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Abstract

Four hundred sixty-nine English and Continental cross yearling steers grazed on native grass pastures over a 2-year period. Rumensin® was added (1,620 g/ton) to the mineral mixture in half of the pastures. Some of the pastures were used from April 23 to July 15 and the remainder from April 23 to August 15. The pooled data for the grazing periods indicated that Rumensin supplemented steers gained 7.7% faster(P<.05) and consumed 32% less mineral (P<.05) compared to the control steers.

Keywords

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EFFECTS OF FEEDING RUMENSIN® IN A MINERAL MIXTURE ON STEERS GRAZING NATIVE GRASS PASTURES

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Summary

Four hundred sixty-nine English and Continental cross yearling steers grazed on native grass pastures over a 2-year period. Rumensin® was added (1,620 g/ton) to the mineral mixture in half of the pastures. Some of the pastures were used from April 23 to July 15 and the remainder from April 23 to August 15. The pooled data for the grazing periods indicated that Rumensin-supplemented steers gained 7.7% faster (P<.05) and consumed 32% less mineral (P<.05) compared to the control steers.

(Key Words: Rumensin, Native Grass, Mineral.)

Introduction

Feed additives used to improve gains of stocker cattle grazing native grass are normally added to the mineral mixtures, resulting in changes in mineral consumption. The objective of this study was to determine the effect of Rumensin® on weight gain and mineral intake of steers grazing native grass pastures from April 23 to either July 15 or August 15.

Experimental Procedures

Four hundred sixty-nine English and Continental Cross yearling steers grazed on native grass pastures. In 1996, four pastures were used (2 acres/head for 83 days) from April 23 to July 15, and four pastures were used (3 acres/head for 114 days) from April 23 to August 15. In 1997, four pastures were used (2 acres/head for 83 days) from April 23 to July 15, and two pastures were used (3 acres/head for 114 days) from April 23 to August 15. Within each pasture replication, steers were allotted randomly to two treatments: a mineral mixture without Rumensin (control) or a mineral mixture with Rumensin-80 added at 1620 g/ton, replacing a processed grain by-product (Table 1). Mineral consumption was monitored weekly.

Results and Discussion

The performance data for the steers grazing to July 15 are shown in Table 2. Steers with access to the Rumensin mineral mixture tended to gain more, but the difference was not significant. Additionally, the Rumensin-supplemented steers consumed less mineral (P<.03) than controls. The Rumensin-supplemented steers that grazed to August 15 (Table 3) had significantly higher gains (P<.08) than the control steers.

The pooled data (across years and grazing periods) show a gain response of .19 lb/head/day (P<.05) for steers receiving Rumensin in a mineral mixture and grazing native grass pasture (Table 4). The average Rumensin intake was 170 mg/head/day. The

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presence of Rumensin in mineral mixtures reduced mineral intake to 3.4 oz per day vs. 5.0 oz per day for control. These data show that mineral mixtures containing Rumensin improve gains. The reduction in mineral intake may offset some of the cost of the mineral.

Control cattle grazing to July 15 consumed an average of 5.3 oz of mineral daily vs. an average of 4.6 oz daily for those grazing to August 15. Corresponding intakes for cattle receiving Rumensin were 3.4 and 3.3 oz. Cattle normally have high salt and/or mineral consumption early in the season, but consumption declines as the grass matures, which would explain the difference in mineral consumption for control steers. Intake of mineral mixtures containing Rumensin appearred to be more consistent from week to week.

Table 1. Formulation of Rumensin Mineral Mixture

Ingredient	Lbs/ton
Monocalcium phosphate	589.8
Salt	485.0
Dried cane molasses	400.0
Limestone	275.0
Cane molasses	60.0
Processed grain by-products	100.0
Vitamin/trace mineral premix	50.0
Rumensin 80	20.2
Antidusting oil	20.0

Table 2. Effects of a Mineral Mixture with Rumensin on ADG and Mineral Consumption of Steers Grazing Native Grass (2 ac/head/July 15, 1996-97)

Item	Rumensin	Control	SE
Pastures, no.	4	4	
Steers, no.	154	154	
Initial wt, lbs	552	543	
ADG, lb	2.81	2.59	.107
Mineral intake, oz/day	3.4[a]	5.3[b]	.464
Rumensin intake, mg/head/day	170	- -	

[ab]Means in the same row with unlike superscripts are different (P<.03).

Table 3. Effects of Mineral Mixture with Rumensin on ADG and Mineral Consumption to Steers Grazing Native Grass (3 acres/head/August 15, 1996-97)

Item	Rumensin	Control	SE
Pasture, no.	3	3	
Steers, no.	73	88	
Initial wt, lb	552	549	
ADG, lb	2.51[a]	2.35[b]	.051
Mineral intake, oz/day	3.3[a]	4.6[b]	.624
Rumensin intake, mg/head/day	170	- -	

[ab]Means in the same row with unlike superscripts are different (P<08).

Table 4. Overall Effects of a Mineral Mixture with Rumensin on Steers Grazing Native Grass to Either July 15 or August 15 (1996-97)

Items	Rumensin	Control	SE
Pastures, no.	7	7	
Steers, no.	227	242	
Starting wt, lb	552	545	8.376
ADG, lb	2.66[a]	2.47[b]	.064
Mineral intake, oz/day	3.4[a]	5.0[b]	.346
Rumensin intake, mg/day	170	- -	

[ab]Means in the same row with unlike superscripts are different (P<.05).