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Effect of Deccox® in a free-choice, grain-mineral mixture on performance of yearlings grazing native range

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EFFECT OF DECCOX® IN A FREE-CHOICE, GRAIN-MINERAL MIXTURE ON PERFORMANCE OF YEARLINGS GRAZING NATIVE RANGE[1]

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Summary

Including Deccox® in a free-choice, intake-limiting, grain-mineral mixture tended to increase grazing stocker gains and substantially reduced the percentage of newly arrived cattle treated for sickness and the number of treatments required per animal.

(Key Words: Deccox®, Bulls, Native Grass, Mineral, Health.)

Introduction

Research has shown improved gain and reduced sickness when the coccidiostat, Deccox®, is included in starting rations for newly purchased calves. The greatest response often occurs during the first month when Deccox is fed to highly stressed calves, such as recently castrated bulls. The objective of this study was to evaluate the effect of Deccox in a free-choice, grain-mineral mixture fed to newly purchased yearlings grazing native grass pasture.

Experimental Procedures

On April 15, 106 mixed-breed yearlings, consisting of half steers and bulls and averaging 608 lb, were shipped 300 miles from Missouri to Kansas. The cattle were processed at arrival, and the bulls were castrated with a knife. They were vaccinated with IBR, BVD, PI3, and 4-way Blackleg; dewormed with Levamisole®; deloused with Lysoff®; and implanted with Ralgro®. The steers and freshly castrated bulls were each allotted to either Deccox or control treatments. A grain-mineral mixture, with or without Deccox (Table 35.1), was offered free-choice to the cattle. Salt was added as an

Table 35.1. Composition of Free-choice Grain-mineral Mixtures

Ingredient	Control	Deccox
	---- lb per ton ----	
Dicalcium phosphate	80.0	80.0
Liquid molasses	100.0	100.0
Deccox 6% premix	—	16.5
Salt	450.0	450.0
Ground grain sorghum	1,370.0	1,353.5

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intake limiter. The steers and newly castrated bulls were assigned separately to eight, 35-acre intensive-early grazed, native grass pastures stocked at 2.5 acres/head. The groups of cattle were rotated among pastures to minimize pasture influences. The yearlings were checked for sickness daily and treated when visual signs of illness occurred. Supplement intake was measured twice a week. The steers were reweighed on May 17 and June 13. Data were analyzed by analysis of variance, and results are reported as least squares means.

Results and Discussion

The Deccox-fed yearlings consumed slightly more of the grain-mineral mixture than controls (.91 vs .79 lb/d) during the first 14 d. However, overall consumption levels were not significantly different. The average consumption of active drug was 225 mg per head daily. The Deccox-fed cattle tended to gain faster throughout the 59-d trial (Table 35.2) and had a significantly lower incidence of sickness and medications required per animal. All of the sickness occurred during the first 2 wk of the trial. There was no interaction between sex status and Deccox treatment.

These results suggest that Deccox can be used in a self-feeding system that limits intake but still maintains adequate Deccox intake by grazing cattle. The data also indicate that the slight gain response to Deccox continued throughout the 59-d period, not just during the first month after arrival.

Table 35.2. Effect of Deccox in a Free-choice, Grain-mineral Mixture on the Gain and Health of Grazing Yearlings

Ingredient	Control	Deccox
No. cattle	53	53
Starting wt, lb	613	612
Daily gain, lb		
First 32 d	2.6	2.7
Second 27 d	2.2	2.4
Overall 59 d	2.4	2.6
Percentage sick cattle	34.6[b]	12.1[a]
No. medications required/head	1.5[d]	.8[c]
Daily supplement intake, lb	1.0	1.0

[ab]Means in a row with unlike superscripts differ ($P<.015$).
[cd]Means in a row with unlike superscripts differ ($P<.13$).