| Transportation Shrink, % | 4.2 | 4.85 | 4.06 |
| Days on Feed | 110 | 148 | 145 |
| Feed Consumption ² /day, lbs | 30.44 | 26.95 | 24.91 |
| Daily Gain, lbs | 4.54 | 3.17 | 3.16 |
| Feedlot Pay Wt ³ , lbs | 1321 | 1194 | 1167 |
| Feed:Gain | 6.7 | 7.9 | 8.5 |
| Feedlot Costs ⁴ Per lb Gain, \$ | .4166 | .4995 | .5367 |

¹Groups 1-4 had visual rating of 0 to <25% Brahman breeding and Groups 5-8 had visual estimates of 25 to >50% Brahman breeding.

²Feed consumption reported as daily intake per steers. Data were gathered on pen-basis.

³Feedlot pay weight reported has received the industry standard 4% shrink.

⁴Total feedlot costs per lb gain includes ration and processing costs.