

EVALUATION OF DEWORMING STRATEGIES IN COWS AND CALVES IN EASTERN OKLAHOMA

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Story in Brief

Crossbred cow-calf pairs grazing bermudagrass pastures overseeded with clover in Eastern Oklahoma were used to evaluate deworming strategies. Forty-six spring-calving cows were blocked by sex of calf and age of cow into treatment groups 1) control, 2) deworm cow and calf, and 3) deworm cow only. Treated animals were dewormed with the label-recommended dosage of ivermectin pour-on at the start of the trial. All cows and calves were maintained in one herd during the 144 day trial. Weights of all cows and calves were recorded on June 5, 1995 at treatment and on October 27, 1995 at weaning. A management system that dewormed cows only significantly increased calf weight gain (28 lb). Deworming cows and calves tended to increase summer weight gain (22lb) of calves.

(Key Words: Deworm, Ivermectin, Beef, Cows, Calves.)

Introduction

The economic importance of cattle parasitism is well recognized. However, considerable confusion exists concerning the economic importance of parasitism in grazing cattle with subclinical parasitic infections. The value of deworming cows and /or their calves is often questioned. Quite often stockers are routinely dewormed while grazing introduced pastures but many cow-calf pairs in good body condition, or their calves, do not receive the same consideration.

In herds where anthelmintics are used, commonly only cows are treated in the early spring or fall months. The amount of exposure of nursing calves to worm infestations is often underestimated. Deworming has been promoted for use in cows with the return coming from increased weaning weights. Timing is often dictated by when other management practices are performed such as calf branding in the spring or pregnancy determination in the fall. Treatment of the cowherd in mid-summer allows for a reduction in pasture infestation by killing worms in the animal which are necessary to contaminate the pasture, at a time when the pasture population, necessary for reinfection of the animal, is low due to the heat and low humidity. Mid-summer treatment with an

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appropriate anthelmintic will kill the inhibited stage of *O. ostertagi* before they erupt from the stomach lining.

Three deworming trials were conducted at the Eastern Research Station located at Haskell, Oklahoma during 1992 and 1993. These trials indicated that deworming cows in late spring increased cow summer weight gains up until calf weaning time. Treating cows but not their calves resulted in no difference in calf weight gains, while treated spring-born calves had significantly higher weight gains than untreated calves when both treatment groups nursed treated cows (Stacey et.al. 1994). Further study (Stacey et.al. 1995) showed that treated calves nursing untreated cows had significantly higher weight gains than the untreated calves nursing untreated cows. The objective of this study was to evaluate two deworming strategies commonly used by cow-calf producers in Eastern Oklahoma.

Materials and Methods

Forty-six crossbred cows and their Charolais sired calves were used in this study conducted at the Eastern Research Station located at Haskell, OK, about 16 miles east of Muskogee. Pairs were blocked by sex of calf and cow age then randomly allotted to three treatments: 1) control, 2) deworm cow and calf, and 3) deworm cow only. Cows and calves were individually identified and weighed on June 5, 1995. Treated animals received label-recommended dosage of ivermectin pour-on. Pairs grazed in rotation seven bermudagrass pastures overseeded with clover at a stocking rate of 2 acres per cow during the 144 day trial. The study concluded October 27, 1995 when calves were weaned. Data were analyzed by General Linear Model Procedures.

Results and Discussion

Treatment of cows with ivermectin in early June increased their untreated calf weight gain (267 vs 239 lb $P < .05$) when compared to calves reared where neither cow or calf was dewormed (Table 1). Treating both cow and calf tended to increase summer calf gain (261 vs 239 lb $P < .08$) compared with untreated pairs. There was no advantage in calf weight gain (261 vs 267 lb) from deworming the cow and calf compared to deworming the cow only. This lack of calf weight gain response is not consistent with earlier observations (Stacey et al. 1994, 1995) when a higher overall level of cow and calf weight gain was achieved. Treatment of cows with ivermectin in early June increased their weight gain over controls during the 144 day period, but not significantly.

Literature Cited

- Stacey, B. R., et. al. 1994. OklaAgr. Exp. Sta. Res. Rep. P-939:118.
Stacey, B. R., et. al. 1995. OklaAgr. Exp. Sta. Res. Rep. P-943:85.

Table 1. Effect of treating spring calving cow/calf pairs or cow only with ivermectin on cow and calf weightgain.^a

Item	Ivermectin		
	Control	Cow/Calf	Cow
<u>Number of Animals</u>			
Cows	16	16	14
Calves	16	16	14
<u>Cows</u>			
Weight 6/5/95 (lb)	1158	1213	1178
Weight gain to 10/27/95 (lb)	12	44	38
<u>Calves</u>			
Weight 6/5/95 (lb)	240	257	261
Weight gain to 10/27/95 (lb)	239 ^b	261	267 ^c

^aLeast square means.

^{b,c}Means with different superscripts differ ($P < .05$).