CATTLE: Bos taurus L.; 'Hereford', 'Angus'
'Simmental', 'Charolais'
Horn fly: Haematobia irritans (L.)

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EAR TAGS (CIODRIN, SUPONA) FOR CONTROL OF HORN FLIES ON BEEF CATTLE, ALABAMA, 1983: Two experimental, insecticide-impregnated plastic ear tags, one containing 16% Ciodrin and the other 16% Supona, were evaluated. Six cow-calf herds of 23 to 26 mixed-breed animals of similar breed composition were tagged while a seventh herd served as an untreated check. Treatments consisted of three herds with Ciodrin tags and three groups with Supona tags. All cows in each test group received two tags. Ear tags were installed during the second week of Jun. following pretreatment horn fly counts on 6 Jun. Weekly fly counts were made for 16 weeks from 6 Jun. to 26 Sep. Counts were made by visual inspection using binoculars with the number of flies/side recorded for 10 cows in each herd. Herds were rotated on pastures of similar foliage approximately monthly to minimize differences due to location.

Both the Ciodrin and Supona ear tags effectively reduced horn fly numbers on treated herds throughout the 16-week study. The Supona ear tags, however, appeared to provide better initial knockdown of established fly populations, reducing fly numbers by 90% within the first week posttreatment compared to a 55% reduction in Ciodrin-treated herds. After the second week, fly control was comparable for both treatments for the next 11 to 12 weeks, with fly numbers consistently 95% or more below that of the untreated check herd. Thereafter, the effectiveness of the Ciodrin tags began to taper off while the Supona tags continued to provide good control up to 16 weeks when the study was terminated.

<table>
<thead>
<tr>
<th>Pretreatment fly counts</th>
<th>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16</th>
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</thead>
<tbody>
<tr>
<td>Ciodrin (16%)....</td>
<td>904 55 82 97 98 99 97 98 97 98 97 98 97 98 99</td>
</tr>
<tr>
<td>Supona (16%).....</td>
<td>1133 90 92 96 98 99 97 99 99 98 99 99 97 96 93</td>
</tr>
<tr>
<td>Untreated.........</td>
<td>886 890 1070 960 1040 540 800 610 562 658 600 22 588 246 464</td>
</tr>
</tbody>
</table>

aMean number of horn flies per animal based on three groups per treatment
bMean number of horn flies per animal in untreated check.

CATTLE: Bos taurus L.
Horn fly: Haematobia irritans L.

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CYPERMETHRIN, FENVALERATE, AND PERMETHRIN DEVICES FOR HORN FLY CONTROL ON BEEF CATTLE, 1983: Eight separately pastured, mixed-breed cattle groups ranging from 40 to 82 cows were treated in East Baton Rouge Parish, La., with the following insecticides: Atroban permethrin 10% (AI) ear tag, cypermethrin 8% (AI) ear tag, Ectrin fenvalerate 8% (AI) ear tag, Ectiban permethrin 1.2 q(AI) ear tag tape, Ectiban permethrin 1.2q (AI) tail tape, Permectrin permethrin 10% (AI) ear tag, and Permectrin permethrin 10% (ear strip. Devices were applied at a rate of one device per cow. A herd of 45 cows and 45 calves served as an untreated control. Fly counts were taken on 15 randomly selected cattle on one side of the animal between 6:00 a.m. and 9:30 a.m. Percent reduction from control was determined by dividing the difference between the untreated and treated counts by the untreated count and multiplying by 100%.

Effective horn fly control was maintained 8 weeks posttreatment by Ectrin ear tags and Permectrin ear strips. Thereafter, effective horn fly control decreased with all devices. Ectiban tail tapes were shown to be the least effective control device because most tapes dislodged within 5 to 7 weeks after treatment. Ectrin tags (96%) were retained most effectively followed by Atroban tags (80%). Ear necrosis was not observed with any of the devices.