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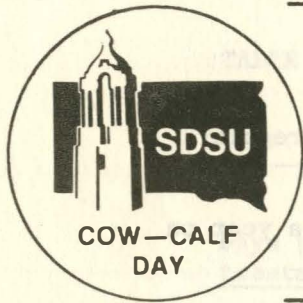
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Rabon-Impregnated Ear Tags for Horn Fly Control on Beef Cattle

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Summary

One insecticide-impregnated ear tag per animal resulted in satisfactory horn fly reductions of over 85% for 46, 62 and 71 days. Failure to control horn flies (50 or more flies per side) occurred at about 70 days post-treatment with three study herds in western South Dakota in the summer of 1980.

Introduction

Plastic ear tags¹ impregnated with about 2.2 grams of Rabon² (2-chloro-1-2,4,5-trichlorophenyl) vinyl dimethyl phosphate (13.7% w/w) were first reported to have dramatically controlled Gulf Coast ear ticks on cattle in Texas. The wounds made by the ticks would become heavily infested with screw worms. Tick and screw worm control was reported to last the entire tick season yielding 98 to 100% tick reduction. No single treatment could compare with the tick control given by these tags. It was noted that during these studies horn fly infestations on the treated cattle were reduced by as much as 95% within 2 to 4 hours post-tagging.

This is the third year Rabon tags have been studied at this station for horn fly control. In 1978, yearling heifers with a tag in each ear showed 78 to 95% horn fly reduction compared to untreated controls for 88 days in pastures near Brookings. At the Greg Weber Ranch 5 miles west of Philip, horn fly reductions on range cows were 89 to 97% over a 67-day period. On the Keffeler Ranch east of Sturgis, a study compared a tag in each ear versus a single tag. After 65 days, horn fly counts showed no difference in fly numbers on the cattle receiving one tag or two tags. Excellent fly control was observed for 80 days (over 92% reduction compared to untreated controls) but failed at 99 days with only 75% reduction.

During the second year of the study (1979), excellent fly control resulted for 80 days using one tag per animal at the Keffeler Ranch on 100 head of yearling Hereford heifers. At the Cottonwood Station, 148 yearling steers with one tag per animal resulted in satisfactory horn fly control for 46 days but failed at 90 days post-tagging. The Weber Ranch study showed complete failure at 116 days and only partial fly control failure at 91 days with one tag per animal.

¹ All-Flex type.

² Stirofos.

Prepared for presentation at Cow-Calf Day, Brookings, South Dakota, December 10, 1980.

Observations in 1978-79 also noted:

- (1) Some necrosis occurred due to tags, but no more than regular All-Flex tags according to cooperating ranchers.
- (2) Ritchie ear tag marking ink is readable for at least a year on these tags.
- (3) Stable and face fly control was not achieved.
- (4) A few tags were lost but no more than ordinary tags according to rancher cooperators.
- (5) Clipping the hair from inside the ear and prepunching the tag holes may decrease infections caused by the tag hole but is not considered advantageous considering the extra work required.
- (6) Tagging required about 1 minute per cow through the chute in a well-organized operation.

Results

The data from the summer of 1980 horn fly control studies are shown in tables 1, 2 and 3. A single tag per animal was used in all cases. Fly count numbers are average per side counts using binoculars on ten randomly selected animals in the treated and untreated herds. The untreated or control herds were neighboring herds of similar age animals. The data show horn fly control failure at an estimated 70 days at Fort Meade, 70 days at Cottonwood and about 90 days at the Weber Ranch. Excellent horn fly control was observed on the cows at Fort Meade and Weber's for the early part of the fly season (94 and 96% reductions). The difference in fly annoyance was dramatic between treated and untreated herds. The herds with the good horn fly control were scattered and grazing with very little tail switching and head tossing. Fly control on yearling steers at Cottonwood was not as impressive as the treated cow herds when compared to their untreated controls (67 to 85% fly reduction). This is not readily explainable.

It would appear that using one Rabon ear tag may shorten horn fly control effectiveness toward the end of the season when compared to two. The savings by using only one tag versus two (cost about \$1.25 per tag in 1980) might be justifiable if that savings were used for a combined treatment of a spray or pour-on in mid- or late August. A treatment such as this could be an effective late season horn fly control treatment as well as a grub and louse control measure.

TABLE 1. RABON-IMPREGNATED EAR TAGS FOR HORN FLY CONTROL
FORT MEADE PASTURE, SUMMER 1980
135 COWS, SINGLE TAGGED, JUNE 19

Days post-treatment	Avg horn fly counts per side (10 animals)		Control (%)
	Ear tagged	No treatment	
11	2	100	98
28	3	142	98
46	7	110	94
73	140	500	72

TABLE 2. RABON-IMPREGNATED EAR TAGS FOR HORN FLY CONTROL
COTTONWOOD RANGE FIELD STATION, SUMMER 1980
81 YEARLINGS, SINGLE TAGGED, MAY 1

Days post-treatment	Avg horn fly counts per side (10 animals)		Control (%)
	Ear tagged	No treatment	
62	34	222	85
76	35	132	73
95	30	55	45
120	117	350	67

TABLE 3. RABON-IMPREGNATED EAR TAGS FOR HORN FLY CONTROL
WEBER RANCH, SUMMER 1980
125 ANGUS COWS, SINGLE TAGGED, MAY 26

Days post-treatment	Avg horn fly counts per side (10 animals)		Control (%)
	Ear tagged	No treatment	
37	13	222	94
51	3	116	97
71	5	121	96
99	75	350	79