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# Insecticide ear tags numerically improve grazing cattle performance

## Abstract

Stocker cattle grazing pastures during the summer months face challenges due to horn flies, which can result in reduced weight gains and less efficient use of forages. One strategy for controlling horn flies is insecticide-impregnated ear tags. The use of pesticide ear tags may be an effective management practice to improve overall productivity during a grazing season. The objective of this study was to evaluate the efficacy of insecticide ear tags as a means of improving growth of stocker calves grazing native pastures in the Flint Hills region of Kansas.

## Keywords

Kansas Agricultural Experiment Station contribution; no. 13-162-S; Report of progress (Kansas State University. Agricultural Experiment Station and Cooperative Extension Service); 1083; Swine; Insecticide ear tags; Stocker cattle; Gain; Cattle performance

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# Insecticide Ear Tags Numerically Improve Grazing Cattle Performance

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## Introduction

Stocker cattle grazing pastures during the summer months face challenges due to horn flies, which can result in reduced weight gains and less efficient use of forages. One strategy for controlling horn flies is insecticide-impregnated ear tags. The use of pesticide ear tags may be an effective management practice to improve overall productivity during a grazing season. The objective of this study was to evaluate the efficacy of insecticide ear tags as a means of improving growth of stocker calves grazing native pastures in the Flint Hills region of Kansas.

## Experimental Procedures

A 77-day grazing study was conducted at the Kansas State University Beef Stocker Unit, starting in April of 2012, to determine the efficacy of insecticide ear tags for managing growth of stocker calves grazing native grass pastures in the Flint Hills region of Kansas. All steers used in this study (267 head) were previously involved in a receiving study and were of sound health at the time the grazing study was initiated. Off-test weights collected at the conclusion of the receiving study were used to randomly assign each animal to grazing treatments. Steers were assigned to three treatments with four pasture replicates per treatment. The treatment groups included a control (no ear tags applied; Control), one insecticide ear tag per calf (One), or two insecticide ear tags per calf (Two). All paddocks were stocked at 253 lb beef/acre.

All calves were injected with 2 mL of Bovi-Shield Gold 5 (Pfizer Animal Health, Whitehouse Station, NJ) and were poured with UltraBoss insecticide (20 mL; Merck Animal Health, Summit, NJ). Corathon (15% Coumaphos, 35% Diazinon; Bayer Animal Health, Shawnee Mission, KS) insecticide ear tags were administered when cattle were placed on pasture on April 24, 2012. Paddocks were randomly assigned to treatment and served as the experimental unit. Individual weights were taken at initial processing prior to placement on pasture and at the completion of the grazing period. Because of drought conditions, all calves were removed from pastures on July 10, 2012.

## Results and Discussion

No significant differences were observed among the three treatment groups ( $P > 0.83$ ; Table 1). This result is likely due to insufficient replicates and a shortened grazing season because of drought conditions. The prevalence of pinkeye was limited in this study; one paddock (Trt = Two) had 5 calves treated for this malady.

## Implications

Using insecticide ear tags yielded substantial improvements in gain over the 77-day grazing season, but these improvements were not statistically significant.

**Table 1. Performance of grazing cattle tagged with 0 (Control), one, or two insecticide-impregnated ear tags**

Treatment	Control	One	Two
Initial weight, lb	679	679	679
Final weight, lb	789	798	801
Average daily gain, lb/day	1.45 ± 0.14	1.53 ± 0.14	1.58 ± 0.14
Added gain relative to control group, lb	-	9	12
Value of added gain, \$/head <sup>1</sup>	-	\$13.05	\$17.40
Value of added gain less cost of ear tags, \$/head <sup>2</sup>	-	\$11.05	\$13.40

<sup>1</sup>Assumes a value of \$1.45/lb live weight.

<sup>2</sup>Assumes a cost of \$2.00/ear tag.