

# PERFORMANCE OF EARLY WEANED STOCKER CALVES OR SUCKLING CALVES TREATED WITH A MID-SUMMER APPLICATION IVOMEC-POUR ON

H. T. Purvis II<sup>1</sup>, C. R. Floyd<sup>1</sup> and K. S. Lusby<sup>2</sup>

## Story in Brief

This trial was conducted to evaluate the efficacy of a single mid-summer application of Ivomec Pour-On on weight gains of early weaned stocker calves grazing summer native range, or suckling spring born calves. Fifty-six early weaned calves and 31 suckling calves were randomly assigned to one of two treatments. Treatments were: calves that received Ivomec Pour-On July 17, 1995 (IVOMEC) or calves that received no Ivomec Pour-On (CONTROL). There were four different management schemes for the calves. Early weaned calves were fed one of three supplements: a 25% protein supplement (2.5 lb/day), a 40% protein supplement (1.5 lb./day) which is isonitrogenous with the 25% supplement, and a 40% protein (1 lb/day). All early weaned calves were managed as one herd while grazing native range. Calves still suckling their dams were managed as a herd and were not supplemented. Calves were weighed in 28-day intervals until the end of the trial (October 6, 1995). There was no management scheme x anthelmintic interaction, therefore the data were pooled and main effects are reported. Calves weighed about 304 lb at the start of the trial. Ivomec-treated calves gained .10 lb faster than CONTROL calves during the first 28-day period (2.14 vs 2.04 lb). During the second weight period IVOMEC calves tended to gain faster than for CONTROL (1.65 vs 1.58 lb). Final liveweights were higher for IVOMEC than for CONTROL (446 vs 436 lb). The administration of Ivomec to light weight stockers or suckling calves enhanced liveweight gain. Overall, Ivomec-treated calves gained 8% faster than controls.

(Key Words: Stocker Cattle, Anthelmintic, Supplementation.)

## Introduction

Cattleman have many different options for increasing the efficiency of their operations. Strategic use of supplemented feed and administration of anthelmintics are two ways managers may impact their bottom line. The objective of this trial was to document the response of summer supplementation

---

<sup>1</sup>Graduate Assistant <sup>2</sup>Professor

and single anthelmintic administration on liveweight gains for suckling and early weaned stocker calves.

## **Materials and Methods**

***Anthelmintic Administration.*** All calves received a weight dependent dose (1 ml/22 lb body weight) of Ivomec Pour-On<sup>1</sup> July 19, 1995. Calves were weighed initially at this time and again August 15, 1995 for an intermittent weight. Calves were weighed off trial October 6, 1995 (78 days on trial) All weights were taken following a 12-hr shrink without feed or water for the early weaned calves. Normally weaned calves were shrunk for 12 hours with their dams.

***Experimental Animals.*** Fifty-six (Angus x Hereford) calves born in February and March at the Range Cow Research Center west of Stillwater, OK were early-weaned May 22 at approximately 65 days of age. At weaning all early weaned calves were vaccinated with 5cc ULTRABAC CSNS<sup>2</sup>. Early weaned calves were fed in a drylot for the first 30 days post-weaning as described by Purvis and Lusby (1996). Following the drylot period calves had access to summer native range and received one of three supplements. Thirty-one normal weaned calves received 5cc ULTRABAC CSNS<sup>2</sup> similar to the early weaned calves in May, but these calves remained with their dams until the end of the trial October 6, 1995.

***Experimental Diets for Early Weaned Calves.*** Supplements for the early weaned calves (as-fed; Table 1) included: 2.5 lb/day of 25% protein pellet, 1.5 lb/day of a 40% protein pellet which is isonitrogenous with 2.5 lb/day of 25%, or 1.0 lb/day of a 40% protein pellet. Daily feed quantity was adjusted to the 5-day per week feeding schedule. Monday through Friday mornings (approximately 7:30 AM) calves were sorted into nine feeding replications and fed supplements in bunks measuring 3 x 6 feet, then returned to pasture (approximately 9:00 AM).

***Statistical Analysis.*** Weight gains were analyzed using least squares analysis of SAS (1985). The model included management scheme and anthelmintic treatment and the two way interaction. There was no ( $P>.60$ ) management scheme x anthelmintic treatment interaction, therefore the final model only included main effects of anthelmintic treatment. Mean comparisons were made utilizing the Tukey method with alpha defined as .05.

---

<sup>1</sup> Merck Company

<sup>2</sup> Beecham Labs

## Results and Discussion

**Calf Gains.** Calves weighed 304 lb at the beginning of the trail (Table 2). During the first weight period (July 17 to August 15, 1995) the IVOMEK calves gained faster than CONTROL (2.14 vs 2.04;  $P<.05$ ). However, liveweight did not differ during the intermittent weigh period. This is probably due to the relatively short period of time between weight periods (28 days). During the second weight period (August 15 to October 6, 1995) IVOMEK calves tended ( $P<.10$ ) to gain faster than CONTROL (1.65 vs 1.58 lb/day). For the 78-day trial period IVOMEK calves gained faster (1.82 vs 1.68 lb/day,  $P<.05$ ) than control calves.

The decision to utilize anthelmintics depends on many variables, such as geographic location, time of the year, grazing management, and known parasite problems. In the current trial Ivomec Pour-On increased weight gains by 8% overall. This was independent of management scheme utilized for the growing calf. Cow-calf producers may consider treating calves instead of cows to decrease initial application cost. It should be noted however that the biggest benefit in relation to gains were realized during the initial weight period. Cattle will ultimately become reinfected with parasites while grazing pastures. Therefore the decline in liveweight gain during the final weight period may be the result of reinfection with parasites coupled with declining forage quality.

## Literature Cited

Purvis, H.T. and K. S.Lusby. 1996. Okla.Agr. Exp. Sta. Res. Rep. (in press).  
SAS. 1985. SAS User's Guide: Statistics (Version 5). SAS Inst. Inc. Cary, NC.

**Table 1. Composition of supplements and amount fed to early weaned calves.**

	Percentage in ration as fed <sup>a</sup>		
	40%	40%	25%
Soybean meal	91.3	90.7	34.9
Wheat middlings			59.1
Cane molasses	4.8	3.2	3.5
Limestone	2.9	4.2	2.6
Dicalcium phosphate	.93	1.9	.0
Amount fed/day <sup>b</sup>	1.0	1.5	2.5

<sup>a</sup> Rumensin was added to each supplement to provide 125 mg/day in 25% and 100 mg/day for both 40%.

<sup>b</sup> 7-day basis. Supplements were prorated for 5-day/week feeding schedule.

**Table 2. Weight gains of calves treated with Ivomec Pour-On.**

	Treatment	
	Ivomec	Control
Initial weight, lb (7/19/95)	305	304
Weight gain period one (7/19/95-8/15/1995)	58.8 <sup>a</sup>	56.1 <sup>b</sup>
Weight gain period two (8/16/1995-10/6/95)	82.5 <sup>c</sup>	79.0 <sup>d</sup>
Final weight, lb (10/6/95)	446 <sup>a</sup>	436 <sup>b</sup>
Total average daily gain lb/day (78 days)	1.82 <sup>a</sup>	1.69 <sup>b</sup>

<sup>a,b</sup> Means within a row with uncommon superscripts differ  $P < .05$ .

<sup>c,d</sup> Means within a row with uncommon superscripts differ  $P < .10$ .