

10-7-92

Record Number(s)

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IN 6/23/92 ~~CUT~~ 10/7/92

EFFICACY

FILE OR REG. NO. 46779-1

PETITION OR EXP. PERMIT NO.

DATE DIV. RECEIVED 4/14/92

DATE OF SUBMISSION 4/6/92

DATE SUBMISSION ACCEPTED 6/23/92

TYPE PRODUCTS(S): I, D, H, F, N, RX S

DATA ACCESSION NO(S) none

PRODUCT MER. NO. 14

PRODUCT NAME(S) SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR

COMPANY NAME Ranchers Supply, Inc.

SUBMISSION PURPOSE submit annual monitoring report; discuss dropping requirements for future annual report

CHEMICAL & FORMULATION 1.00% Sodium Fluoroacetate solution in Livestock Protection Collar

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Efficacy Review: SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR,  
46779-1  
Rancher's Supply, Inc.  
Alpine, TX 79831

## 200.0 INTRODUCTION

### 200.1 Use

A 1.00% Sodium Fluoroacetate (Compound 1080) solution enclosed in a two-pouched rubber vessel attached to Velcro bands which hold the pouches in place in the throat regions of sheep or goats subject to predatory attacks by coyotes.

### 200.2 Background Information

See efficacy reviews of 11/21/86, 7/7/87, 7/11/88, 9/9/88, 11/15/88, 3/5/89, 4/29/89, 6/13/89, 12/19/89, 5/9/90, 10/22/90, 1/25/91, 3/1/91, 5/20/91, and 10/15/91, along with other information in the three-volume product jacket.

The product was conditionally registered on 12/1/87. Rancher's Supply once was and may still be the source for all Livestock Protection Collars legally produced in this country. The president of Ranchers Supply, Roy McBride, apparently was interviewed concerning the case but was not charged with any crimes associated with illegal distribution of 1080 in 1991 by an agent of the Wyoming Department of Agriculture (see efficacy review of 10/15/91).

This review discusses the the Texas Department of Agriculture's (TDA's) letter of 4/6/91 with which were included a copy of TDA's "1991 Annual Report Livestock Protection Collar Use" and a copy of proposed amendments to TDA's regulations which, among other things, would terminate the current monitoring program for use of Livestock Protection Collars in Texas.

## 201.0 DATA SUMMARY

The annual report summarizes collar sales, transfers, and use. TDA states that it held five "Predator Management Training Sessions" for certifying collar applicators and another session limited to recertifications.

TDA reports that a total of 705 collars were purchased in Texas in 1990. Individuals purchased 80 collars and the Texas Animal Damage Control (ADC) Service bought 625 collars. ADC also was given 30 collars by "individuals no longer wanting to possess collars." Fifteen collars were exchanged within a "collar pool" (see previous efficacy reviews for discussions of pools). Due to a numbering problem, three collars were exchanged between an applicator and the registrant.

Of 61 applicators with collars in their possession in 1991, 36 reported no use. Seven of the 25 applicators that used collars were ADC applicators.

General data on collar use in Texas in 1991 are summarized in Table 1. Numbers in Table 1 were taken from Tables 1-3 in TDA's 1991 annual report. TDA's Table 1 and Table 2 have a discrepancy in that Table 1 reports only one collar puncture resulting from rancher use in Mason County but Table 2 reports that

Table 1. Summary of Livestock Protection Collar use in Texas in 1991.

	USAGE BY POOLS AND INDIVIDUALS	TEXAS ADC USAGE	1990 TOTALS
Applicators Using Collars	18	7	25
Counties Where Collars Used	33	14	41
Days of LPC Use			
Maximum	20,559	22,569	43,128
Minimum	18,886	22,213	41,099
Average	19,722	22,391	42,114
Collars Punctured by Coyotes	20	23	43
Collars Damaged by Vegetation	38	17	55
Collar Damaged by Other Causes	3	NR	3?
Collars Damaged by Unknown Causes	13	8	21
Collars Lost	12	14	26*
Coyotes Believed to Have Been Taken by Collars	21	23	44
Suspected Collar Kills Found	NR	NR	NR
Nontarget Deaths Reported	2*	0	2*
Violations Reported	0	0	0

\* TDA's report states that there were "two (2) livestock deaths from unknown cause" among collared animals.

two coyotes were killed by collars in Mason County. My Table 1's figures for other fates of collars were taken from TDA's Table 1. These data do not always square with what TDA provides in the text of its report, but the discrepancies are rather small and seem to be insignificant.

