

## LIVESTOCK

### Dewormer Efficacy in Oklahoma Stocker Calves

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**Internal** parasites cost U.S. cattle operations an estimated \$200 million annually. While several chemicals and formulations are approved to control

worms in cattle, there have been recent reports of declining efficacy of some dewormers. The decline in efficacy could be due to over-use of some chemicals (i.e., resistance), the variability in bioactivity of some formulations (i.e., injectables versus pour-ons, manufacturer differences, etc.) and/or dosage or delivery errors by producers. To help producers manage health and performance of their cattle, the Noble Foundation undertook a research study to investigate the effectiveness of some popular dewormers.

The research trial used 497 stocker calves purchased from Oklahoma and Texas sale barns during spring 2011. The cattle were processed with an industry standard processing protocol and grouped into pens of approximately 50 animals. One of five dewormer treatments (Table 1) was applied to animals in each pen. Average daily gain (ADG) was measured over a 42-day receiving period during which the steers were fed free-choice

**Table 1.**

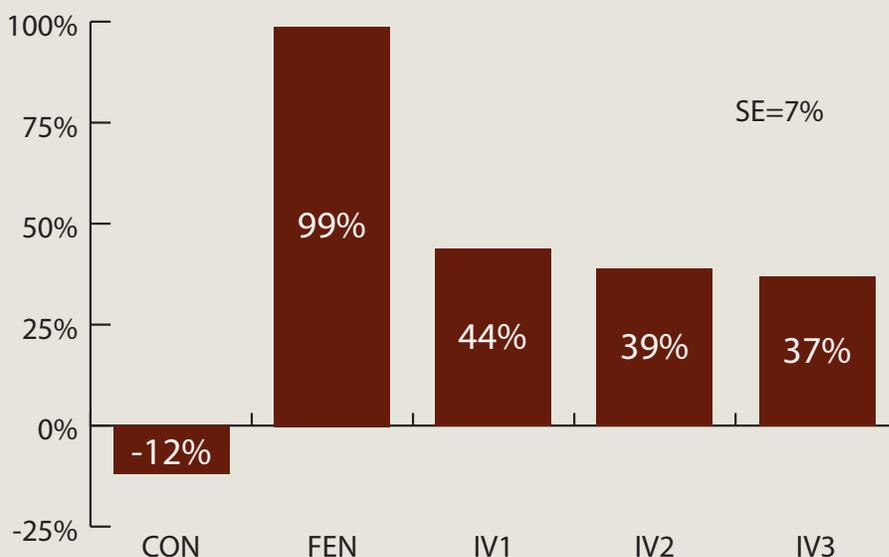
Treatment	Chemical	Formulation	42-d ADG, lb <sup>1</sup>
CON	none	none	1.58
FEN	Fenbendazole	drench	1.83
IV1 <sup>2</sup>	Ivermectin	injectable	1.63
IV2 <sup>2</sup>	Ivermectin	injectable	1.55
IV3	Ivermectin	pour-on	1.50

<sup>1</sup>n = 2, 50-animal pens per treatment, SE = 0.12 lb/d, P = 0.43

<sup>2</sup>different manufacturers

**Figure 1.**

#### 14-d Fecal Egg Count Reduction Percent



hay and 5 pounds per day of a receiving ration. Additionally, fecal samples were collected from each steer prior to treatment and 14 days following

treatment. An independent laboratory determined the number of worm eggs that were being shed from each steer. From those egg counts, a 14-day

fecal egg count reduction statistic was calculated for each pen. This statistic is the industry accepted way to determine efficacy of dewormers in cattle.

Average daily gain was similar among the dewormer treatments (Table 1). However, Figure 1 reveals that fenbendazole produced the

greatest reduction (99 percent) in egg shedding. The steers that received no dewormer actually increased the number of eggs they were shedding. The formulations of ivermectin that we tested were not effective at reducing the number of eggs shed. This trial would indicate that producers who

are interested in reducing parasite loads in their stocker cattle should consider using a dewormer other than ivermectin. Producers should work with their animal health advisors to design an integrated parasite control program specific to their operations and objectives. ■