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## The effect of feeding different levels of Aureomycin® in a mineral mixture to stocker cattle grazing native grass

### Abstract

Two hundred and forty-three mixed breed steers were allotted to four treatments with two pastures per treatment. Treatments consisted of a free-choice mineral supplement alone or with Aureomycin® added to provide 150, 300, or 450 mg/hd/day. Gain was similar for all four treatments. The percentage of cattle with eye problems was reduced in pastures where 150 and 450 mg of Aureomycin were consumed daily; however, the incidence in the 300 mg/hd/day group was as high as in the control group.

### Keywords

Cattlemen's Day, 1994; Kansas Agricultural Experiment Station contribution; no. 94-373-S; Report of progress (Kansas State University. Agricultural Experiment Station and Cooperative Extension Service); 704; Beef; Aureomycin®; Antibiotic; Mineral; Chlortetracycline; Native grass; Stocker cattle

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**THE EFFECT OF FEEDING DIFFERENT LEVELS OF  
AUREOMYCIN® IN A MINERAL MIXTURE TO STOCKER  
CATTLE GRAZING NATIVE GRASS <sup>1</sup>**

*F. K. Brazle <sup>2</sup>*

**Summary**

Two hundred and forty-three mixed breed steers were allotted to four treatments with two pastures per treatment. Treatments consisted of a free-choice mineral supplement alone or with Aureomycin® added to provide 150, 300, or 450 mg/hd/day. Gain was similar for all four treatments. The percentage of cattle with eye problems was reduced in pastures where 150 and 450 mg of Aureomycin were consumed daily; however, the incidence in the 300 mg/hd/day group was as high as in the control group.

(Key Words: Aureomycin®, Antibiotic, Mineral, Chlortetracycline, Native Grass, Stocker Cattle.)

**Introduction**

Aureomycin (chlortetracycline), at levels ranging from 75 to 500 mg/hd/day, has been shown to increase daily gain of stockers grazing native grass pastures. Additionally, it has reduced eye problems when fed at 350-500 mg/hd/day. The objective of this study was to determine the optimum level of Aureomycin needed to control eye problems and footrot, in addition to improving animal gains.

**Experimental Procedures**

Two hundred and forty-three mixed breed steers were allotted randomly to four treatments consisting of free-choice mineral mixes designed to provide 0, 150, 300, or 450 mg/hd/day of Aureomycin. Each treatment group was further divided into two pasture replications for a total of eight pastures. To attain the desired Aureomycin intake in the last three treatments, an Aureomycin premix (50 gram/lb) was added at 28, 56 or 84 lb per ton, respectively, of a commercial mineral mixture. The composition of the commercial mineral mixture is shown in Table 1.

**Table 1. Composition of the Commercial Mineral Mixture**

Ingredient	Percent
Calcium, not less than	7.0
Calcium, not more than	8.4
Phosphorus (P), not less than	7.0
Salt, not less than	39.0
Salt, not more than	41.0
Selenium, not less than	0.0026
Iodine, not less than	0.0002
Potassium, not less than	1.0
Magnesium, not less than	0.5
Vitamin A, not less than	50,000 IU/lb

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The steers grazed for 92 days. Individual weights were taken at the start and end of the trial. Steers were commingled at weighing to remove time of weighing effects. Additionally, they were monitored each week for footrot and eye problems. Mineral intake was monitored weekly.

### Results and Discussion

The typical gain response to Aureomycin was not observed in this trial (Table 2). Mineral intake was very close to the

predicted level, which resulted in Aureomycin intakes very close to the target levels. There was a slight but nonsignificant trend toward a reduction in footrot with the increasing Aureomycin. The steers consuming 150 mg and 450 mg had a lower incidence of eye problems; however, the incidence was as high in the 300 mg group as in the controls. Given the low incidence of both footrot and eye problems in the control steers, this trial may not have been an adequate test of the efficacy of Aureomycin in preventing these problems.

**Table 2. The Effect of Adding Aureomycin to a Mineral Mixture Supplied Free-Choice to Stocker Cattle**

Item	Treatment - mg Aureomycin/hd/day			
	Control	150	300	450
No.	56	65	54	68
Starting wt, lb	565	561	562	553
ADG, lb	2.57	2.58	2.57	2.58
Mineral intake, g/day	88	93	97	99
Aureomycin intake, mg/day	—	143	298	458
Incidence of:				
Footrot, %	2.0	1.3	.4	1.0
Eye problems, %	6.9 <sup>b</sup>	1.8 <sup>a</sup>	7.7 <sup>b</sup>	3.5 <sup>a</sup>

<sup>a,b</sup>Means in the same row with unlike superscripts are different (P<.10).