

Stocker Cattle Gains When Dewormed with Ivomec SR Bolus Compared with Ivomec Pour-onâ or Ivomec Injectable

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Authors:

**J.D. Wallace, J.
Arnold, A.L.
Hutson, B.R.
Stacey, K.C.
Barnes and D.L.
Lalman**

Story in Brief

Three studies were conducted to determine the influence of the Ivomec SR Bolusâ on stocker performance during summer grazing compared with a one time application of Ivomec Pour-Onâ or Ivomec Injectableâ . The SR Bolus improved average daily gain by .19 and .28 lb/d in two of the three trials and did not influence weight gain in a third study.

(Key Words: Anthelmintic, Bolus, Deworming, Stocker Cattle, Grazing.)

Introduction

Internal parasite infestation has a significant impact on profitability of the stocker cattle enterprise. Response to anthelmintics for stockers grazing summer pastures depends on many factors, including level and type of initial parasite load, rate of re-infestation after grazing begins and timing of appropriate anthelmintic application. Several Oklahoma trials have demonstrated improved weight gain when stockers are re-treated for parasite infestation during mid-summer. However, re-treating cattle one or more times during the summer grazing period increases costs and labor requirements. The Ivomec SR Bolusâ offers an opportunity to achieve continuous parasite control for 135 d. More information is needed for cattlemen to be able to effectively evaluate the potential of this product to improve profitability in the stocker enterprise.

Materials and Methods

Three studies (Table 1) were conducted comparing performance of stocker cattle receiving Ivermectinâ administered with the Ivomec SR Bolusâ (SRB) to cattle receiving a one-time treatment of Ivomec Pour-Onâ (PO) or Ivomec Injectableâ (INJ).

Trial 1 was conducted in Pontotoc County with 144 stocker heifers with average initial weight of 461 lb. Two pastures were utilized, consisting of predominately bermuda grass and stocked at the rate of 1.5 head per acre. Treatments included a single application of PO or SRB on April 18, 1997. Treatments were randomly assigned and equally represented in each pasture. The grazing trial continued through July 30 for a total of 104 d. All animals were individually identified and weighed at the beginning and end of the study. Nematode egg counts were determined from random samples collected on d 0 and d 104 from five head in each treatment.

Trial 2 was conducted in Grady County with 152 head of stocker heifers with average initial weight of 508 lb. Heifers rotationally grazed three bermuda pastures at a stocking rate of 1 head per acre. Treatments consisted of Ivomec Injectableâ or Ivomec SR Bolusâ and were initiated on June 9, 1997. Each heifer was weighed and individually identified at the initiation of the study and individual weights were recorded at the end of the trial. The grazing period continued through October 17, 1997 for a total of 130 d.

In Trial 3, 25 fall born mixed steers and heifers (initial weight = 523 lb) grazed bermuda and fescue pastures from May 13 through October 22, 1997 at the Eastern Research Station in Muskogee County. Cattle were blocked by sex and previous anthelmintic treatment. Treatments were Ivomec SR Bolusâ or a one time treatment of Ivomec Pour-Onâ . Nematode egg counts were collected randomly from 5 head representing each treatment on October 22, 1997.

Results and Discussion

In Trial 1, SRB treated heifers gained an additional 21 lb compared with PO treated heifers (Table 2). This resulted in a .19 lb/d increase in weight gain. Nematode egg counts were higher

for PO treated heifers both at the beginning and at the end of the study (Table 3). Assuming both treatments eliminated fecal egg shedding for a period after trial initiation, these data suggest that pasture parasite contamination was significant enough to cause re-infestation of PO treated heifers by the end of the grazing period.

Weight gains for heifers treated with INJ did not differ from heifers treated with SRB in Trial 2. Although a relatively high stocking rate was used, pasture contamination may have been low enough to maintain low infection levels in INJ treated heifers for the 130-d grazing period.

In Trial 3, SRB treated cattle gained 44 lb more weight compared with PO treated cattle in the 162-d grazing period. This resulted in an increase in average daily gain of .28 lb/d for SRB treated cattle. Nematode egg counts were greater for PO treated cattle, suggesting an increased level of re-infestation compared to SRB treated cattle.

Implications

These studies suggest that the SR Bolus is an effective tool to increase weight gain of stocker cattle when substantial pasture parasite contamination is present and when one initial anthelmintic application is normally used. More information is needed to determine situations where the SR Bolus may improve profitability of the stocker/feeder enterprise.

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Trial	Location, county	Beginning date	Trial length, d	Sex	Number of cattle	Initial weight
1	Pontotoc	4-18-97	104	Heifers	144	461
2	Grady	6-9-97	130	Heifers	152	508
3	Muskogee	5-13-97	162	Mixed	25	523

Trial	Treatment	Number of cattle	Total gain, lb	Average daily gain, lb
1	Pour-On	71	225 ^a	2.17 ^a
1	SR Bolus	73	246 ^b	2.36 ^b
2	Injectable	75	229	1.78
2	SR Bolus	77	231	1.76
3	Pour-On	11	192 ^a	1.18 ^a
3	SR Bolus	14	236 ^b	1.46 ^b

^{a,b}Means within a column and trial with different superscripts are different (P<.05).

Trial	Treatment	Date	Nematode eggs/g of feces
1	Pour-On	4-18-97	387.4 ^a
1	SR Bolus	4-18-97	108.8 ^b
1	Pour-On	7-30-97	98.8 ^a
1	SR Bolus	7-30-97	2.4 ^b
3	Pour-On	5-13-97	472.4
3	SR Bolus	5-13-97	185.5
3	Pour-On	10-22-97	151.5 ^a
3	SR Bolus	10-22-97	13.0 ^b
^{a,b} Means within trial and date with different superscripts are different (P < .05).			