

Using Fly Tags for Horn Fly Control in Alabama

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Introduction

Horn flies are the most economically important external parasite of beef cattle, costing the cattle industry hundreds of millions of dollars each year. Adult horn flies spend most of their adult life on the animal itself, where they feed on blood 30-40 times per day, using piercing mouthparts that inflict a painful bite. Cattle spend more time trying to rid themselves of horn flies than they do eating or drinking. When horn flies are left untreated weight gain will be affected, causing calves to lose up to 15% of their body weight.

There are many products labeled for control of horn flies in Alabama. Products come in a variety of delivery methods, with one of the more commonly used being insecticide impregnated ear tags. Through repeated use, many of these products have become virtually useless due to horn fly resistance. This research was conducted to give up-to-date protocols for the use of fly tags in Alabama cattle production systems.

Experimental Design

There are currently fly tags labeled for horn fly control from three insecticide groups: organophosphates, pyrethroids, and avermectins. A total of six brands of fly tags were tested: two organophosphate tags (Patriot® and Corathon®), three pyrethroid tags (Python Magnum®, Saber Extra®, and CyLence Ultra®), and one avermectin tag (XP 820®). The six fly tag brands constituted the treatments, the experiment was replicated twice, giving 12 treatment herds and two control herds.

The tags were placed in 12 herds averaging 30 head across Southwest Alabama. Tags were applied according to label directions once horn fly numbers reached the economic threshold (200 flies/animal). Tags were assigned based on the prior years horn fly control tactic (not randomly assigned). For example, if herd A had used pyrethroid sprays as their horn fly control method in the previous year, we assigned herd A with either an organophosphate or avermectin tag. Accounting for previous years control method allowed for a true test of the fly tag while also accounting for possible resistance in the local horn fly population.

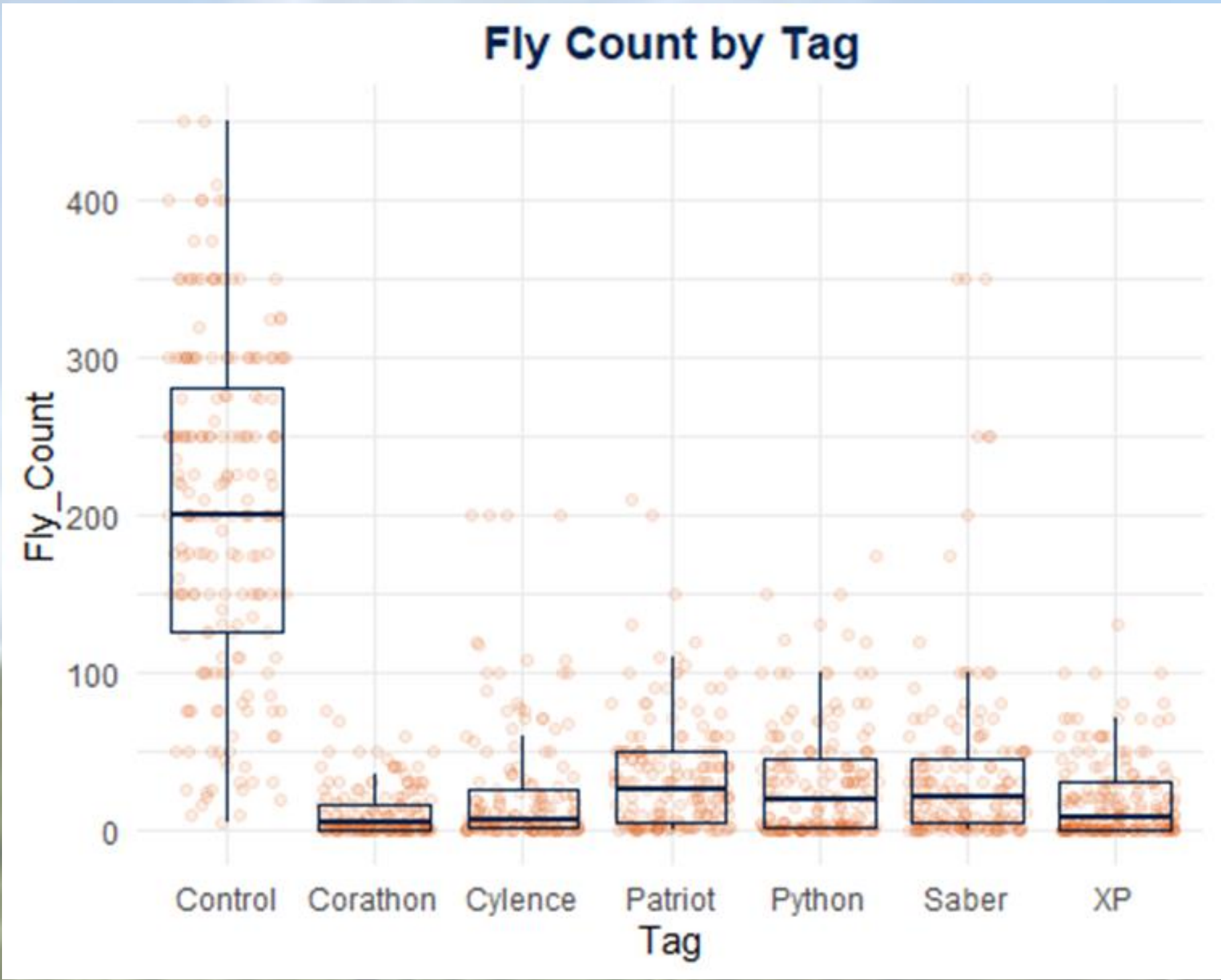
After placement of tags, fly counts were taken by choosing five treatment cows at random and recording the total flies on each cow. Counts were taken on a weekly basis until either: tag failure was noted by reaching economic threshold, or fly season ended. Upon tag failure/end of fly season, tags were removed from the treatment groups.

Picture: Applying fly tags in one of the treatment groups.



Results

The control groups consistently showed a higher fly count than all the treatment groups throughout the study. All the fly tag treatments kept horn fly numbers below economic threshold throughout the season. The Python Magnum® tag was associated with a slightly higher fly count compared to the other tags, but the levels were still below economic threshold. There was not a statistical difference between the other five tags. See graph below.



Implications for Alabama Cattlemen

Commercially available fly tags can be effective at managing horn flies in Alabama if used correctly. Producers need to rotate between insecticide classes each season. Make sure to wait until horn flies reach economic threshold before applying tags and cut out tags at the end of each season.

The costs of horn fly treatment were \$4.50-\$5 per head, which far outweighs the costs of not using horn fly control (20-50lb/calf loss). See the table below for an example on how to rotate classes each season.

Insecticide Classes			
Brand Names	Organophosphates	Pyrethroids	Avermectin
	Patriot	Python	XP 820
	Warrior	Python Magnum	
	Optimizer	GardStar Plus	
	Dominator	CyLence Ultra	
	Corathon	Saber Extra	

Table: Make sure to rotate between insecticide classes each year. Choose your starting point based on what you used for fly control in the previous season. For example, if last year you sprayed pyrethroids for horn fly control, choose an organophosphate or avermectin tag this year. Then, rotate to a different class next year. This should allow you to have a 3-year tag rotation.

