EFFECT OF INSECTICIDE IMPREGNATED EAR TAGS ON FLY 
NUMBERS AND PRODUCTIVITY OF BEEF CATTLE

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SUMMARY

Six beef herds, on a cooperating ranch in Duval County, were used to study the effectiveness of three brands of insecticide impregnated ear tags. Monthly fly counts, starting in April and going through September, on a randomly selected sample of ten cows per herd revealed that Estrin® and Atroban® tags were significantly (P<.01) more effective in controlling flies after June than Rabon® tags even though new Rabon® tags were attached in July. Weaning weights of calves, from cows tagged with Estrin® and Atroban®, averaged 28 kilograms heavier than calves from cows treated with Rabon® ear tags.

INTRODUCTION

It is estimated that producers in the southeast lose $200 million per year from reduced production due to horn, stable, and house flies, lice and mosquitoes. To reduce this loss, cattlemen have periodically sprayed their cattle. Research and extension demonstrations have shown that forced use of dustbags containing an effective insecticide is a more economical and effective way of controlling these pests. In recent years, insecticide impregnated ear tags have been suggested as an effective alternative.

OBJECTIVE

This study was designed to compare the effectiveness of three kinds of insecticide impregnated ear tags for controlling horn flies on beef cows and to determine effects on cow productivity.

PROCEDURE

A cooperating rancher in Duval County routinely divides the cow herd into six groups for breeding. In April, 1981, each of these herds was assigned to one of three insecticide impregnated ear tag treatments. The ear tags used were (1) Rabon, (2) Estrin, and (3) Atroban. Each cow in a herd had one tag of the brand assigned to her herd attached to one ear. Once a month, starting two weeks after tagging, a visual estimate of the number of flies per side

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1Use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee or warranty of products named and does not signify approval to the exclusion of others of suitable composition by the University of Florida. 
2M. G. Kelly, Extension Agent, Duval County.
was made on ten animals selected at random from each herd. In July, the animals in the Rabon treatment group were retagged with Rabon tags since these tags last only about 90 days. In late September, the calves were weighed as part of the ranches production testing program and weaned.

RESULTS AND DISCUSSION

All three tags were effective in keeping the number of horn flies below the economic threshold of 50 per side for the first three months. In July, the average number of flies per side increased significantly in the Rabon herds and despite new tags being attached, remained high through to the end of the study (table 1).

<table>
<thead>
<tr>
<th>Tag</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rabon®</td>
<td>22.5</td>
<td>19.85</td>
<td>15.0</td>
<td>88.0</td>
<td>100.0</td>
<td>85.0</td>
</tr>
<tr>
<td>Ectrin®</td>
<td>5.0</td>
<td>7.5</td>
<td>10.0</td>
<td>25.0</td>
<td>20.0</td>
<td>50.0</td>
</tr>
<tr>
<td>Atroban®</td>
<td>5.0</td>
<td>10.0</td>
<td>15.0</td>
<td>19.5</td>
<td>22.5</td>
<td>50.0</td>
</tr>
</tbody>
</table>

The Ectrin and Atroban ear tags are advertised as having a five month life span, and the data suggests that in September they were beginning to lose their effectiveness.

In the three previous years, there was no significant effect of treatment on the weaning weight of the calves from these herds. In this particular trial, the calves from the herds tagged with Ectrin and Atroban were significantly (F<.01) heavier than the calves from herds with Rabon tags (table 2).

<table>
<thead>
<tr>
<th>Ear Tags</th>
<th>Number of calves</th>
<th>Adjusted weaning weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rabon®</td>
<td>35</td>
<td>194&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Ectrin®</td>
<td>19</td>
<td>215&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Atroban®</td>
<td>42</td>
<td>219&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>1</sup>Adjusted for age of dam, sex of calf and 205 days of age.
<sup>2</sup>Means in the same column with different superscripts differ significantly (P<.01).

There were no known management practices such as fertilizer application or breeding differences to account for the observed difference of 23 kg per calf. The difference between the Ectrin and Atroban treated groups is not significant. The fly counts support the effectiveness of these two brands of ear tags in controlling external parasites. This study will be repeated to verify results. It appears that effectively controlling external parasites on beef cows can significantly improve calf weaning weights.