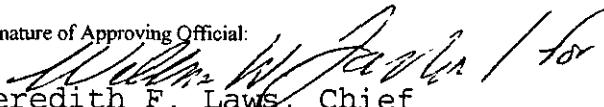
	U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (7505P) Ariel Rios Building 1200 Pennsylvania Ave., NW Washington, D.C. 20460		EPA Reg. Number: 35975-4	Date of Issuance: JUN 20 2006
	NOTICE OF PESTICIDE: _ Registration <input checked="" type="checkbox"/> Reregistration (under FIFRA, as amended)		Term of Issuance: unconditional Name of Pesticide Product: SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR	
Name and Address of Registrant (include ZIP Code): Montana Department of Livestock P.O. Box 202001 Helena, MT 59620-2001				
Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.				
<p>On the basis of information furnished by the registrant, the above named pesticide is hereby /reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.</p> <p>This product is reregistered in accordance with the requirements of FIFRA.</p> <p>The Confidential Statement of Formula (CSF) dated "4/11/06" is accepted and replaces all previously accepted CSFs for this product.</p> <p>The label for individual Livestock Protection Collars submitted on April 11, 2006, is accepted.</p> <p>The container label submitted on April 11, 2006, is acceptable, although one small editorial change should be made. In the second paragraph under "STORAGE" in the "STORAGE AND DISPOSAL" section, change "in a leakproof container, dry locked place" to "in a leak-proof container in a dry locked place". When this change is made, remember also to replace the copy of the container label in the technical bulletin with a corrected copy.</p> <p>The technical bulletin submitted on April 11, 2006, is acceptable provided that the changes listed below are made to it prior to its distribution.</p> <p>1. Replace the copy of the container label in the bulletin with a copy corrected as indicated above.</p>				
Signature of Approving Official:  Meredith F. Laws, Chief Insecticide-Rodenticide Branch			Date:	

2. In the second sentence of "**PREFACE**" text, change "do=s and don=ts" to "do's and don'ts".
3. At the bottom of the "**TABLE OF CONTENTS**" change "BILINGUAL WARNING SIG" to "BILINGUAL WARNING SIGN".
4. In the second sentence of "**II.B.**" under "TOXIC PROPERTIES OF SODIUM FLOUROACETATE (COMPOUND 1080)", change "5 to 14 mL" to "5 to 14 ml".
5. In the third sentence of "**II.B.**" under "TOXIC PROPERTIES OF SODIUM FLOUROACETATE (COMPOUND 1080)", change "30 mL" to "30 ml".
6. In the second sentence of the first paragraph of "**II.C. DESCRIPTION OF COLLARS**", delete "up to 1985". The statement seems to remain accurate up to 2006.
7. In the second sentence of the second paragraph of "**II.C. DESCRIPTION OF COLLARS**", change "Velcro7" to "Velcro®" (or just "Velcro").
8. In the first sentence of item "**II.D.1.g.**" under "MANAGEMENT OF COLLARS ON SHEEP AND GOATS", change "a one-ounce bottles" to "a one-ounce bottle" or "one-ounce bottles".
9. In the last sentence of the first paragraph of item "**II.D.2.**" ("Attaching collars") under "MANAGEMENT OF COLLARS ON SHEEP AND GOATS", change "rather" to "rate".
10. In the sixth sentence of the second paragraph of item "**II.D.2.**" ("Attaching collars") under "MANAGEMENT OF COLLARS ON SHEEP AND GOATS", change "photo" to "photos".
11. In the fifth sentence of the first paragraph of item "**II.D.5.**" ("Disposal of damaged collars and other contaminated materials") under "MANAGEMENT OF COLLARS ON SHEEP AND GOATS", change "Not more" to "No more".
12. Delete "\$16.50-17.50 each in March 1985" from the second sentence of the "Collar all vulnerable livestock" paragraph in "**II.E.**" ("DIRECTING COYOTE PREDATION TO COLLARED LIVESTOCK"). The prices of collars likely have changed over the past 21 years.
13. In the second sentence of the "Collars are placed where effective targeting cannot be expected" paragraph under "Mistakes in targeting" in "**II.E.**" ("DIRECTING COYOTE PREDATION TO COLLARED LIVESTOCK"), change "out numbered" to "outnumbered".
14. Change the first sentence of the "Collars are attached improperly or not securely" paragraph under "Mistakes in targeting" in "**II.E.**" ("DIRECTING COYOTE PREDATION TO COLLARED LIVESTOCK") to read as shown below.

If collars are attached improperly, or if they slip out of position (photo 13), coyotes will kill collared animals without puncturing the collars.

15. Move item "1." Of "**SECTION III. USE RESTRICTIONS FOR SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLARS**" to a position under the subheading "A. GENERAL" and assign the moved text the designation "(1)", using "(2)" and "(3)", respectively, as the designations for the items currently designated "(1)" and "(2)" under "III.A.". As amended, the "A. GENERAL" text will appear as shown below.

A. GENERAL

(1) Use of collars shall conform to all applicable Federal, State, and local regulations.

(2) The Montana Department of Agriculture hereby establishes rules regarding the registration and restricted use of 1080 Livestock Protection Collars [hereafter referred to as collar(s)] to control coyotes (Canis latrans) that depredate sheep and goats.

(3) Registration of the collar, dealers selling the collar, and applicators using the collar shall be subject to future labeling restrictions and requirements as may be prescribed from time to time by the U.S. Environmental Protection Agency and/or the Montana Department of Agriculture.

16. At the end of the first paragraph of item "(2)" under "DEALER SALES" in item subsection "III.C.", insert a proper footnote indicator (e.g., "1/"). At the bottom of the same page, use the same footnote indicator at the beginning of the "Direct supervision ... applicator)" paragraph. The use of "(1)" for that paragraph makes it appear to be an out-of-sequence use restriction rather than a footnote it item "III.C.(2)".

17. In section "III.1.D.(9)" (use restriction 9 under "D. APPLICATOR CLASSIFOCATIONS AND REQUIREMENTS", change the mail code given for the contact person in the asterisked (*) reference from "7505C" to "7505P" and insert "1200 Pennsylvania Avenue NW" between "EPA," and "Washington, DC 20460".

18. In the first sentence of use restriction "III.D.(19)", change "and A permitted farm applicators" to "and permitted farm applicators". (If there is such a thing as an "A" permit for farm applicators, then "A permitted farm applicators" should appear as "A-permitted farm applicators".)

19. In the first sentence of the "RECORDS A." paragraph under "**SECTION IV. SUPERVISION AND INSPECTION OF 1080 LIVESTOCK PROTECTION COLLARS**", change ">permitted farm applicator=" to "permitted farm applicator". Make the same change in the first sentence of paragraph "B." under "RECORDS".

20. In the last sentence of photo caption "3.", change "Velcro7" to "Velcro®" (or "Velcro"). Make the same change to the second sentence of photo caption "6.".

21. Change "lamb=s" to "lamb's" in photo caption "10.".

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21. Change "butcher=s" to "butcher's" in photo caption "11."
22. Insert a line space between photo captions "13." and "14."
23. Determine whether anything needs to be done (or can be done) to improve the resolution of the photographs included in the bulletin. On the copies that we received, many of the pictures were dark with little contrast. However, that circumstance may have arisen because U.S. mail sent to us is irradiated (due to anthrax issues) before we receive it. (Irradiation also led to the photos being partially stuck to one another.) Obscure photos do not convey their intended messages very well.
24. In the Spanish text on the bilingual warning sign in "**APPENDIX B**", change "ALGUCAS" to "ALGUNAS".

Copies of the stamped accepted labels and labeling are enclosed. When this label is printed for distribution, incorporate the changes indicated above. Submit two copies each of the final printed container label and technical bulletin. The collar label submitted already may serve as the final printed version as no changes are needed to that element of labeling.

If these conditions are not complied with, this registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Sincerely yours,



Meredith F. Laws, Chief
Insecticide-Rodenticide Branch
Registration Division (7505P)

Enclosures

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND
DOMESTIC ANIMALS**

DANGER

Fatal if swallowed. Wear waterproof gloves when handling collars. Wash hands after handling collars or animals that have been contaminated with 1080 solution. Do not use contaminated animals for food or feed.

