

EFFECTS OF FEEDING DECCOX IN GROWING RATIONS FOR STOCKER HEIFERS

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Story in Brief

A field trial was conducted on a ranch in Noble County in north central Oklahoma. Ninety-eight heifer calves, purchased in a western Arkansas auction, were shipped to the ranch on October 11, 1984 and allotted to the study on October 13. Heifers were maintained in drylot pens and full-fed wheat hay and crabgrass hay for 56 days. All heifers were fed 2 lb of 38 percent cottonseed meal-based pellets per day with half the heifers receiving 100 mg of Deccox in their supplement. Heifers fed Deccox gained 1.34 lb/day compared to 1.06 lb/day for control heifers ($P < .01$). One case of clinical coccidiosis was seen in control heifers. These data suggest that these newly received calves were affected by sub-clinical coccidiosis enough to reduce performance.

(Key Words: Deccox, Coccidiosis, Stocker Calves.)

Introduction

Coccidiosis is a common health problem among newly arrived stocker calves in Oklahoma. Clinical cases with signs of bloody scours and death loss cause obvious economic losses. However, recent research suggests that coccidiosis may reduce performance in some cattle without causing the most apparent clinical signs of the disease. Because Deccox (Decoquinat) is an effective coccidiostat that should not have any other growth promotive effects, feeding Deccox during the receiving and growing phase should provide evidence of the effects of subclinical coccidiosis in cattle.

Materials and Methods

A 56-day field trial was conducted on a ranch in Noble county near Perry in north central Oklahoma. Ninety-eight heifer calves weighing about 340 lb were purchased in a western Arkansas auction and trucked to the ranch on October 11, 1984. The heifers were vaccinated for IBR, PI-3, Haemophilus somnus, Pasteurella hemolytica-multicida, Lepto and 5-way Clostridia. All heifers were injected with Ivermectin and implanted with Synovex®H. Hay was provided free choice to all heifers in round bale feeders and 2 lb/head/day of cottonseed meal was fed in feed troughs. Hay consisted of high quality wheat and crabgrass hay for the first 28 days and lower quality wheat hay for the last 28 days of the study.

On October 13, all heifers were randomly allotted to either Control or Deccox treatments. Deccox was administered through the cottonseed meal pellets at the rate of 50 mg/lb or 100 mg/head/day in 2 lb of

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supplement. All heifers were individually identified with a color coded and numbered ear tag at the time of allotment to treatments. Thirteen heifers had been pulled for sickness at the time of arrival and processing and were allotted to treatment groups while in the sick pen. All weights were unshrunk weights taken immediately after moving cattle from their pens to the scales. Heifers were maintained in adjacent drylot pens throughout the study.

Heifers were observed daily and pulled for treatment when signs of sickness such as anorexia and depression were noted. Rectal temperatures were taken on all calves pulled for sickness. Sick calves were treated with antibiotics prescribed by the consulting veterinarian. The veterinarian was called to examine calves not responding to treatments and to evaluate severe cases.

Results and Discussion

During the first 28 days of the trial, calves fed Deccox in their cottonseed meal supplement gained 1.53 lb/day (Table 1) compared to 1.24 lb/day for control calves ($P < .05$). Control calves appeared to have slightly rougher haircoats and showed more loose stools than calves fed Deccox during the first 28 days in drylot. One case of clinical coccidiosis in a Control heifer was diagnosed by the consulting veterinarian on the tenth day of the trial. This heifer showed bloody scours, extreme incoordination and weakness. After treatment with Amprolium and antibiotics, the heifer recovered. Weather was generally mild during this period with limited rainfall.

Table 1. Performance and health of heifers fed Deccox for 56 days following arrival.

	Control	Deccox	Prob.
Number heifers	49	49	
Initial weight	352	342	
Daily gain, lb/day			
1st 28 days	1.24	1.53	$P < .05$
2nd 28 days	.88	1.17	$P < .01$
56 days	1.06	1.34	$P < .01$
Number dead	0	0	
Number treated at processing	7	6	
Sick days/calf pulled	3	3	
Number treated after Deccox feeding began	24	17	
Sick days/calf pulled	5.5	5.9	

During the second 28 days of feeding, calves fed Deccox again gained faster than control calves (1.17 lb/day vs .88 lb/day, $P < .01$). Approximately 5 inches of snow fell during this period. At the time of the final weighing, about 70 percent of the control cattle showed some signs of loose stools although no blood was apparent in their feces. No Deccox-fed calves were observed to show any scouring. The fact that feed related scouring would not be expected with a diet of low quality wheat hay and 2 lb/day of cottonseed meal, and that no scouring was

observed in the Deccox group, suggests that some other factor was involved. These data suggest that these heifers were affected with sub-clinical coccidiosis severely enough to reduce weight gain without causing clinical signs of coccidiosis. No heifers died during the trial. Slightly more Control calves required treatment for sickness than Deccox-fed calves although there was no apparent effect of treatment on the number of days each calf was sick. Respiratory illness was the most common sign among calves pulled for treatment.

For the entire 56 day trial, calves fed Deccox gained 1.34 lb/day compared to 1.06 lb/day for Control calves ($P < .01$). Deccox-fed heifers gained a total of 15.7 lb more than Control heifers during the trial. At a value of \$58 per hundred, the added gain would be worth \$9.09 per heifer. The cost of the drug will be between 2 and 5 cents per head per day depending on the source. Deccox is normally recommended for feeding the first 28 days after arrival. It was fed for 56 days in this study to estimate effects of controlling coccidiosis on performance of growing calves. Typically, a growth promotive feed additive would be used after the first 28 days. This study, along with others in Oklahoma (Barnes et al., 1984a and b), suggest that feeding a coccidiostat in growing and receiving rations can improve gains, particularly in the fall and spring months and in locations with a history of coccidiosis.

Literature Cited

- Barnes, K.C. et al. 1984. Deccox-mineral feeding studies--Okmulgee County, Oklahoma. OSU MP-116:130.
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