



Evaluation of the Pour-On Formulation of Dectomax

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Findings

- # Dectomax reduced roundworm egg shedding for at least 56 days.
- # Dectomax significantly increased calf weight, resulting in a 64-pound or \$38.40 advantage for treated calves.

Introduction

Gastrointestinal parasites cost producers anywhere from \$25 to \$200 per head in losses. Treatment with effective anthelmintic products can greatly reduce these losses. Previous studies at the Dean Lee Research Station have confirmed the efficacy and persistence of activity of the injectable formulation of doramectin (Dectomax, Pfizer) against the common nematode parasites of cattle. Many small producers do not have the facilities necessary for using an injectable product. This study was conducted to evaluate the effectiveness of the pour-on formulation of Dectomax. A measured dose of this product is applied down the back of an animal and can be applied in a simple line chute. It could be applied to free-standing animals if they were gentle enough to handle.

Experimental Approach

Sixty weanling steers were used to compare the effect of treatment with Dectomax Pour-On to no treatment for parasites. Five calves were assigned by weight to six groups of calves that received each treatment. Each group of five was

assigned to a four-acre paddock. The paddocks were bermudagrass sod overseeded with ryegrass. Calves were weighed, individual fecal samples collected, the Dectomax calves were treated and the calves were put in their appropriate paddocks on Jan. 15, 1997. All calves were weighed and fecal samples were collected at 28-day intervals. Calves were weighed off test on May 4, 1997. Calf gains and fecal egg counts were used to determine the effectiveness of treatment. Fecal egg counts were obtained by processing 3 grams of each individual fecal sample through a centrifuge-sucrose flotation procedure that separated the nematode eggs from the remainder of the sample. The recovered eggs were counted using a 10-power microscope. This number was divided by three to obtain the eggs per gram (EPG) of feces. Egg count data were analyzed and are presented as geometric means.

Results and Discussion

There was no difference in average egg counts between the control and treated calves on Day 0 (Table 1). By Day 28, counts for both groups had decreased dramatically. Prior to going on the study, the calves were maintained on primarily a hay diet and were processed through the working chutes several times. Stress and forage quality often increase nematode egg shedding. By Day 28 the calves had adjusted to a high-quality forage diet and were comfortable in their environment. This usually results in lower egg counts. Even with the markedly lower egg counts, calves

treated with the pour-on formulation had lower ($P<.05$) egg counts than control calves. This relationship continued through Day 56, confirming the label claim that Dectomax Pour-On had an extended period of efficacy of up to 28 days. By Day 84 and for the rest of the trial, egg counts for treated calves were not different ($P<.05$) from the counts of control calves.

Table 2 contains calf weight data. Initial

average weights were 429 for both treatment groups. By Day 28, calves treated with doramectin were heavier ($P<.05$) and on average weighed 48 pounds more than control calves. By Day 56 they had a 66-pound advantage over controls, and this advantage was maintained for the duration of the trial. All calves were sold at the end of the trial. Based on Day 140 weights, calves treated with Dectomax Pour-On were worth \$38.40 more than control calves.

Table 1. Treatment means of nematode eggs per gram of feces

Treatment	Day of Study					
	0	28	56	84	112	140
Control	415	97 ^a	84 ^a	41	14	23
Dectomax Pour-On	427	4 ^b	14 ^b	18	10	15

^{ab} Means within a column with different superscript are different ($P<.05$).

Table 2. Calf weights (lbs)

Treatment	Day of Study						Final Value @ \$.60/lb.
	0	28	56	84	112	140	
Control	429	447 ^a	470 ^a	546 ^a	632 ^a	689 ^a	\$413.40
Dectomax Pour-On	429	495 ^b	536 ^b	614 ^b	691 ^b	753 ^b	\$451.80
Advantage	0	48	66	68	59	64	\$ 38.40

^{abc} Means within a column with a common superscript are not different ($P<.05$).