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Effect of Rumensin on Legume Bloat in Cattle

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Summary

Rumensin¹ with or without Bloatguard² was fed to rumen-fistulated cattle grazing lush alfalfa pasture. Although Rumensin alone or in combination with low doses of Bloatguard reduced bloat, it was not completely effective. Hence, Bloatguard at the recommended dose is still necessary for full bloat control.

Introduction

Legume bloat is excess frothing of rumen contents after intake of lush legume forage. Many cattlemen have observed that cattle fed Rumensin while grazing alfalfa pasture have less frothy bloat. That led us to investigate the effects of Rumensin alone or combined with Bloatguard on alfalfa-pasture bloat.

Experimental Procedure

Our alfalfa pasture was divided into small plots and strip-grazed to provide bloat-provocative forage at all times. Cattle were pastured for about 1 hr in the morning and 1 hr in the evening: a schedule designed to cause bloat. When not grazing, cattle were held in drylot with shade, salt, and water available. Bloat was scored on a scale of 0 to 5 (0 = no bloat; 1 or 2 = moderate bloat; 3 to 5 = severe bloat) after each grazing period. We tested Rumensin alone at 300 mg (approved dose), 450 mg, and 600 mg per 1000 lbs of body weight. The approved dose of Bloatguard is 20 g per 1000 lbs of body weight. Treatment was not started until cattle had bloated for 3 consecutive days. Drugs were given via the rumen fistula before the morning grazing period. Treatment periods were 7 days or fewer if there were 3 consecutive days without bloat.

Results and Discussion

Bloat scores before and after treatment were compared, and the percentages of reduction in bloat are shown in Table 15.1. Rumensin alone at 300, 450, and 600 mg/1000 lbs reduced bloat by 36, 64, and 72%, respectively. Bloatguard at the recommended dose (20 g/1000 lbs) was 100% effective. Rumensin (300 mg) with 5 g of Bloatguard reduced bloat 46% and with 10 g, 66%.

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Rumensin alone or combined with reduced doses of Bloatguard did not control 100% of the bloat. Bloat on even one occasion in an experiment indicates the possibility, under field conditions, of many animals bloating on any given day. Thus, though Rumensin provides some bloat control and though control is better with Rumensin and low doses of Bloatguard, it is still necessary to use the recommended dose of Bloatguard if legume bloat is to be controlled effectively.

Table 15.1. Effect of Rumensin with or without Bloatguard on legume bloat

Drug	Dose*	Bloat score		Percent reduction
		Pre-treatment	Post-treatment	
Rumensin	300 mg	3.2	2.1	36.4
+ Bloatguard	5 g	3.1	1.7	45.9
+ Bloatguard	10 g	3.1	1.1	66.4
Rumensin	450 mg	3.2	1.1	64.2
Rumensin	600 mg	3.2	.9	72.5
Bloatguard	20 g	3.2	0	100.0

*

Per 1000 lbs body weight.