ENVIRONMENTAL HAZARDS

This pesticide is highly toxic to wildlife. Birds and mammals feeding on carcasses of contaminated livestock may be killed. Keep out of any body of water. Apply this product only as specified on this label.

(REVISED 03/05)

**ENDANGERED SPECIES
CONSIDERATIONS**

NOTICE: It is a Federal offense to use any pesticide in a manner that results in the death of a member of an endangered species.

The use of 1080 in the Livestock Protection Collar has been determined to pose a hazard to several endangered species. See technical bulletin (use restriction III.D.18) for specific area where the 1080 collar cannot be used or approval must be obtained from the U.S. Fish and Wildlife Service prior to use.

NOTE TO PHYSICIAN

WARNING SYMPTOMS: 1080 poisoning results from the transformation of fluoroacetate into fluorocitrate within cell mitochondria. Poisoning is characterized by a symptom-free latent period of 1/2 to 2 hours or longer between ingestion and onset of symptoms (nausea, vomiting, diarrhea, and hyperactive behavior leading to convulsions, coma, and cyanosis). Ventricular fibrillation is commonly noted and is the primary cause of death. Early symptoms include alteration of heart sounds and premature weak contractions.

TREATMENT: No effective antidote is known, but symptomatic treatment may be effective. Establish respiration: create artificial airway if necessary. Check adequacy of tidal volume. Initiate emesis. If patient is comatose, convulsing, or has lost the gag reflex, endotracheal intubation should precede gastric lavage with large bore tube. Administer activated charcoal and magnesium sulfate. Treat seizures with IV diazepam. Monitor cardiac function closely. Treatment with glyceryl monoacetate (monoacetin) may be effective; however, it is experimental and unproven in humans. **CONSULT NEAREST POISON CONTROL CENTER FOR CURRENT INFORMATION.** Symptoms of non-fatal intoxication will usually subside within 12-24 hours.

RESTRICTED USE PESTICIDE

**Due to Acute Oral Toxicity and the Need
For Highly Specialized Applicator Training**

Collars may be sold or transferred only by registrants or their agents and only to certified Livestock Protection Collar applicators. Collars may be used only by specifically certified Livestock Protection Collar applicators or by persons under their direct supervision.

SODIUM FLUOROACETATE

(COMPOUND 1080)

LIVESTOCK PROTECTION COLLAR

For use on sheep or goats to kill depredating coyotes

ACTIVE INGREDIENT:		
Sodium fluoroacetate	1.00%	
INERT INGREDIENTS:	99.00%	
TOTAL	100.00%	

KEEP OUT OF REACH OF CHILDREN

DANGER -- POISON



**STATEMENT OF PRACTICAL TREATMENT
IF SWALLOWED: CALL A PHYSICIAN OR POISON CONTROL CENTER
IMMEDIATELY!!**

IF SWALLOWED: Induce vomiting at once with an emetic such as syrup of ipecac; use as directed. If an emetic is not available, drink 1-2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. **PROMPT TREATMENT IS MANDATORY. GET MEDICAL ATTENTION IMMEDIATELY!**
IF ON SKIN: Wash the exposed area twice with soap and water.
IF IN EYES: Wash eyes with plenty of water for at least 15 minutes.
IF ON CLOTHING: Remove contaminated clothing and wash before re-use. Dispose of all contaminated leather, including shoes, boots, and gloves according to the PESTICIDE DISPOSAL section. See disposal instruction on side panel.
SEE LEFT SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

MANUFACTURED BY:
Rancher's Supply, Inc.
PO Box 725
Alpine, TX 79830-0725

MANUFACTURED FOR:
Montana Department of Livestock
PO Box 202001
Helena, MT 59620-2001

U.S. Pat. 3,842,806
EPA Est. No. 46779-TX-01
NET CONTENTS: 30.4 GRAMS (1 1/2 oz.) per collar
EPA Registration No. 35975-4
EPA Est. No. 35975-MT-1

NOTICE

Seller makes no warranty, expressed or implied, concerning the use of this product other than that indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

STORAGE: Store Livestock Protection Collars only in original container, in a dry, locked place away from food, feed, domestic animals and corrosive chemicals. Do not store in any structure occupied by humans.

When snow or frozen ground make on-site disposal impractical, up to one cubic foot of wastes may be stored in a leakproof container, dry locked place for up to 90 days.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of such materials is a violation of Federal law.

Dispose of collars and other wastes vegetation, contaminated by 1080 (carcasses, wool, hair, soil, leather clothing, and water) under three feet of soil, at a safe location, preferably on property owned and managed by the applicator and at least one half mile from human habitations and water supplies.

Alternatively, contact your state pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in disposing of wastes at approved hazardous waste disposal facilities.

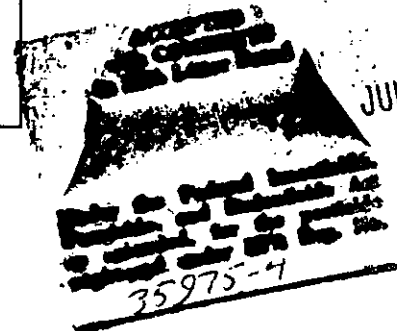
CONTAINER DISPOSAL:

Metal Containers: Triple rinse contaminated and uncontaminated containers with water. Then puncture and dispose of contaminated containers as above.

Plastic containers: Triple rinse with water. Then puncture and dispose of container as above.

COLLAR DISPOSAL: Dispose of punctured or unserviceable collars as above, except that not more than 10 collars may be buried in any one hole. If buried in trench, groups of 10 collars must be at least 10 feet apart.

**SEE BACK PANEL AND TECHNICAL BULLETIN
FOR DIRECTIONS FOR USE**



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DIRECTIONS FOR USE

It is a violation of state and federal law to use this product in a manner inconsistent with its labeling or the Compound 1080 cancellation order. Misuse may result in civil or criminal enforcement action.

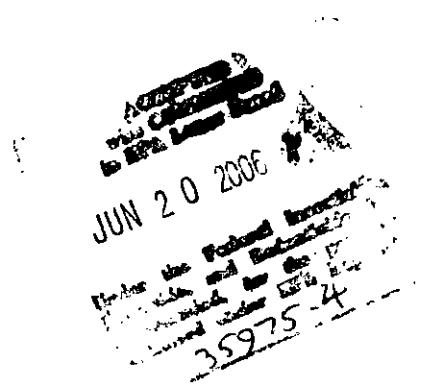
DO NOT REMOVE TOXICANT FROM COLLARS. DO NOT USE TORN, DAMAGED OR LEAKING COLLARS. Dispose of damaged collars in accordance with the "Storage and Disposal" instruction on this label.

Put collars on the necks of sheep or goats in fenced pastures where coyote predation is occurring or is expected to occur. Use collars only in accordance with the User Instructions and Use Restrictions contained in the accompanying Technical Bulletin.

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TECHNICAL BULLETIN
FOR THE
LIVESTOCK PROTECTION COLLAR



EPA REGISTRATION NUMBER: 35975-4

MONTANA DEPARTMENT OF LIVESTOCK

ANIMAL HEALTH DIVISION
PO BOX 202001
HELENA, MONTANA 59602-2001

PREFACE

This bulletin contains the rules for proper use of the Livestock Protection Collar. In addition to the do=s and don=ts contained herein, each applicator will be required to have in his/her possession a copy of the bulletin *"Procedures for Evaluating Predation on Livestock and Wildlife"* and a copy of the bulletin *"Applicator Manual for Compound 1080 in Livestock Protection Collars."* Applicators are expected to be knowledgeable of the information presented in these publications.

