

VETERINARY
TECHNICAL
UPDATE

**Efficacy Evaluation of Ultra Saber® Pour-On and Double Barrel® VP
Insecticide Ear Tags vs. XP 820™ Insecticide Cattle Ear Tags and Agri-
Mectin® Pour-On Against Horn Flies, *Haematobia irritans*, in
South Florida.**

Objective

The purpose of this study was to evaluate the efficacy of Ultra Saber Pour-On and Double Barrel Insecticide Ear Tags vs. XP 820™ Insecticide Cattle Ear Tags and Agri-Mectin® Pour-On against natural horn fly, *Haematobia irritans*, infestations on cattle in South Florida.

Animals

Two herds of cattle were utilized for this study. One herd contained 599 head of two year old heifers and the other herd contained 637 head of yearling heifers. The two herds are located over 3 miles apart from each other.

The two year old heifers (approximately 800 lbs. each) were equally allocated across treatments I and II, with this herd serving as a study site to meet the previously stated objective.

The yearling heifers (approximately 500 lbs. each) were equally allocated across treatments I and II, with this herd serving as a study site to meet the previously stated objective.

Inclusion Criteria

Good health and the presence of horn flies (*Haematobia irritans*).

Treatment Groups

I. Ultra Saber Pour-On (1% Lambdacyhalothrin and 5% piperonyl butoxide) applied at a dose rate of 10 mL/head for cattle that weigh < 600 lbs. or 15 mL/head for cattle that weigh \geq 600 lbs. and Double Barrel VP Insecticide Ear Tags (6.8% Lambdacyhalothrin and 14.0% Pirimiphos methyl), use two tags per head.

II. Agri-Mectin Pour-On (5 mg. ivermectin/ml.) applied at a dose rate of 1 ml/22 lbs. and XP 820 insecticide cattle ear tags (8% total of Avermectin B_{1a} and B_{1b} and 20% piperonyl butoxide), use two tags per head.

All cattle in a herd received their respective treatment (I or II) at processing on Study Day 0. All products were administered in accordance with label directions.

Fly counts were conducted weekly after Day 0 for 17 weeks, unless one wasn't conducted due to an unforeseen conflict. In each respective herd (yearling heifers and two year old heifers), 20 animals from each treatment group were randomly selected and horn flies were counted on each animal by use of binoculars.

Results and Discussion

Yearling Heifers

AVERAGE FLY COUNT BY WEEK COMPARISON

Yearling Heifers

DATE of FLY COUNT	Week	TREATMENT 1	TREATMENT 2
<u>Sept. 2, 2009 *</u>	<u>1</u>	28	28
<u>Sept. 11, 2009</u>	<u>2</u>	3	3
<u>Sept. 18, 2009</u>	<u>3</u>	3	3
<u>Sept. 24, 2009</u>	<u>4</u>	9	5
<u>Oct. 2, 2009</u>	<u>5</u>	7	5
<u>Oct. 9, 2009</u>	<u>6</u>	5	10
<u>Oct. 20, 2009</u>	<u>8</u>	1	1
<u>Oct. 23, 2009</u>	<u>9</u>	5	6
<u>Oct. 30, 2009</u>	<u>10</u>	6	6
<u>Nov. 6, 2009</u>	<u>11</u>	5	8
<u>Nov. 13, 2009</u>	<u>12</u>	8	9
<u>Nov. 20, 2009</u>	<u>13</u>	8	6
<u>Dec. 4, 2009</u>	<u>15</u>	9	6
<u>Dec. 11, 2009</u>	<u>16</u>	11	9
<u>Dec. 18, 2009</u>	<u>17</u>	14	5

* Day (Sept. 2) was when products were applied

Treatment 1 = Double Barrel ear tags and Ultra Saber Pour-On

Treatment 2 = XP 820 ear tags and Agri-Mectin Pour-On

Yearling Heifer Herd

In yearling heifers -

- The average fly count was 28 flies per head prior to treatments being applied. These animals were treated with Ultra Saber in the second week of July, as part of the operations' standard Integrated Pest Management practices.
- Compared to pretreatment fly levels -
 - By weeks 2 and 3, both treatments reduced fly pressure by 89%.
 - By week 8, both treatments reduced fly pressure by 97%.
- By week 17, both treatments still effectively reduced fly pressure and provided economic fly control, with Treatment I animals averaging 14 flies per head and Treatment II animals averaging 5 flies per head.

Two Year old Heifers

AVERAGE FLY COUNT BY WEEK COMPARISON

Two Year Old Heifers

DATE of FLY COUNT	Week	TREATMENT 1	TREATMENT 2
<u>Sept. 3, 2009 *</u>	<u>1</u>	316	316
<u>Sept. 11, 2009</u>	<u>2</u>	5	2
<u>Sept. 18, 2009</u>	<u>3</u>	6	4
<u>Sept. 24, 2009</u>	<u>4</u>	7	2
<u>Oct. 2, 2009</u>	<u>5</u>	5	5
<u>Oct. 9, 2009</u>	<u>6</u>	5	4
<u>Oct. 20, 2009</u>	<u>8</u>	1	5
<u>Oct. 23, 2009</u>	<u>9</u>	8	5
<u>Oct. 30, 2009</u>	<u>10</u>	7	7
<u>Nov. 6, 2009</u>	<u>11</u>	8	8
<u>Nov. 13 2009</u>	<u>12</u>	5	6
<u>Nov. 20 2009</u>	<u>13</u>	6	8
<u>Dec. 4 2009</u>	<u>15</u>	10	7
<u>Dec. 11 2009</u>	<u>16</u>	11	9
<u>Dec. 18 2009</u>	<u>17</u>	10	13

* Day (Sept. 3 was when products were applied)

Treatment 1 = Double Barrel ear tags and Ultra Saber Pour-On

Treatment 2 = XP 820 ear tags and Agri-Mectin Pour-On

Two Year Old Heifer Herd

In two year old heifers -

- The average fly count was 316 flies per head prior to treatments being applied.
- Compared to pretreatment fly levels –
 - By week 3, Treatment I reduced fly pressure by 98%, while Treatment II reduced it by 99%.
 - By week 10, both treatments reduced fly pressure by 98%.
 - By week 13, Treatment I reduced fly pressure by 98%, while Treatment II reduced it by 97%.
- By week 17, both treatments still effectively reduced fly pressure and provided economic fly control, with Treatment I animals averaging 10 flies per head and Treatment II animals averaging 13 flies per head.

Summary

The one time application of Ultra Saber in combination with two Double Barrel ear tags (one per ear) proved to be a very effective treatment and virtually equivalent to Treatment II for reducing initial horn fly populations and keeping horn fly populations reduced and below economic threshold levels of 200 flies per head during the seventeen week trial in yearling and two year old heifers.

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