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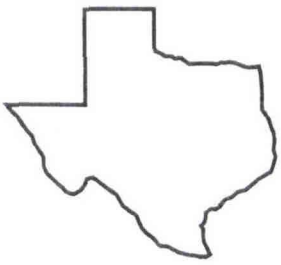
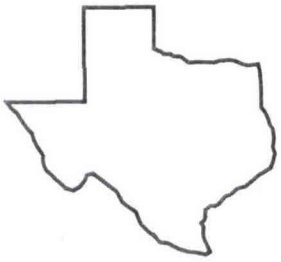
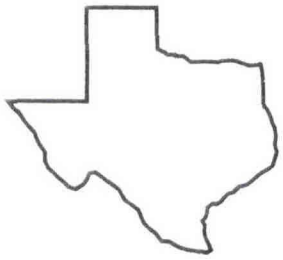
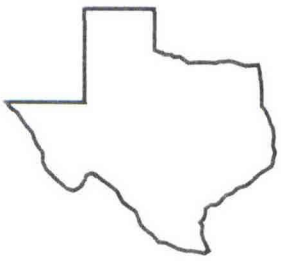




# Overton Field Day Report - 1994





## *1994 Research Center Technical Report No. 94-1*

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# WEIGHT GAINS BY LONG-YEARLING AND MATURE STEERS GRAZING SMALL GRAIN-RYEGRASS

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**Background.** Small grain-ryegrass overseeded on bermudagrass pastures in East Texas provides adequate nutrition to produce steer average daily gain (ADG) in excess of 2 lbs/hd. When supplemental energy or protein rations containing an ionophore were offered, significant improvements in ADG have resulted. The objective of this experiment was to evaluate the effect of non-ionophore containing supplements on gain by two diverse age and breed types of steers grazing 'Elbon' rye-'TAM 90' ryegrass.

**Research Findings.** The following treatments were evaluated for the promotion of steer ADG: (1) Pasture Only (PAS), (2) 1 lb/hd/da ground corn (CRN 1), (3) 2 lb/hd/da ground corn (CRN 2), (4) CRN 1 + 1 lb/hd/da Menhaden fishmeal (FIS), and (5) CRN 1 + 1 lb/hd/da feathermeal (FEA). Long-yearlings were Florida origin crossbred steers purchased in mid-June of the previous summer weighing 425 lbs. A visual scoring of these steers suggested that 32% were about 25% Brahman, 40% were >25 but <50% Brahman, and 28% were about 50% Brahman. In addition, these predominantly non-exotic based steers were 32% black and 68% red. The mature steers were estimated to be 3 to 5 years of age by assessment of teeth and size of horns. A visual scoring of these steers suggested that about 85% appeared to be Texas Longhorn-based breeding, about 22% had evidence of Brahman breeding, and about 24% had dairy breeding. One 5-year-old was a Mexican steer and several steers had obviously been used in steer roping and/or dogging events.

The long-yearlings were relatively heavy (725 lbs) at initiation of the test period on February 19. Table 1 shows excellent gains by steers on all treatments from February 19 to May 12 with three treatment groups with an ADG of more than 3 lbs. However, by extending the grazing period to completion of ryegrass and initiation of bermudagrass (June 3), final ADG ranged from 2.35 to 2.79. Final weight of these steers was 973 lbs.

The mature steers also showed excellent, but less magnitude ADG from February 19 to May 12 (Table 2). The influence of the transition from ryegrass to predominantly bermudagrass is vivid in the ADG changes from May to July. The most dramatic change in these steers was that body condition scores accelerated from 3.1 to 6.0 during the study. Final weight of these mature steers was 915 lbs.

The effect of the non-ionophore containing supplements was not as clear as previous experiments, however, there appeared to be slight improvements in gain of the long-yearlings from

CRN 1, CRN 2, and FEA over that from the PAS treatment. Gain response from the long-yearlings appeared to be stimulated by CRN 2 and FIS treatments.

**Application.** Small grain-ryegrass pastures may promote ADG in excess of 3 lbs if grazing is terminated prior to the maturation process of ryegrass (after mid-May in East Texas). Although selected supplements enhanced gain, the inclusion of an ionophore in the ration would be expected to promote additional gain. Size of steer at termination of the grazing season should be carefully considered for optimum economic returns from marketing options.

Table 1. Performance of long-yearling steers grazing rye-ryegrass.

| | | Daily Supplements | | | |
|---|---|---|---|---|---|
| Item | Pasture Only | CRN 1 | CRN 2 | FIS | FEA |
| BODY CONDITION | | | | | |
| 2-19-93 | 5.4 | 5.7 | 5.6 | 5.9 | 5.4 |
| 6-2-93 | 6.3 | 6.5 | 6.9 | 6.8 | 6.8 |
| WEIGHT, lbs | | | | | |
| 2-19-93 | 721 | 716 | 729 | 730 | 702 |
| 6-2-93 | 964 | 986 | 1017 | 971 | 971 |
| AVG. DAILY GAIN, lbs | | | | | |
| 2-19 to 5-12 | 2.67 | 3.03 | 3.25 | 2.78 | 3.13 |
| 2-19 to 6-2 | 2.35 | 2.63 | 2.79 | 2.34 | 2.61 |
| Std. Err. (2-19/6-2) | .13 | .20 | .11 | .08 | .18 |

Table 2. Performance of mature steers grazing rye-ryegrass-bermudagrass.

| | | Daily Supplements | | | |
|---|---|---|---|---|---|
| Item | Pasture Only | CRN 1 | CRN 2 | FIS | FEA |
| BODY CONDITION | | | | | |
| 2-19-93 | 3.1 | 3.3 | 3.3 | 3.4 | 3.6 |
| 7-20-93 | 6.0 | 6.0 | 5.9 | 6.4 | 5.8 |
| WEIGHT, lbs | | | | | |
| 2-19-93 | 626 | 627 | 627 | 606 | 622 |
| 7-20-93 | 911 | 899 | 936 | 960 | 886 |
| AVG. DAILY GAIN, lbs | | | | | |
| 2-19 to 5-12 | 2.78 | 2.41 | 2.64 | 3.04 | 2.45 |
| 2-19 to 6-2 | 2.35 | 2.10 | 2.31 | 2.66 | 1.95 |
| 2-19 to 7-20 | 1.88 | 1.80 | 2.05 | 2.35 | 1.88 |
| Std. Err. (2-19/7-20) | .07 | .11 | .07 | .11 | .12 |