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- C. Description of Collars
- D. Management of Collars and Sheep and Goats

- 1. Things to do before putting collars on livestock
- 2. Attaching collars
- 3. Monitoring collared livestock
- 4. Handling collars and contaminated animals remains, vegetation, clothing, water and soil
- 5. Disposal of damaged collars and other contaminated materials

E. Directing Coyote Predation to Collared Livestock

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- 2. Target strategies
- 3. Mistakes in targeting

SECTION III. USE RESTRICTIONS FOR SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLARS

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Photo Captions & Photos

APPENDIX A. REGISTERED LABEL

APPENDIX B. BILINGUAL WARNING SIG

SECTION I: DO'S and DON'TS FOR LIVESTOCK PROTECTION COLLAR**DO**

- Read the label and instructions before using collars
- Plan how to target coyotes to your collared animals before using collars
- Use an appropriate size collar (small collars for 25 to 50 lb. animals; large collars for larger animals)
- Be sure to position collars correctly (see SECTION II.D.2. and photos)
- Check and repair fences if necessary before putting collared animals in pasture
- Notify neighbors that collars can be hazardous to free-ranging pets
- Keep warning signs in place as long as collars are being used (see SECTION III.D.13.)
- Check collared animals weekly or more often to be sure that all are present and that collars are in position and not punctured (see SECTION III.D.14.)
- Properly dispose of all collars, animals, vegetation, soil, water, leather clothing, and containers contaminated by 1080 (see SECTIONS II.D.4 & 5 and III.D.15 & 16)
- Report any suspected poisoning of non-target animals or humans (see SECTION III.D.9)
- Minimize human activity in pastures where collars are being used
- Keep records up to date as directed in the labeling (see SECTION III.D.8.)
- Take collars off when predation has stopped or is not expected to occur
- Store collars properly when not in use (see SECTION III.D.17.)
- Wear waterproof gloves when handling the collars
- Wash your hands with soap and water after handling collars

DON'T

- Waste time by placing collared animals where coyotes won't attack them
- Use collars if your livestock can be protected more easily or economically by other measures
- Use so few collared animals that coyotes won't find them
- Use more than 20 collars in any 100-acre or smaller pasture, or more than 50 collars per section (640 acres) of pasture (see SECTION III.D.11 & 12)
- Use collars on unfenced, open range (see SECTION III.D.11.)
- Place collars in any pasture where wolves or grizzly bears have recently attacked livestock (see SECTION III.D.18.)
- Use contaminated animals for food or feed (see SECTION III.D.22.)

- Use leaking or damaged collars (see SECTION III.D.15.)
- Remove toxicant from collar (see SECTION III.D.10.)
- Use until you have consulted SECTION III.D.18. for those counties where its use has been prohibited or requires written permission from the local Office of Endangered Species, Fish and Wildlife Service

SECTION II. USER INSTRUCTIONS

A. INTRODUCTION AND THEORY

The Livestock Protection Collar, invented by Roy McBride of Alpine, Texas exploits the coyote's habit of killing sheep and goats by bites to the throat (photo 1). As described in McBride's U.S. Patent No. 3,842,806 (issued in 1974), coyotes that attack collared livestock usually bite through the collars and receive oral doses of the contents. When used with a toxicant such as sodium fluoroacetate (Compound 1080), Livestock Protection Collars kill the attacking coyotes. Collars may be used only by specifically certified Livestock Protection Collar applicators or persons under their direct supervision (see SECTION III.C.2.). This publication is intended for the instruction of collar applicators.

Coyotes' attacking and feeding behavior do not seem to be affected by the presence of Livestock Protection Collars. Attacking coyotes usually kill and feed upon collared animals just as they would if no collar were present. After a lethal dose of sodium fluoroacetate (Compound 1080) has been ingested, symptoms of intoxication typically do not appear for 2 or more hours. Death occurs from 2 to 7 hours (average 4 hours 20 minutes) after the collar is punctured.

When collars are used properly, coyotes may puncture them in 75 percent or more of their attacks. A 100 percent puncture rate is unlikely to be achieved because coyotes sometimes attack body sites other than the throat (photo 2).

Effective use of Livestock Protection Collars requires not only that collars be positioned correctly, but also that coyote attacks be directed or targeted to collared livestock. Targeting may be difficult or impossible under some conditions. If coyotes are killing less than once per week, the collar technique may be impractical. Collars are recommended for ranches with high rates of coyote predation and management conditions that permit effective targeting of predations to collared livestock.

Experienced persons usually can evaluate local conditions quickly to decide whether or not collars will be effective. In addition to the basic problem of targeting, other factors to consider in deciding whether or not to use collars include availability and effectiveness of other control methods; costs of collars; labor requirements to collar and monitor livestock; potential hazards of collars to humans, domestic animals including pets, and non-target wildlife; and severity of predation.

B. TOXIC PROPERTIES OF SODIUM FLUOROACETATE (COMPOUND 1080)

Compound 1080 is highly toxic to warm-blooded animals, including man, when taken internally. Humans are not likely to be poisoned except by ingestion of collar contents. Based on available estimates of toxicity (0.7 to 2.1 mg/kg) a lethal dose for a 150-pound man would be contained in 5 to 14 mL of collar solution. Each Livestock Protection Collar contains 2 to 6 lethal doses (contents 30 mL). Before using collars, read the label (Appendix A) and the Use Restrictions in this Technical Bulletin (SECTION III) carefully.

The toxic solution in Livestock Protection Collars contains yellow dye (Tartrazine) as a safety marker. Punctured, damaged, or broken collars together with clothing, animal remains, vegetation, soil, or other materials marked by this dye must be cleaned or disposed of in accordance with the label and SECTION II.D.5. and III.D.15. of this technical bulletin. Collars with minor damage to straps or fastenings may be repaired by applicators as long as the toxicant reservoirs have not been punctured and do not leak.

Compound 1080 is hazardous to domestic animals including livestock and pets. Dogs are particularly susceptible. In field studies, dogs have died after they attacked collared livestock and punctured the collars. As little as 0.1 ml of collar contents may be fatal to a 25-pound dog. Dogs could

be poisoned by scavenging the carcasses of collared livestock. Therefore, to minimize the potential hazard to dogs, promptly dispose of all livestock carcasses as well as coyote carcasses suspected of being poisoned by Compound 1080 according to instructions in this bulletin.

Pen studies have shown that an adult sheep can be fatally poisoned by eating forage containing as little as 0.1 ml of 1080 solution from Livestock Protection Collars. Although no livestock appear to have been poisoned by eating contaminated vegetation during 5 years of field testing, it could happen. Therefore, contaminated forage must be disposed of as directed on the product labeling.

C. DESCRIPTION OF COLLARS

A Livestock Protection Collar consists of a rubber bladder that contains a solution of Compound 1080, with neck straps for attachment to a sheep or goat. The type of collar used most up to 1985 have two Velcro7 neck straps (0.75 inches wide and 22 to 24 inches long on new collars). Three-strap models also are available and are intended for use on goats. Both two-strap and three-strap collars have two toxicant reservoirs and come in two sizes – small and large (photo 3). The small collar is intended for use on lambs and kids weighing from 25 to 50 pounds. Livestock Protection Collars are not recommended for small animals (under 25 lbs.). A small collar, properly in place on a lamb, is shown in photo 4. The large collar is used on large lambs and kids, and on adult sheep and goats. A goat with a large collar is shown in photo 5.

Collars with straps of elastic fabric also have been tested (photo 6). Although they are faster to put on, elastic-strap collars may be less effective than those with Velcro7 straps. Elastic-strap collars may be used only on horned goats.

D. MANAGEMENT OF COLLARS ON SHEEP AND GOATS

1. Things to do before putting collars on livestock:
 - a. Be sure you have enough collars of proper size.
 - b. Inspect all collars for leaks and inspect straps to be sure they are securely attached. Do not use leaking or torn collars (photo 7) or collars on which the straps are coming loose (photo 8). Loose straps may be reattached by sewing.
 - c. Check the fence around the pasture where collared animals are to be placed and repair as necessary to keep animals within the pasture.
 - d. Establish locations for warning signs (Appendix B), and be sure you have enough signs.
 - e. Inform neighbors of your intent to use Livestock Protection Collars and advise them of the potential hazards to free-roaming dogs.
 - f. If ear tags or other marks are to be used, have the tags and related equipment on hand.
 - g. Have an emetic (a one-ounce bottles of syrup of ipecac) available when collars are to be handled. Also, have a few good quality plastic bags or other leak-proof containers on hand for packaging damaged collars.
 - h. Select and pen the target flock (animals to be collared).

2. Attaching collars

Hold collars up to the necks of target livestock to determine the size of the collar needed for each animal (photo 9). The rubber portion of the collar should come up to the ear (photo 4). If the collar is too small there will be an unprotected region below each ear (photo 10). This will result in a lower puncture rather than would be obtained with collars of proper size.