Table 2 compares results reported for 1991 with those reported for 1988 through 1990. The apparent increase in collar use seems to be due to the advent of collar pools, which began in 1989, and to the use of collars by Texas ADC personnel, which began in 1990. For reasons explained in a footnote to Table 2, the data for numbers of collars used in 1990 and 1991 are maximum possible figures.

An appendix to TDA's annual report summarizes collar use in Texas from April of 1988 through December of 1991. This summary includes the following generalizations:

1. "collars can be especially useful in taking coyotes that have learned to evade conventional control methods such as traps, snares, calling and shooting, and M-44 sodium cyanide devices";
2. "an outstanding advantage of the collar is its selectivity for individual coyotes actually causing damage";
3. "[t]he common targeting practice reported by ranchers successful in taking coyotes with LPCs is to place a few collared lambs or kids with their mothers along with a larger number of dry ewes or nannies in a pasture where coyotes are attacking to the throat"; and
4. "[i]t is reasonable to assume that a significant number of the collared animals reported lost or missing were likely to have involved collar punctures because few collared animals were found to have died of other causes."

The upbeat nature of these generalizations is supported by much of the data included in TDA's brief summary of its 4-year monitoring program and in earlier annual reports. In the past, TDA has declined to pursue having Ranchers Supply modify its technical bulletin so that it recommends using the strategy which is mentioned in item "3." for sheep as well as for goats. It has been known for some time that coyotes will selectively take kids from large herds of adult goats. The technical bulletin currently states that a similar strategy has not been tested with sheep and is not recommended.

TDA's summary report also indicates certain problems and limitations associated with collar use. Among the problems mentioned are occasional reports of livestock kills stopping after collared animals were placed (with no apparent takes of coyotes), only to resume after the collars were removed. At one site, 20 collared animals were killed by (unidentified?) predators, but no collars were punctured. Losses of collared animals to causes other than being killed outright by a predator have included one animal destroyed after having been caught in a leg-hold trap, one destroyed after having been contaminated with 1080 solution from a ruptured collar, and 9 which died of "unknown causes."

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Table 2. Summary of Livestock Protection Collar use in Texas in 1988-1991.

	1988 TOTALS	1989 TOTALS	1990 TOTALS	1991 TOTALS
Collars Bought	827	441	1183	705
Applicators Using Collars	34	30	39	25
Counties Where Collars Used	22	20	36	41
Days of LPC Use				
Minimum	24,944	25,543	36,633	43,128
Maximum	26,445	28,428	37,299	41,099
Average	25,694	26,986	36,966	42,112
Total Collars Used	524	463	≤ 951¶	≤ 2,708¶
Collars Apparently Undamaged*	435	380	820	2,560
Collars Punctured by Coyotes	30	23	38	43
Collars Damaged by Vegetation	15	28	30	55
Collars Damaged by Other Causes	1	0	13?§	3?
Collars Damaged by Unknown Causes	4	7	9	21
Collars Lost	39	25	45	26
Coyotes Believed to Have Been Taken by Collars	37	23	31-34	44
Suspected Collar Kills Found	7	1	6?	NR
Nontarget Deaths Reported	1	0	0	2
Prey Kills w/no Collar Puncture	1	26	NR	NR
Serious Infractons Reported	1	1	0	0

¶ These figures represent the maximum possible number of collars used. The number of collars used by ADC personnel was not reported for 1990. For 1991, numbers actually used by ranchers were not reported. Number used for ranchers in 1991 was total number of collars possessed by ranchers or pools that used any.

\* This number determined by subtracting numbers in "damaged" and "lost" categories from total number of collars used.

§ Twelve of these collars may have been the ones that were reportedly disposed of for being "in poor condition."

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TDA reports that coyote-attributed collar punctures have occurred in pastures in which from 2 to 68 collared animals had been deployed. In just over half of the pastures in which coyotes apparently punctured collars, 10 or fewer collars were used.

Loss of collars and damage to collars by vegetation and other causes are problems inherent to the use of collars which additional monitoring would not prevent. Recordkeeping requirements are geared, in part, toward detecting possible human-caused collar damage related to removing 1080 solution for use in other ways.

