

# **PUBLICATIONS**

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**BIRTH WEIGHTS, WEANING WEIGHTS, AND AVERAGE DAILY GAIN OF  
ROMOSINUANO-SIRED CALVES FROM FIRST AND SECOND CALVING  
ANGUS X BRAHMAN (F-1) COWS**

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**Background.** The Romosinuano is a tropically adapted, non-*Bos indicus* breed of cattle which are native to Columbia, SA. Genetic materials from this breed were imported into the US in the mid 1990's by USDA at Brooksville, FL for research related to mode of action of genotype x environment interactions. This breed is light red in color, short-haired, with a high percent polled. Progeny developed from USDA Brooksville, FL were used as sires at TAMU-Overton to breed Angus x Brahman (F-1) heifers for their first calf (FIRST), and F-1 cows for the second calf (SCND). For the FIRST, breeding was initiated on Nov. 15, and on Dec. 1 for SCND cows. The primary objective of this research was to evaluate the tropically adapted sired calves from time of conception to time of slaughter. This report summarizes birth-to-weaning performance across various stocking rates during the pre-weaning phase.

**Research Findings.** Calving began August 21 and terminated November 15. The average birth weight of Romosinuano sired calves using three bulls was similar for both the FIRST and SCND cows at about 75 lbs (Table 1). For the FIRST heifers, female birth weights averaged 70 lbs with a range from 40 to 87 lbs; whereas male calves averaged 77 lbs with a range from 61 to 104 lbs. In the SCND herd, female birth weights averaged 78 lbs with a range from 62 to 96 lbs; whereas male calves also averaged 78 lbs with a range from 56 to 103 lbs. There was no dystocia during this experiment. Calves were weaned on June 7 at about 270 days from FIRST and 245 days from SCND cows. Steer calves were implanted with a growth promotant and weaned nearly 100 lbs heavier than heifer calves (638 vs 543 lbs). Actual weaning weight was greater for FIRST cows compared to SCND cows primarily because of an approximate 25 day difference in age. Weight per day of age for these calves, however, was similar for heifer calves at 2.10 and 2.15 lbs/da, respectively, from FIRST and SCND cows; and for steer calves at 2.44 and 2.49 lbs/da, respectively, for FIRST and SCND cows. Average daily gain from birth to initiation of full time grazing (Feb. 28), as well as other periods to weaning were relatively similar for both age groups of cows (Table 2). During full-time grazing of ryegrass or clover on bermudagrass (2-28 to 6-7) heifer calves gained 2.00 lbs/day and steer calves gained 2.60 lbs/day. From birth to weaning, heifer calves had ADG of 1.84 lbs/day and steer calves had ADG of 2.17 lbs/day. Average daily gain from 2-28 to 6-7 for heifer calves was 1.83, 2.02, and 2.32 lbs/da, respectively, from HI, ME, and LO stocking rates (Table 3). The ADG for steer calves during

this same period was 1.98, 2.65, and 3.18 lbs/da, respectively, from HI, ME, and LO stocking rates.

**Application.** Romosinuano-sired fall-born calves had acceptable performance when grazed on ryegrass-clover-bermudagrass and weaned in early June. Additional research will be required to assess additional beef industry performance traits.

**Table 1.** Birth weight, weaning weight, and age at weaning of Romosinuano sired calves.

| COW<br>CALF | CALF<br>SEX | n  | BIRTH           |                 | WEANING         |    | WEANING         |    |
|-------------|-------------|----|-----------------|-----------------|-----------------|----|-----------------|----|
|             |             |    | Wt              | SD <sup>1</sup> | Wt              | SD | Age             | SD |
|             |             |    | ----- lbs ----- |                 | ----- lbs ----- |    | ----- lbs ----- |    |
| First Calf  | F           | 20 | 70              | 11              | 563             | 63 | 268             | 21 |
| Second Calf | F           | 25 | 78              | 9               | 528             | 47 | 244             | 16 |
| AVE         | F           | 45 | 74              | 10              | 543             | 56 | 255             | 22 |
| First Calf  | M           | 19 | 77              | 14              | 667             | 99 | 273             | 16 |
| Second Calf | M           | 24 | 78              | 9               | 618             | 61 | 245             | 11 |
| AVE         | M           | 43 | 78              | 11              | 638             | 82 | 258             | 18 |

<sup>1</sup>Standard Deviation from the Mean (SD).

**Table 2.** Average daily gain of Romosinuano-sired steers and heifers.

| COW<br>STATUS | CALF<br>SEX | AVERAGE DAILY GAIN |                 |             |      |                  |      |
|---------------|-------------|--------------------|-----------------|-------------|------|------------------|------|
|               |             | BIRTH TO 2-28      |                 | 2-28 TO 6-7 |      | BIRTH TO WEANING |      |
|               |             | (lb/da)            | SD <sup>1</sup> | (lbs/da)    | SD   | (lbs/da)         | SD   |
| First Calf    | F           | 1.73               | 0.14            | 2.01        | 0.34 | 1.84             | 0.17 |
| Second Calf   | F           | 1.67               | 0.37            | 2.00        | 0.29 | 1.84             | 0.15 |
| AVE           | F           | 1.70               | 0.29            | 2.01        | 0.31 | 1.84             | 0.16 |
| First Calf    | M           | 1.86               | 0.18            | 2.67        | 0.77 | 2.16             | 0.33 |
| Second Calf   | M           | 1.97               | 0.18            | 2.50        | 0.54 | 2.18             | 0.24 |
| AVE           | M           | 1.93               | 0.18            | 2.57        | 0.64 | 2.17             | 0.27 |

<sup>1</sup>Standard Deviation from the Mean (SD).

**Table 3.** Average daily gains of Romosinuano-sired steers and heifers grazing ryegrass or clover pastures at different stocking rates during the pre-weaning phase from both first and second calving Angus x Brahman (F-1) cows.

| CALF<br>SEX | AVERAGE DAILY GAIN 2-28 to 6-7 |                 |                 |                 |      |                 |    |
|-------------|--------------------------------|-----------------|-----------------|-----------------|------|-----------------|----|
|             | HI                             | SR <sup>1</sup> | ME              | SR <sup>1</sup> | LO   | SR <sup>1</sup> |    |
|             |                                | (lb/da)         | SD <sup>2</sup> | (lbs/da)        | SD   | (lbs/da)        | SD |
| F           | 1.83                           | 0.35            | 2.02            | 0.28            | 2.32 | 0.16            |    |
| M           | 1.98                           | 0.29            | 2.65            | 0.36            | 3.18 | 0.56            |    |
| AVE         | 1.92                           | 0.32            | 2.20            | 0.42            | 2.98 | 0.62            |    |

<sup>1</sup>Stocking rates (SR) of low (LO), medium (ME), and high (HI).

<sup>2</sup>Standard Deviation from the Mean (SD).