One person can put collars on livestock, but the task is much easier for a two-person team. One person holds each animal while the other attaches its collar. To attach a collar, hold it in position under the animal's throat. Tighten the rear strap over the animal's neck just behind the ears and fasten it temporarily. Then tighten the front straps over the head between the eyes and ears and fasten it securely. Straps should be positioned to keep the rubber part of the collar directly below the ear (photo 4, 5, and 6). On goats with horns, the front strap may pass in front of both horns or in front of one horn and behind the other. If necessary, use string or twine to tie the front strap to one or both horns to keep the collar in position (photo 11). Once the front strap is in position, readjust the rear strap if necessary and then secure it. If the straps are longer than needed, a knife or scissors can be used to trim off the excess. Fasten the strap ends by stapling (photo 12).

Collar straps must be tight enough to prevent collars from slipping out of position (photo 13), but not so tight as to choke the animal or cause sores (photo 14). Each strap should be loose enough that the applicator can insert 2 fingers between the strap and the animal. Collars stay in place well on animals with wool or mohair, but may be difficult to keep in position on newly shorn or slick-necked animals, particularly goats (photo 11). Head and neck conformation varies among animals and it may be impossible to keep collars in place on some individuals. They should be taken out of the collared flock.

A suitable method of permanently identifying individual animals in a target flock is required to keep track of collared livestock. One such method is the use of numbered ear tags. Tags which can be read from a distance of 50 feet or more are most useful (photo 15). If you are using ear tags, attach them before the animal is collared.

When the collar is in place, release the animal into a corral or other confined area and observe it carefully. Listen for labored breathing that may indicate the collar is too tight. When first released, collared sheep and goats often shake their heads, rub or make other attempts to rid themselves of the collars. This behavior will stop within a few hours if collars are not too tight. After you are satisfied that the collars are properly attached, move collared animals to the desired location.

Place warning signs at logical points of access (see SECTION III.D.13. and APPENDIX B).

After handling Livestock Protection Collars, wash your hands with soap and water.

3. Monitoring collared livestock

Once collared animals are in the desired location, the pasture should be checked every 7 days or more often if frequent predation is expected. During each check try to locate each animal and observe collars to be sure they are in position. If the collar has slipped out of position, catch the animal and reposition its collar. Inspect each animal's neck for yellow dye, which could indicate a punctured or leaking collar. If dye is seen, catch the animal and check the collar. Replace any damaged or leaking collar. See the label and SECTIONS II.D.5. and III.D.15 & 16 of this technical bulletin. Collars on small kids or lambs may require periodic adjustment to allow for growth.

When searching for collared livestock, watch for both animal carcasses and congregations of scavenging birds that would indicate the locations of carcasses. Whenever you visit a pasture, record

the identity of each collared animal seen. Check each warning sign weekly to insure that it is in place and is legible.

Based on experience gained in research studies, you will not see each collared animal every time you visit large, brushy pastures. Any animal not accounted for in two consecutive checks may be dead. An intensive search for it must be made. In addition, if more than three collared animals are not accounted for during any one check, an intensive search for these animals is required. Searches are to be conducted in a systematic manner suited to the height of the vegetation and natural features of the pastures, i.e., they must be searched in their entirety. If more than nine (9) collars/collared animals are unaccounted for during any 60-day period, remove all collars from animals and terminate their use.

Routine checks of collared livestock are difficult if the animals are secretive or wild. Feed concentrates can be used to train animals to come to you or your vehicle. This facilitates the identification and inspection of collared livestock (photo 16). It also helps to have a few tame animals in the collared flock. Binoculars may be useful for inspecting collared livestock from a distance.

Infrequently, collars may be missing from carcasses of sheep or goats killed by coyotes. In research studies, missing collars appeared to have been carried or dragged away by coyotes. Some were found as far as half a mile away from kill sites, but about half of the missing collars were never recovered. Coyotes sometimes cache (hide or bury) them. Whenever a collar is missing, make a reasonable effort to find it. See SECTION III.D.14.

If you see an animal that you think may have been poisoned, report it promptly to the appropriate regulatory agency. Any suspected poisoning of threatened or endangered species must be reported immediately. See SECTION III.D.9.

4. Handling collars and contaminated animal remains, vegetation, clothing, water, and soil

The toxic solution in the Livestock Protection Collar contains a yellow dye, Tartrazine, which is used as a marker for the presence of 1080 on punctured, damaged or broken collars; on clothes, animal remains, vegetation, soil, or other materials; and in water. Always use waterproof gloves when handling collars or any materials known to be contaminated by 1080.

Inspect carcasses of collared animals to determine the cause of death. When the carcasses are fresh (within 24 hours after death), coyote kills usually are obvious (photo 17). Remove punctured collars carefully and examine the punctures. Holes made by coyote teeth usually can be distinguished from accidental punctures. When collars are punctured by cactus thorns, the thorns remain in the holes (photo 18).

If the collar was punctured, place it in a leak-proof plastic bag or other container for transport to your disposal site. If necessary, double bag to prevent leakage. See SECTION III.D.15 & 16. Examine the carcass for contamination as indicated by yellow dye. Cut away the contaminated parts for disposal along with the punctured collar. See SECTION III.D.16. Dispose of the remainder of the carcass using your normal practice. Cut or dig up contaminated forage and soil and place in a leak-proof container for transport to the disposal site.

If the collar was not punctured, the applicator can reuse it on another animal. Dispose of carcass using your normal practice. No special handling is required. If an unpunctured collar has only minor damage to straps or fasteners, the applicator may repair it.

When predation has stopped, or when collars are taken off for other reasons such as shearing, gather the collared flock into a corral. Hold each animal and inspect its collar for punctures. If the collar is not punctured, loosen the neck straps of collar and then pull free. Do not pull so hard that you

rupture the collar (photo 7). It may be necessary, particularly with Angora goats, to use a knife or scissors to free collar straps from the animals' hair. Clean collars as necessary and return them to locked storage until you need them again.

If the collar is punctured, remove it carefully to minimize leakage of the contents. Put all damaged collars in plastic bags or other leak-proof containers for disposal. Cut away any contaminated wool or hair for disposal with the punctured collar.

Promptly remove and wash clothing contaminated with 1080 solution. Contaminated leather clothing, including gloves and footwear, should be disposed of in the same manner as contaminated animal remains because pesticides cannot be easily cleaned from leather. See SECTION III.D.16.

5. Disposal of damaged collars and other contaminated materials

Damaged, punctured, or leaking collars, contaminated animal remains, vegetation, soil, water, and leather clothing must be properly disposed of. The preferred method is by deep burial under 3 feet of soil in a safe field location at least one-half mile from human habitations and water supplies. For disposal on the ranch, it may be convenient to drill several deep holes using a mechanized post hole auger, or to make a trench with a backhoe. Then, as waste materials are produced, they can be dropped into the hole or trench and covered with earth. Not more than 10 collars may be buried in any one hole. If buried in a trench, separate each group of 10 collars by 10 feet of soil.

Alternatively, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in disposing of wastes at approved hazardous waste disposal facilities.

When snow or frozen ground make on site disposal impractical, up to one cubic foot of waste may be stored in a leak-proof container, in a dry, locked place for up to 90 days.

E. DIRECTING COYOTE PREDATION TO COLLARED LIVESTOCK

1. General comments

The process of directing coyote predation to collared livestock is called targeting. Knowledge of targeting is in its infancy and should improve as more people gain experience with Livestock Protection Collars. Three different approaches or targeting strategies are described here. Ranchers and predation control specialists are encouraged to apply these methods as necessary to achieve the best results in their own circumstances.

2. Target strategies

a. Collar all vulnerable livestock

Collaring all sheep or goats on a ranch would solve the targeting problem. This strategy has not been tested due to the cost of collars (\$16.50-17.50 each in March 1985) and the large number that would be required in large flocks (over 100 animals). Nevertheless, in small flocks (50 or fewer animals) it may be practical to collar all the lambs or kids. In flocks with 50 to 100 lambs or kids, it may be worthwhile to collar the smallest 20 to 50 individuals (25 to 50 lbs.). Do not use more than 20 collars in any pasture under 100 acres, or more than 50 collars per square mile of fenced pasture.

b. Use target (collared) flocks

When coyotes are killing in particular pastures, remove all vulnerable livestock.