In some respects, TDA's annual report for 1991 is less detailed than earlier versions and suggests that the Department's monitoring efforts in 1991 might have been somewhat less intense than in prior years. TDA does report having conducted 25 inspections of individual applicators, five inspections of ADC applicators, four of registered agents (heads of pools?), and one of the registrant, and concludes

"No significant applicator infractions of Livestock Protection Collar use restrictions were detected during applicator inspections in 1991."

In some ways, this statement says less than it does not say, raising questions such as "Were there any 'insignificant' infractions by applicators and, if so, what were they?" and "Were there any infractions of any kind by the registrant or his agents and, if so, what were they?" Perhaps there were no important violations at all, but past annual reports listed even rather trivial matters.

TDA's somewhat glosssy treatment of the 1991 annual report may be a by-product of its desire to have the monitoring requirement dropped. The original plan was to require use of all registered collars to be monitored for four years and for EPA to revisit the need for monitoring reports after four years worth of reports had been submitted. My overall assessment of TDA's surveillance of the use of Ranchers Supply's collars in Texas is that it has been reasonably thorough and probably has been adequate. While I would have preferred to see more detail in certain areas, especially violations, I believe that TDA has been reasonably conscientious. Therefore, I do not oppose dropping the monitoring report requirement for 46779-1. Reports of incidents still would have to be submitted as they are required by the "Use Restrictions" in the technical bulletin. My only reservation would be that TDA might monitor collar use and transfer less intensely in the absense of a requirement to submit annual reports.

According to Murry T. Walton, author of TDA's letter of 4/6/92, TDA desires to drop requirements for applicators to submit quarterly or annual reports of collar use. TDA would continue its program of annual site "inspections of all applicators possessing collars." Walton states that such inspections "should reveal any significant problems."

According to the preamble to TDA's proposed amendments to sections 7.10 and 7.32 of its pesticide regulations, the changes are sought

"to integrate the livestock protection collar applicator recertification program into the general pesticide applicator recertification program, which will result in the reduction of administrative costs to applicators using the collar."

The rule change also would formally permit collar pools and remove the current limitation (15) on the number of "registrant agents" that there could be for collars. TDA estimates that the various changes would reduce Texas's costs \$5,000 per year with "no estimated loss in revenue." Recertification costs per applicator are expected to drop \$2-10 per year. It appears as though applicators would have to recertify every year rather than every three years with "retraining and retesting" being required only(?) for

". . . any LPC applicator who fails to comply with the use, recordkeeping, or other requirements of the department [TDA]."

LPC applicators still would have to be certified for livestock protection and still would be tested at the time of initial certification. Applicators would have to comply with recordkeeping requirements prescribed in the "Use Restrictions" portion of product labeling and (presumably) would have to make "record forms" available to TDA's inspectors. Applicators also would have to report all transfers of collars.

I have no objections to the changes which TDA proposes. I feel, however, that it is the Certification and Training staff (FOD) which should make final comments on the suitability of TDA's proposed changes. Perhaps that staff already has commented on the changes, either directly or through the regional office.

In his letter of 4/6/92, Walton implies that EPA's concerns about retaining the monitoring program as a back-up mechanism for detecting possible hazards to nontarget species are unfounded because past studies have suggested that there is "a very low probability of nontarget poisoning." Actually, the reason why EPA has looked to the monitoring program as a back-up is because some of the earlier studies mentioned in the reports cited by Walton have been invalidated and/or called into question by improved residue methodologies which indicate that more 1080 is present on and in sheep and coyote carcasses than originally was thought. This information was communicated to TDA in EPA's letter of 10/18/91. The reporting requirements which remain, including the immediate reporting of threatened or endangered species (Use Restriction 6), might be adequate to detect significant problems before irreparable damage is done.

## 202.0 CONCLUSIONS

I have no significant objections to ending the requirement for the Texas Department of Agriculture to submit annual monitoring reports. As this requirement was imposed by EPA rather than by Judge Nissen, who presided at the 1080 predicide hearings of 1982, it appears that EPA is free to act unilaterally to remove it. I also feel that OPP should not act to remove monitoring requirements for other registered collars until four years of annual reports have been submitted and reviewed by EPA.

I also have no significant objections to TDA's planned revisions to its pesticide regulations. However, the final word from EPA on the latter topic should come from the Certification and Training staff in FOD or through the Region VI office.

William W. Jacobs  
Principal Specialist: Rodenticides  
Insecticide-Rodenticide Branch  
October 7, 1992

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