THE EFFECT OF MID-SUMMER DEWORMING ON WEIGHT GAIN OF COWS AND THEIR CALVES IN SOUTHEAST OKLAHOMA

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Story in Brief

The effect of a midsummer deworming following a spring deworming on performance of cows and their calves was evaluated in a herd of 41 cows and their calves in LeFlore County in southeastern Oklahoma. Midsummer deworming improved calf weight gains from treatment to October weaning by 24 pounds. During the same period, cow weight was also improved by 20 pounds.

(Key Words: Anthelmintics, Deworm.)

Introduction

The effect of routine treatment of cowherds with anthelmintics has been inconsistent. The response of a cow herd to deworming will depend on the level of infection, reinfestation, and the type of parasite involved. Research has shown the intestinal nematode Ostertagia ostertagi to potentially be the most economically damaging of the internal parasites. A 1987 southeast Oklahoma study with cows and their calves receiving a midsummer deworming resulted in a 21 lb. improvement in weaning weights and improved cow weight gain and body condition in weaning weights and improved cow weight gain and body condition score (Smith et al., 1987). In the 1987 trial the cattle had not received a previous spring treatment with an anthelmintic. The objective of this study was to evaluate the effect of a midsummer deworming as a follow up treatment to a spring deworming on the weight gain of cows and their calves.

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Materials and Methods

A total of 41 cows and their calves were used to evaluate the effect of midsummer treatment with ivermectin (Ivomec) on cow and calf weight gain. The trial was conducted on a ranch north of Poteau, Oklahoma. Calves ranged in weight from 120 to 500 lbs. at the beginning of the trial. On May 19, 1990, all cattle were gathered, individually identified, weighed and dewormed with fenbendazole (Safe-Guard) drench. Prior to midsummer (M/S) deworming calves were paired to their respective dams. On August 3, 1990, all cows and calves were again weighed. Cows were randomly allotted to treatment groups either receiving ivermectin or no treatment. Ivermectin was used as the midsummer anthelmintic due to its efficacy against the inhibited stage of Ostertagia at label dosage. Calves were identified when weighed, treated and allotted to the same treatment group as their respective dams. Throughout the trial all cattle grazed together in improved pastures. Treatment groups were not physically separated from one another. Cows and calves were again weighed at weaning on October 9, 1990. Data were analyzed by General Linear Models procedure.

Results and Discussion

Initial mean calf weights were similar for control and M/S groups (241 vs 238 lb, respectively). The midsummer deworming significantly improved August-October weight gains (119 vs 143 lb, $P<.04$). May-August and total calf weight gains were not statistically different. Lactating cows retreated with an anthelmintic in August tended to gain faster to weaning in October (49 vs 29 lb) then control cows.

The combination of results of this field trial and the 1987 study indicate that a midsummer deworming of commercial cows and their spring born calves should be considered by Oklahoma cattlemen. The effectiveness of an internal parasite control program is dependent on the type of parasite involved, the level of infection, the rate of reinfestation and the timing of the administration of appropriate anthelmintics. If application of an anthelmintic is necessary and economically effective in the spring, after which reinfestation can be quite rapid given the environment and grazing management employed in southeast Oklahoma herds, then a midsummer deworming will probably be warranted in terms of productivity and profitability. Reinfestation rates will be lessened in the hot, dry summer months. Although specific parasites involved in this and the previous study were not determined, any midsummer deworming in southeast Oklahoma should be with a product deemed effective against the inhibited stage of Ostertagia.

Table 1. Effect of midsummer deworming on cow and calf performance.[a]

Item	Control	Midsummer deworm
Number of animals:		
Cows	21	20
Calves	21	20
Cow Performance:		
Weight, lb; 5/19/90	894	897
Weight changes 5/19/90 to 8/3/90	20	23
Weight changes to 8/3/90 to 10/9/90	29	49
Total weight change	48	72
Calf Performance:		
Initial wt. 5/19/90 lb	241	238
Wt. gain 8/3/90	159	151
Wt. gain 8/3/90 to 10/9/90	119[b]	143[b]
Total wt. gain	278	294

[a] Least squares means.

[b,c] Means on same line with different superscripts differ significantly ($P<.04$).

Literature Cited

Smith, S.C., et al. 1987. The effect of midsummer deworming with ivermectin on performance of cows and their calves in southeast Oklahoma. Okla. Agr. Exp. Sta. Res. Rep. MP-119:280.