

Technical Bulletin

Consumption Studies (Clinical Trials)

I. Summary

Three dewormer block consumption studies were conducted using a total of 143 mature cattle (approximately 50 at each location). Locations of the studies were Alabama, Louisiana and Wyoming. An adaptation period of 4-19 days with unmedicated feedblocks was required prior to offering the medicated dewormer blocks. The adaptation period varied depending upon current and previous herd feeding and management practices in addition to weather conditions. The medicated dewormer blocks were given for a 3-day treatment period with the total fenbendazole consumption for the 3-day period calculated to be 5 mg fenbendazole per kg body weight (2.27 mg/lb. body weight). Average fenbendazole consumption for each location is shown in Table 1.

Table 1. Fenbendazole Consumption for Each Location.*

Location	No. Animals	Average Consumption per Animal Fenbendazole, mg/kg Body Wt.
Alabama, Group 1	24	5.79
Alabama, Group II	24	7.73
Louisiana	60	5.58
Wyoming	35	3.60
		Average 5.68
		Std. Dev. 1.69

*Corrected for weathering effects.

All cattle were grazing on pasture. No supplemental feed was given except for the dewormer blocks. The total number of dewormer blocks placed in each pasture was determined at the beginning of each study and was based on the number of cattle in each pasture and other conditions such as physical layout of the pasture and watering areas.

Fecal samples were collected from all cattle before treatment and again approximately 14 days after treatment. Fecal egg counts were determined for all samples.

Fenbendazole was calculated to be given via the dewormer blocks at a dosage of 1.67 mg/kg of body weight/day for 3 days (5 mg/kg body wt. total dose). The dewormer block was formulated so that mature cattle would consume approximately 1 pound block per head per day. Use rate is approximately 1 block per 8 head of cattle (based on average mature cow weight of 990 lb.).

A summary of fecal egg counts for the 3 studies is shown in Table 2.

Table 2. Fecal Egg Counts.

Location	No. Animals	EPG	
		Before	After
Alabama	48	54.2	12.5
Louisiana	60	5.5	0.43
Wyoming	35	72.2	97.2*

*Percent of infected cows that showed EPG reductions due to treatment was 72%.
Four of 35 head had an increase, therefore probably did not consume any block.

Consumption of fenbendazole medicated dewormer blocks was consistent over all three locations of these studies. Average fenbendazole consumption was 5.68 mg/kg body weight compared to target treatment dose of 5 mg/kg body weight. Therefore, the dewormer block is an excellent method of fenbendazole administration for cattle on pasture. No working facilities are required to deworm cattle with dewormer blocks.



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