Place 20 to 50 collared lambs or kids with their mothers in the pasture while all other vulnerable animals are penned at night or moved elsewhere. Add uncollared adult sheep or goats to the target flock to increase its total size to 50 to 100 head. If coyotes have been killing adult sheep or goats in the area, both adults and kids in the target flock should be collared. Remove collars 30 days after predation ceases, or whenever the risk of predation has abated.

This was the strategy used in most field tests and is the usual approach when collars are introduced onto a ranch where depredation is in progress. This strategy also can be employed in placing collared flocks in vacant pastures 1 to 2 months before large bands of sheep or goats arrive.

c. Collar vulnerable individuals in large flocks

Coyotes usually prefer kids or lambs to adult goats or sheep. Experience with Angora goats has shown that if a few collared kids are placed in larger flocks (5 to 10 collared kids per 100 uncollared adults), coyotes will select the kids (photo 20).

This strategy has not been tested on sheep and is not recommended for sheep at this time.

3. Mistakes in targeting

As with any new technique, one must learn how to use Livestock Protection Collars before optimum results can be expected. Following is a list of some mistakes commonly made by persons learning this technique.

a. Collars are placed where effective targeting cannot be expected

For example, 20 lambs were collared in a ewe-lamb flock containing hundreds of lambs. When over 95 percent of the lambs had no collars, coyotes killed the uncollared lambs. Targeting did not occur because collared lambs were outnumbered by uncollared lambs that were equally attractive to coyotes.

b. Collars are placed where predation is too infrequent

In one such case, collared sheep were exposed for 4 weeks during which no predation occurred. The users then lost interest and removed the collars. Collars cannot be used effectively where there is little or no predation.

c. Target flocks are too small

In one example, six collared lambs were left alone in a one-section pasture. Coyotes passed through the pasture without finding the collared animals and then killed sheep from a large flock in an adjacent pasture. The larger the flock, the more likely it is to attract coyotes. The optimum size for target flocks has not been determined, but pastures of 100 acres or more should probably contain at least 50 head.

d. Target flocks are not sufficiently isolated from uncollared livestock

On one small farm, a group of ewes and collared lambs was exposed while other sheep on the place were penned each night. Instead of killing the collared flock, coyotes switched to a neighbor's unprotected flock half a mile away. With small farm flocks, adjacent land owners may have to work together to achieve effective targeting.

- e. Small collars are used on large sheep or goats

This practice leaves the throat region inadequately covered (photo 10). Coyotes frequently killed these animals without puncturing the collars.

- f. Collars are attached improperly or not securely

Collars are attached improperly, or when they slip out of position (photo 13), coyotes will kill collared animals without puncturing the collars. Collars in proper position are shown in photos 4, 5, 6, 11, and 16.

- g. Placing collars on sick or cull animals

Placing collars on sick or cull animals in an effort to save money may be false economy, as coyotes are not necessarily more likely to attack ill or lethargic animals. Collars should be used only on animals of the size and kind that coyotes have been killing locally.

- h. Greatly increasing the level of human activity on ranch while collars are in use

Use of collars may be accompanied by increased human activity on the ranch. Coyotes often are wary of unusual activity and may temporarily stop killing because of it. Collars should be placed and monitored with a minimum of disruptive activity.

SECTION III. USE RESTRICTIONS FOR SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLARS

- 1. Use of collars shall conform to all applicable Federal, State, and local regulations.

A. GENERAL

(1) The Montana Department of Agriculture hereby establishes rules regarding the registration and restricted use of 1080 Livestock Protection Collars [hereafter referred to as collar(s)] to control coyotes (Canis latrans) that depredate sheep and goats.

(2) Registration of the collar, dealers selling the collar and applicators using the collar, shall be subject to future labeling restrictions and requirements as may be prescribed from time to time by the Environmental Protection Agency and/or Montana Department of Agriculture.

B. REGISTRATION

(1) Registration of the collar for sale or distribution in the State shall be limited to the Montana Department of Livestock and federal agencies.

(2) The collars shall not be sold, transferred, transported, given, or entrusted to the care of any person by the registrant who is not authorized, properly licensed or permitted, by the Montana Department of Agriculture.

(3) Only the registrant or the collar manufacturer is authorized to fill collars with 1080 solution. Certified applicators are not authorized to fill collars. Compound 1080 solution may not be removed from collars and used in any other form.

C. DEALER SALES

(1) Only registrants of the collar shall be allowed to become licensed dealers for the sale and distribution of the collar. The dealer shall be required to maintain an inventory record of collars purchased, sold, distributed, given away, or entrusted. The record shall include each purchase of the collars by the dealer, each individual's name and license or permit number to whom the dealer sells the collars, and the number of collars remaining in the dealer's stock.

(2) Collars shall be sold or transferred only by registrants or their agents and only to certified Livestock Protection Collar applicators. Collars may be used only by specifically certified Livestock Protection Collar applicators or by persons under their direct supervision.

The certified applicator is directly responsible for assuring that all use restrictions are met. The certified applicator will decide, in accordance with label directions, when and under what circumstances collars will be used. The certified applicator will either apply collars or be physically present where collars are applied by a noncertified person. However, the noncertified person who has received appropriate verifiable instructions from the certified applicator may store collars, check collars in the field, remove collars, repair or dispose of damaged collars in accord with use restrictions, retrieve collars lying in the field, and properly dispose of contaminated material and animal carcasses.

D. APPLICATOR CLASSIFICATIONS AND REQUIREMENTS

(1) Individuals who desire to use collars shall have to be qualified and certified as either a certified-licensed commercial or government applicator or a permitted farm applicator. All individuals desiring to become certified shall be required to attend a training course sponsored or approved by the Montana Department of Agriculture and pass an examination.

(2) The training course shall include, but is not limited to:

- (a) Training in the safe handling and attachment of collars.
- (b) Training in disposal of punctured or leaking collars, contaminated animal remains, contaminated vegetation and soil, and contaminated clothing.
- (c) Instructions for practical treatment of 1080 poisoning in humans and domestic animals.
- (d) Instructions on record keeping.
- (e) Familiarization with Montana pesticide laws and rules.
- (f) Familiarization with collar labeling.

(3) Individuals desiring to become certified shall be required to pass a written examination based on materials and training provided by the Montana Department of Agriculture. Applicants for a certified license must pass the examination with a score of eighty percent (80%), and applicants for a special use permit must pass with a score of seventy percent (70%). Applicants failing the examination for the first time shall not be allowed to retake the examination for seven (7) days after

(1) Direct supervision, as described in this restriction, conforms to the requirements established under 40 CFR 171.6 (i.e., the availability of the certified applicator must be directly related to the hazard of the situation. In many situations, where the certified applicator is not required to be physically present, direct supervision shall include verifiable instruction to the competent person, as follows (1) detailed guidance for applying the pesticide properly, and (2) provisions for contracting the certified applicator in the event he is needed. In other situations, and as required by the label, the actual physical presence of a certified applicator may be required when application is made by a noncertified applicator).

notification. Applicants failing the examination a second time may retake the examination fifteen (15) days after notification by certified mail. Applicants failing the examination a third time shall not be allowed to retake the examination until the next licensing period beginning January 1 the next year and shall attend another approved training course. Examinations may be retaken at any reasonable time after the time limitations expressed for the first and second examinations at the Montana Department of Agriculture's Helena office, or the applicant may make arrangements for examination or reexamination at other locations in the State at the convenience and approval of the Montana Department of Agriculture.

(4) Applicators maintaining their licenses for four consecutive licensing periods shall be required to requalify for licensing prior to every fifth licensing period. Applicator requalification shall be accomplished by passing an examination or by attending an acceptable applicator training course approved by the Montana Department of Agriculture. An applicator requalifying for licensing by attending a pesticide training course shall be required to have the government agency sponsor of the training course submit to the Montana Department of Agriculture a written verification of the applicator's attendance and an agenda of topics and speakers. The standards for requalification shall be the same as those required for initial certification. The Montana Department of Agriculture may also require *applicators to pass an examination and/or attend training during any licensing period on new major pesticide technology which applies to the applicator's classification.*

(5) All individuals who have attended a training course and have passed the written examination on the use of the collars, will be certified under one of the following classification:

- (a) Certified-Licensed Government Applicator - Regulatory Pest Control - Predator - Livestock Protection Collar
- (b) Certified-Licensed Commercial Applicator - Agricultural Pest Control - Vertebrate - Livestock Protection Collar
- (c) Permitted or Certified Farm Applicator - Livestock Protection Collar

(6) Applicants desiring certification for use of collars and individuals certified to use the collars shall have to meet and comply with other applicable licensing requirements as established by the Montana Department of Agriculture's departmental rules.

