

Effects of Anthelmintics and Leptospirosis Vaccination on Performance of Feedlot Cattle

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Story in Brief

Two wormers (Tramisol¹ and Albendazole²) were administered to 125 crossbred steers (400 lb). The Tramisol was administered either as a liquid drench or injected intramuscularly and Albendazole was given as an oral bolus. The steers were given an IBR/Lepto³vaccination (for IBR and *Leptospira pomona*) upon arrival. Half the steers in each pen were given a Leptomune 5⁴, a five-way Leptospirosis vaccination. Tramisol-treated steers gained slightly faster and were slightly more efficient than Albendazole-treated steers. The injectable and liquid forms of Tramisol had similar effects on animal performance. The additional leptospirosis vaccination tended to reduce daily gains.

Introduction

Internal parasites can reduce feedlot performance and increase cost of beef production. This study was conducted to compare two different chemical worming agents and determine if an injectable anthelmintic may produce superior performance. Finally, the relative effects on performance of a Leptomune 5 injection was measured. Only performance responses were monitored so drug effectiveness was not directly measured.

Material and Methods

Two different wormers (Tramisol and Albendazole) were administered during arrival processing to 125 crossbred steers (400 lb) obtained from the southeast U.S. The Tramisol was injected intramuscularly or given as a liquid drench. The Albendazole was administered as an oral bolus. Four pens of cattle were allotted to each treatment. Every animal received an IBR/Lepto vaccination upon arrival. Half the animals in each pen received an additional Leptomune 5 injection. The 60-percent concentrate, 13-percent crude protein diet (Table 1) was fed twice daily. The protein source in the supplement was soybean meal (Table 2). Final weights were obtained after 32 days on feed. A 4-percent pencil shrink was applied to the 32-day weights before the gain, and efficiency was calculated.

Results and Discussion

Feed intake, gain and feed efficiency results are presented in Table 3. Cattle receiving Tramisol by either administration method had 6.8 percent greater gains and

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²Smith Kline Animal Health Products, Philadelphia, Pennsylvania.

³Abbott Laboratories, North Chicago, Illinois.

⁴Beecham Laboratories, Bristol, Tennessee.

Table 1. Ration ingredients

Ingredient	%
Cottonseed hulls	20.00
Alfalfa	20.00
Steam-flaked corn	27.25
Oats	23.25
Supplement	3.00
Soybean meal	6.50

Table 2. Supplement composition

	%
Soybean meal	67.0
Salt	10.0
Limestone	23.0
Trace mineral	+
Rumensin (60 g/lb)	20 g/ton
Vitamin A	25,000 IU/hd/day

Table 3. Effects of wormer administration on cattle performance (32 days)

Item	Tramisol		Albendazole
	Liquid	Injectable	
Cattle, no.	41	42	42
Feed intake, lb/day	13.1	12.9	13.0
ADG, lb/day	2.96	3.03	2.81
Feed/gain	4.43	4.25	4.65

Table 4. Effects of leptospirosis vaccination on cattle performance

Item	Control	Vaccinated
Cattle, no.	59	66
ADG, lb/day	3.02	2.84

were 6.7 percent more efficient than cattle receiving Albendazole, though these differences were not statistically significant. The two forms of Tramisol had similar effects on ADG and efficiency. Administration of the Leptomune 5 vaccine reduced daily gains of steers by 6 percent (Table 4).