

Medicated Salt-Mineral Mixtures for Cow-Calf Pairs Grazing Native Range Pastures

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Medicated feeds have been used by livestock producers for many years in all classes of livestock. One such compound that has been used under feedlot conditions is chlortetracycline. This compound is a broad spectrum antibiotic sold by American Cyanamid Company under the registered tradename Aureomycin[®]. American Cyanamid has been doing field grazing studies in conjunction with universities to ascertain the effectiveness of medicating salt-mineral-vitamin mixtures for about 10 years. Research under grazing conditions done with ranchers under the direction of Kansas State University has shown a positive cost effective response favoring increased weight gains and a lower incidence of pink eye and foot rot. In Kentucky, where the medication was used with cow-calf pairs over a two year period on fescue-clover pastures, calves were 31 pounds heavier, and pregnancy rates in the treatment groups were 10-13% higher. Since the geographical region where these studies were conducted is quite different from southwestern North Dakota it is important to investigate the usefulness of this antibiotic under our conditions.

Angus X Hereford first calf heifers and their Milking Shorthorn X Angus X Hereford calves were allotted to graze native range pastures and receive either a chlortetracycline medicated mineral mix or an unmedicated control mixture. Fed free choice in covered mineral feeders, the salt mineral mix contained two parts trace mineral salt and one part dicalcium phosphate. Chlortetracycline was added at the rate of 312.5 mg. per ounce of mineral mix.

The mineral blend was kept fresh by adding small amounts at frequent intervals. Results for the 1984 grazing season, which ran for 151 days from June 1st to October 30th are shown in Table 1.

Summary: Chlortetracycline fed in the salt mineral mixtures resulted in 5.9% faster calf gains and cow weight gains were 17% better at the end of the 151 day grazing period. Although a gain advantage was shown for medication, the

cost for the medicated mixture was \$11.23 more per cow-calf pair than for the control. Using .70 $\frac{\text{¢}}{\text{lb}}$ per pound for value of the additional gain, the 18.1 pounds of calf obtained by using the medication would amount to \$12.68. Any advantage for the medication in the form of weight gain would be eliminated by the cost of medication.

Table 1. Summary of cow-calf pairs supplemented with Chlortetracycline medicated and unmedicated salt mineral mixtures.						
	Control			Medicated		
	Cows		Calves	Cows		Calves
No. cow/calf pairs	15		15	15		15
Starting weight June 1	950		199	954		192
Final weight Oct. 30	1020		486	1039		497
Days grazing	151		151	151		151
Avg. daily gain	.46		1.89	.56		2.01
Economics:						
Total pounds salt/ mineral mix consumed		450			700	
Avg. consumption/pair ¹ daily, ounces		3.10			4.82	
Salt mineral mixture cost/pound, $\frac{\text{¢}}{\text{lb}}$		10			31.1	
Avg. mineral cost/pair daily		.0193			.0936	
Total cost/pair, \$		2.91			14.14	

¹Herd bull included in average daily consumption.

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