(7) Registrants or their agents shall keep records of all collars sold or transferred at their address of record. Records shall include the name, address, and state where Livestock Protection Collar certification was issued, certification number of each recipient, and dates and numbers of collars sold or transferred.

(8) Each applicator shall keep records dealing with the use of Livestock Protection Collars and the results of such use. Records shall be maintained in accordance with appropriate State and Federal regulations but for not less than two (2) years following disposal or loss of collars. See SECTION IV Supervision, Inspection of 1080 Livestock Protection Collars for details of records.

(9) Any suspected poisoning of threatened or endangered species must be reported immediately (within 3 days) to the Environmental Protection Agency*, and the Montana Department of Agriculture** (within 12 hours) as well as each suspected poisoning of humans, domestic animals, or nontarget wild animals.

* William W. Jacobs, Insecticide-Rodenticide Branch, Registration Division (7505C), EPA, Washington, DC 20460. Telephone: (703) 305-6406. Email: jacobs.bill@epa.gov

** Montana Department of Agriculture, Technical Services Bureau, Vertebrate Pests, Special Registrations, PO Box 200201, Helena, Montana 59620-0201 - Telephone (406) 444-5400

(10) Only the registrant or the collar manufacturer is authorized to fill collars with 1080 solution. Certified applicators are not authorized to fill collars. Compound 1080 solution may not be removed from collars and used in any other form.

(11) Collars shall only be used to take coyotes within fenced pastures. Fenced pastures include all pastures which are enclosed by livestock fencing. In addition to wire livestock fences, these may include other manmade fences such as rock walls, and natural barriers such as escarpments, lakes, and large rivers. Collars shall not be used on unfenced, open range.

Use of toxic collars shall be limited to fenced pastures no larger than 2560 acres (4 square miles). Larger fenced pastures, up to a maximum of 10,000 acres, may be treated where the average annual precipitation is less than 20 inches and vegetation of the pasture is sparse, nonforested and restricted to short to mid-height grasses and scattered shrubs.

Collared livestock shall not be placed in any pasture in which the applicator cannot monitor use in accordance with all other Use Restrictions. In no case shall collared livestock be placed in a pasture larger than 10,000 acres.

(12) Collars shall be used only where losses of sheep or goats due to predation by coyotes are occurring or, based upon prior experience, where coyote predation can reasonably be expected to occur.

(13) Where collars are in use, each logical point of access (e.g., gates, trails, etc.) shall be conspicuously posted with a bilingual (English/Spanish or other second language appropriate for the region) warning signs not less than 8" x 10" in size. Such signs shall be inspected weekly to ensure their continued presence and legibility and will be removed when collars are removed. The signs will have a minimum type size for DANGER-POISON of 24 points (1/4 inches). The remaining text would be at least 18 points (3/16 inches).

(14) Check all collared livestock at least once every 7 days and adjust collars if needed.

If any collared animal is not accounted for in two consecutive checks, an intensive search for it must be made.

In addition, if more than three collared animals are not accounted for during any one check, an intensive search for these animals is required.

If more than nine (9) collars/collared animals are unaccounted for during any 60-day period, remove all collars from animals and terminate their use.

(15) Damaged, punctured, or leaking collars shall be removed from the field for repair or proper disposal. Damaged collars shall be placed individually in leak-proof containers while awaiting repair or proper disposal. Authorized collar repairs are limited to minor repairs of straps and fastenings. Leaking or punctured collars must be properly disposed of.

(16) Dispose of 1080 wastes (punctured, leaking, or otherwise unrepairable, damaged collars; contaminated leather, clothing, animal remains, wool, hair, vegetation, water, and soil) under three feet of soil, at a safe location, preferably on property owned or managed by the applicator and at least 2 miles from human habitations and water supplies. No more than 10 collars may be buried in any one hole. If buried in a trench, separate each group of 10 collars by 10 feet of soil.

Alternatively, contact your State Pesticide or Environmental Control Agency or the

Hazardous Waste representative at the nearest EPA Regional Office for guidance in disposing of wastes at approved hazardous waste disposal facilities.

When snow or frozen ground make on-site disposal impractical, up to one cubic foot of waste may be stored in a leak-proof container, in a dry, locked place for up to 90 days.

Metal Container: Triple rinse contaminated and uncontaminated containers with water. Puncture and dispose of contaminated container and rinse it as above.

Plastic Container: Triple rinse with water. Then puncture and dispose of container and rinse it as above.

(17) All persons authorized to possess and use Livestock Protection Collars shall store them under lock and key in a dry place away from food, feed, domestic animals, and corrosive chemicals and in outbuildings or storage areas attached to, but separate from human living quarters.

(18) The collar may not be used in the following areas in Montana without written approval from the nearest U.S. Fish & Wildlife Service Office, Endangered Species Specialists. If the U.S. Fish & Wildlife Service or the user determines that the use of the collar may adversely impact an endangered species (Black-Footed Ferret, Northern Rocky Mountain Wolf or Grizzly Bear) in the specific areas requested, the collar may not be used in these areas. Written approval must be obtained annually.

THE NEAREST U.S. FISH & WILDLIFE SERVICE OFFICE AND PHONE NUMBER:

Department of Interior
U.S. Fish & Wildlife Service - Endangered Species
100 N Park Ave
Helena, Montana 59601
(406) 449-5225

COUNTIES OR AREAS: STATE OF MONTANA

Beaverhead, Carbon, Flathead, Gallatin, Glacier, Lake, Lewis & Clark, Lincoln, Madison, Missoula, Park, Pondera, Powell, Sanders, Stillwater, Sweet Grass and Teton.

(19) Certified applicators and A permitted farm applicators must submit to the Montana Department of Agriculture copies of all documents from the U.S. Fish & Wildlife Service which permit or deny use of the Livestock Protection Collar in any of the counties mentioned in USE RESTRICTION III.D.18. If use of collars is permitted in one or more of the aforementioned counties, such use must be in full compliance with all limitations prescribed by the U.S. Fish & Wildlife Service in addition to being in full compliance with all stipulations of the product's labeling.

(20) The number of collars used shall be the minimum necessary for effective livestock protection. For pastures of the following size classes, do not use more collars than the number indicated.

<u>Size (acres)</u>	<u>Number of Collars</u>
up to 100	20
101 to 640	50
641 to 10,000*	100

*See SECTION III.D.11.

(21) Each applicator will have a one-once bottle of syrup of ipecac (to induce vomiting in case of accidental poisoning) available when attaching, inspecting, removing, or disposing of collars.

(22) No contaminated animal will be used for food or feed.

SECTION IV. SUPERVISION AND INSPECTION OF 1080 LIVESTOCK PROTECTION COLLARS

The Montana Department of Agriculture, or its authorized agent(s) shall inspect the premises owned or utilized by each certified applicator and each permitted farm applicator at least once a year to verify that all applicable laws, regulation, rules, and restrictions are being followed strictly.

RECORDS

A. Each licensed certified applicator and >permitted farm applicator= shall keep records dealing with the placement of the collar and results of each placement on forms approved by the Montana Department of Agriculture. Records shall be maintained in accordance with appropriate State rules and federal regulations. Such records shall include, but need not be limited to:

1. The number of collars attached on livestock.
2. The pasture(s) where collared livestock were placed.
3. The dates of each attachment, inspection, and removal.
4. The number and locations of livestock found with ruptured or punctured collars and the apparent causes of the damage.
5. The numbers, dates, and approximate locations of collars lost.
6. The species, locations, and dates of all animals suspected to have been killed by collars.
7. All suspected poisonings of humans or domestic animals resulting from the collar use.
8. The names of trained non-certified applicators authorized by the certified applicator to handle the collars according to ARM 4.10.1205.

B. Each licensed certified applicator and >permitted farm applicator= shall maintain monthly report forms which shall be submitted to the Montana Department of Agriculture within fourteen (14) days after the end of each calendar month.

