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## STOCKER PERFORMANCE OF ROMOSINUANO CROSSBRED STEERS GRAZING BERMUDAGRASS AND RECEIVING A SUPPLEMENT

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**Background.** Fall-born Romosinuano-sired calves (ROMO) from AxB cows grazed ryegrass or clover at different stocking rates (SR) and were weaned on June 7 (companion paper). Heifer calves were assigned to a stocker-backgrounding experiment to evaluate growth and puberty. ROMO steers (n=40) and Hereford x Brahman (F-1) steers (n=12) were stratified into six groups based on breed type, previous SR, and weight, and randomly assigned to 2 replicates of the following three treatments: (1) bermudagrass only (PAS); (2) PAS + liquid molasses (24% CP with 18% NPN, 3% fat) (MOL); and (3) PAS + MOL with the addition of Cattle-Ase™ (MCAS), a fibrolytic enzyme. After weaning was complete, all steers grazed Coastal bermudagrass pastures until 6-28 at which time steers were allotted to treatment pastures. A one-week adjustment period from 6-28 to 7-3 was allowed for steers to adjust to treatment groups and to molasses lick tanks. Gains were monitored from 7-3 to 9-25. The primary objectives of this experiment were to quantify stocker (backgrounding) performance of ROMO steers grazing bermudagrass and effect of a liquid, molasses supplement with and without Cattle-Ase.

**Research Findings.** Molasses consumption was estimated using lick-tank difference on weekly basis intervals for both replicate pastures of MOL and MCAS. Weekly consumption of molasses varied, however, the trial-long average consumption from all lick tanks averaged 2.89 and 2.31 lbs/hd/da for MOL, and 2.69 and 2.64 lbs/hd/da for MCAS (Table 1). Although there were no statistical differences in ADG among the three treatments, steer ADG tended to decline when offered liquid molasses (Table 2). Potential explanations for the non-impact of molasses on steer ADG may be that (1) grazing behavior and time spent grazing was negatively effected; (2) the relatively high NPN content (18%) with molasses was not efficiently used by this class of livestock grazing bermudagrass; and/or (3) steers substituted liquid molasses intake for bermudagrass intake. The F-1 HB steers had significantly higher ADG than the ROMO steers on each treatment (Table 3). However, ADG for ROMO steers was abnormally low for the July through September period in East Texas.

**Application.** Formulation of supplements should match the forage and class of livestock being used. Neither liquid molasses nor Cattle-Ase enriched molasses affected ADG under these experimental and environmental conditions. The half Romosinuano steers had moderately acceptable gains on bermudagrass but were not as adaptive to the environment as were the F-1 (HxB) steers.

**Table 1.** Estimated weekly molasses consumption by steers in 2 replicate pastures with molasses (MOL) and molasses plus Cattle-Ase (MCAS) consumption.

PERIOD	MOL 1	MOL 2	MCAS 1	MCAS 2
	----- lbs/hd/day -----			
6-29 to 7-3	2.30	2.32	1.79	2.20
7-3 to 7-10	2.23	2.65	1.92	2.18
7-10 to 7-16	2.30	2.55	2.69	2.08
7-16 to 7-24	3.42	2.12	3.20	3.04
7-24 to 7-31	3.35	2.38	3.20	3.04
7-31 to 8-7	2.83	2.85	2.69	3.51
8-7 to 8-14	3.68	3.04	2.88	2.71
8-14 to 8-21	3.09	1.99	2.81	4.04
8-21 to 8-28	2.43	1.79	2.30	2.65
8-28 to 9-4	3.59	1.76	2.24	3.52
9-4 to 9-11	2.17	1.72	2.43	1.06
9-11 to 9-18	1.91	1.52	1.66	1.59
9-18 to 9-25	1.77	1.26	1.60	1.26
<b>AVG</b>	<b>2.89</b>	<b>2.31</b>	<b>2.69</b>	<b>2.64</b>

**Table 2.** Effect of bermudagrass pasture (PAS) and liquid molasses (MOL) supplement without and with Cattle-Ase (MCAS) on steer gain.

Treatment	Initial Weight (lbs)	Final Weight (lbs)	ADG <sup>1</sup> (lbs/da)
PAS	609	739	1.29 a
MOL	595	693	1.16 a
MCAS	604	690	1.02 a

<sup>1</sup>Means in a column followed by the same letter do not differ (P<.05).

**Table 3.** Influence of steer breed type on average daily gains from bermudagrass pasture (PAS) and liquid molasses supplement (MOL), and molasses with Cattle-Ase (MCAS).

Treatment	Breed Type <sup>1</sup>	Initial Weight (lbs)	Final Weight (lbs)	ADG <sup>2</sup> (lbs/da)
PAS	ROMO	639	729	1.07 b
PAS	F1 HB	516	681	1.96 a
MOL	ROMO	612	699	1.03 b
MOL	F1 HB	506	661	1.85 a
MCAS	ROMO	626	703	0.91 b
MCAS	F1 HB	510	640	1.5 a

<sup>1</sup>Breed type are 1/2 Romosinuano x 1/4 Angus x 1/4 Brahman (ROMO) and 1/2 Hereford x 1/2 Brahman (F1 HB).

<sup>2</sup>Means in a column followed by a different letter are different (P<.05).