C. Each individual applicator shall maintain these records for at least two (2) operational years.

D. Dealers selling and distributing collars shall submit their sales inventory records required by ARM 4.10.1203 to the Montana Department of Agriculture by January 31 of each year or whenever requested by the Montana Department of Agriculture.

E. All records shall be subject to inspection and shall be supplied to the Montana Department of Agriculture upon request.

SECTION V. VIOLATIONS

It shall be a violation of the Montana Pesticide Act 80-8-101 (MPC) and Administrative Rules of Montana 4.10.1201 - 1208 (ARM) to use the collars in a manner inconsistent with its label and labeling. It shall be a violation of the MPC Act and ARM rules adopted thereunder:

- A. To sell, distribute, entrust, give, or use collars in any manner which violates or exceeds the standards established in these ARM rules or by the MPC Act.
- B. To use the 1080 solution in any other device, equipment, or manner except the 1080 collar.
- C. For the registrant or the licensed dealer of the collars to sell, distribute, give away, or entrust the collars to any individual other than applicators licensed or permitted to use the 1080 Livestock Protection Collars.
- D. For a "permitted farm applicator" to use collars other than on lands owned, leased, or administered by them.
- E. For any individual or applicator, whether licensed or permitted or not, to allow any individual, other than the licensed or permitted applicator, to use the 1080 collars except as permitted by ARM 4.10.1205.
- F. Refuse or neglect to maintain applicator records required by the ARM rules.
- G. Make false or fraudulent records or reports.
- H. Refuse to submit records requested by the Montana Department of Agriculture.
- I. Refuse an authorized representative of the Montana Department of Agriculture access to inspect collar storage facilities, collar disposal sites, application and use of the collars or to inspect and record application records at reasonable business hours.
- J. To violate any Administrative Rules of Montana rule or standard established by these rules, any collar labeling, or by the Montana Pesticide Act.

PHOTO CAPTIONS*

1. When coyotes attack sheep or goats, they usually bite at the throat. The Livestock Protection Collar is an effective way to deliver chemicals selectively to depredating coyotes.
2. A coyote attacked this Angora goat at the rear, but did not puncture the collar. The goat had to be destroyed.
3. Large and small Livestock Protection Collars made by Ranchers Supply, Alpine, Texas. Each toxicant reservoir is 1.5 inches wide and 3.75 inches long on large collars (top) or 2.25 inches long on small collars (bottom). The beige Velcro7 straps are 0.75 inches wide and 22 to 24 inches long.
4. Small Livestock Protection Collar on a 30-pound lamb. Note that the toxicant reservoir comes up almost to the ear.
5. Large Livestock Protection Collar on an adult Angora goat.
6. Small elastic-strap Livestock Protection Collar on a 50-pound lamb. In field tests on Angora goats the rate of collar punctures by attacking coyotes was lower for elastic-straps than for Velcro7-strap collars.
7. The corners of this small collar tore when the collar was being removed from an Angora goat. To avoid such damage, a knife or scissors can be used to free collar straps from hair or wool.
8. The rubber portion of this collar was poorly attached to the neck straps. Repairs can be made by sewing or stapling neck straps back in position. Only heavy thread or staples should be used.
9. The small collar is too small for effective coverage on this 100-pound lamb.
10. This lamb=s collar is too small. Note the unprotected region below the ear. Large collars should be used on lambs of this size.
11. To keep the collar in position on this Angora goat, the forward collar strap was tied to a horn using a butcher=s twine. Any heavy string or cord will do.
12. An ordinary office stapler can be used to tack collar strap ends in place. These staples are inadequate for reattaching straps to collars (see photo 8).
13. The collar on this Angora goat has slipped back out of position. If the collar was in this position when a coyote attacked, the collar probably would not be punctured.
14. *If the collar straps are too tight, they will produce abrasions that become infected and attract flies, as shown on this Angora goat. This problem, which is more common with goats than sheep, can be avoided by frequently checking strap tension.*
15. Numbered ear tags are a valuable aid in keeping track of collared livestock. The numbers on this tag can be read at a distance of 50 feet or more.
16. Checking of collared livestock is easy if the animals are trained to come for feed.
17. Typical remains of a collared lamb that was killed and fed upon by coyotes. The collar was punctured.

18. A Livestock Protection Collar punctured by prickly pear thorns. Thorn punctures are smaller than coyote tooth punctures. This damaged collar cannot be reused.
19. This coyote was found dead 0.4 miles from the spot where it attacked a collared lamb and punctured the collar. Laboratory analyses confirmed that it was killed by the collar toxicant, Compound 1080.
20. Flocks of adult Angora goats can be protected with Livestock Protection Collars by adding 5 to 10 collared kids per 100 uncollared adults. Two collared kids appear in this photograph (facing the camera, left of center). Test statistics revealed a high rate of coyote selection for the kids.

28 8 42



Photo 1



Photo 2

29 8 42



Photo 3

Photo 4

30 8 42

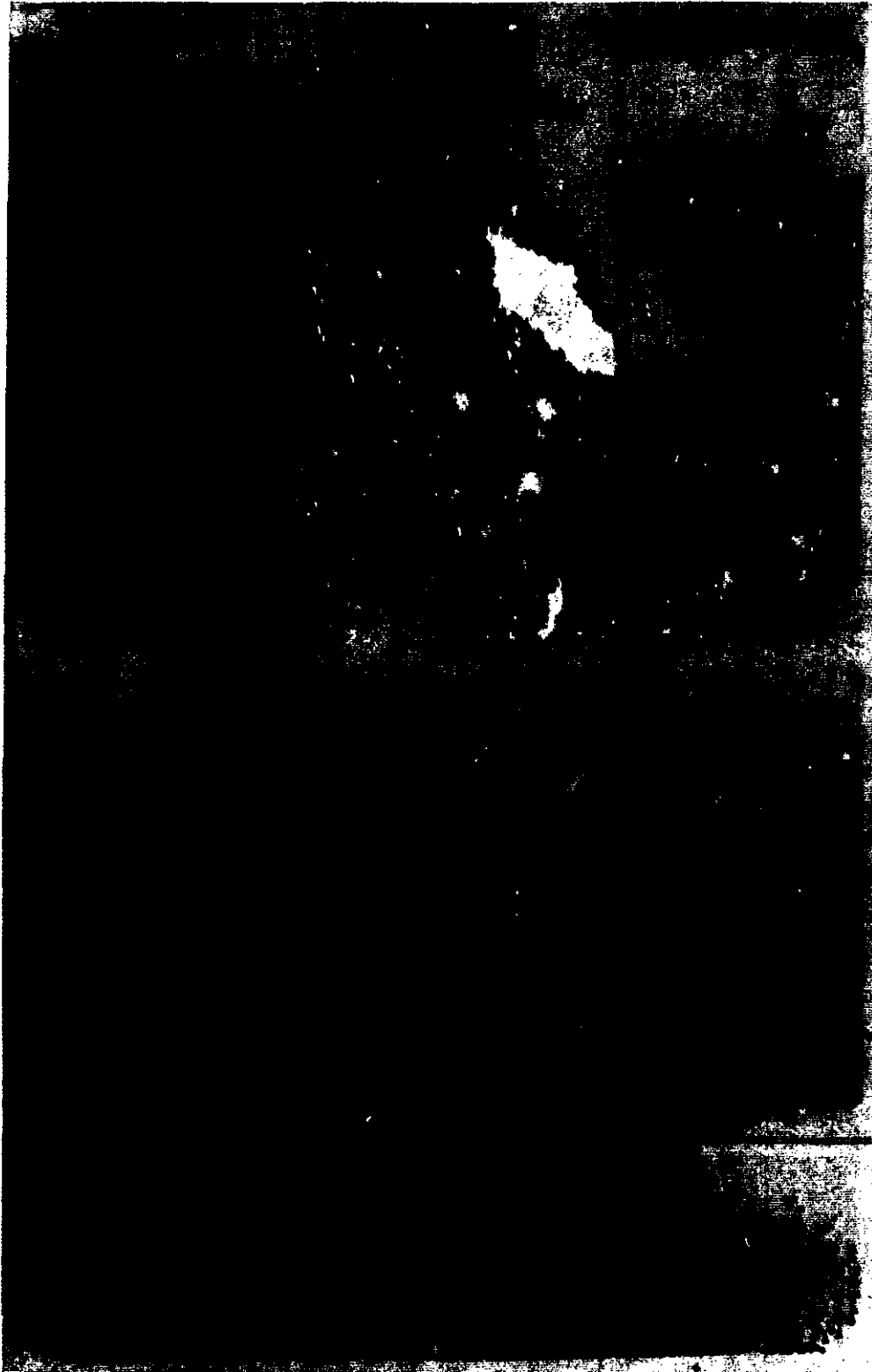


Photo 5

Photo 6

31 7 42

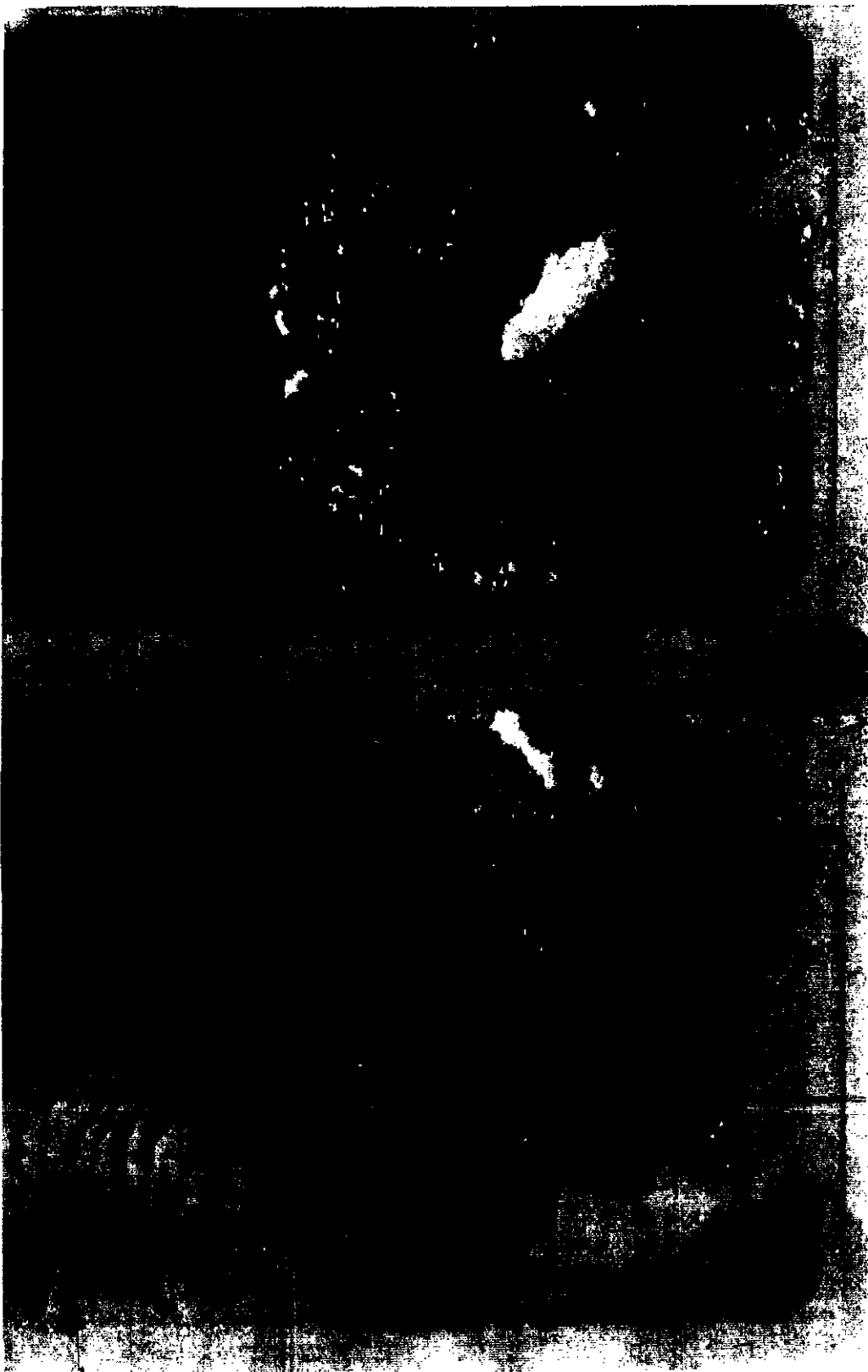


Photo 7

Photo 8

32 8 42

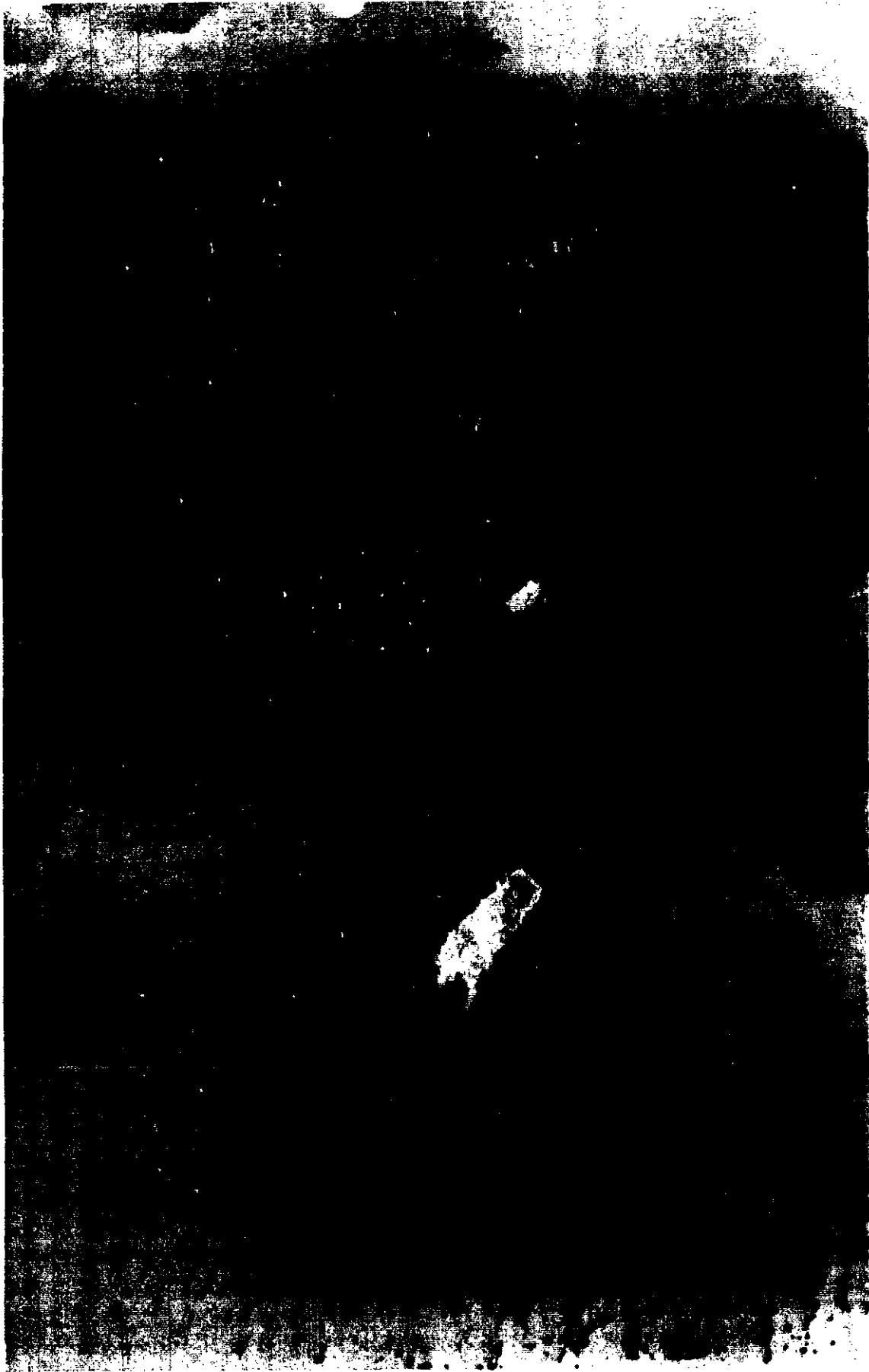


Photo 9

Photo 10

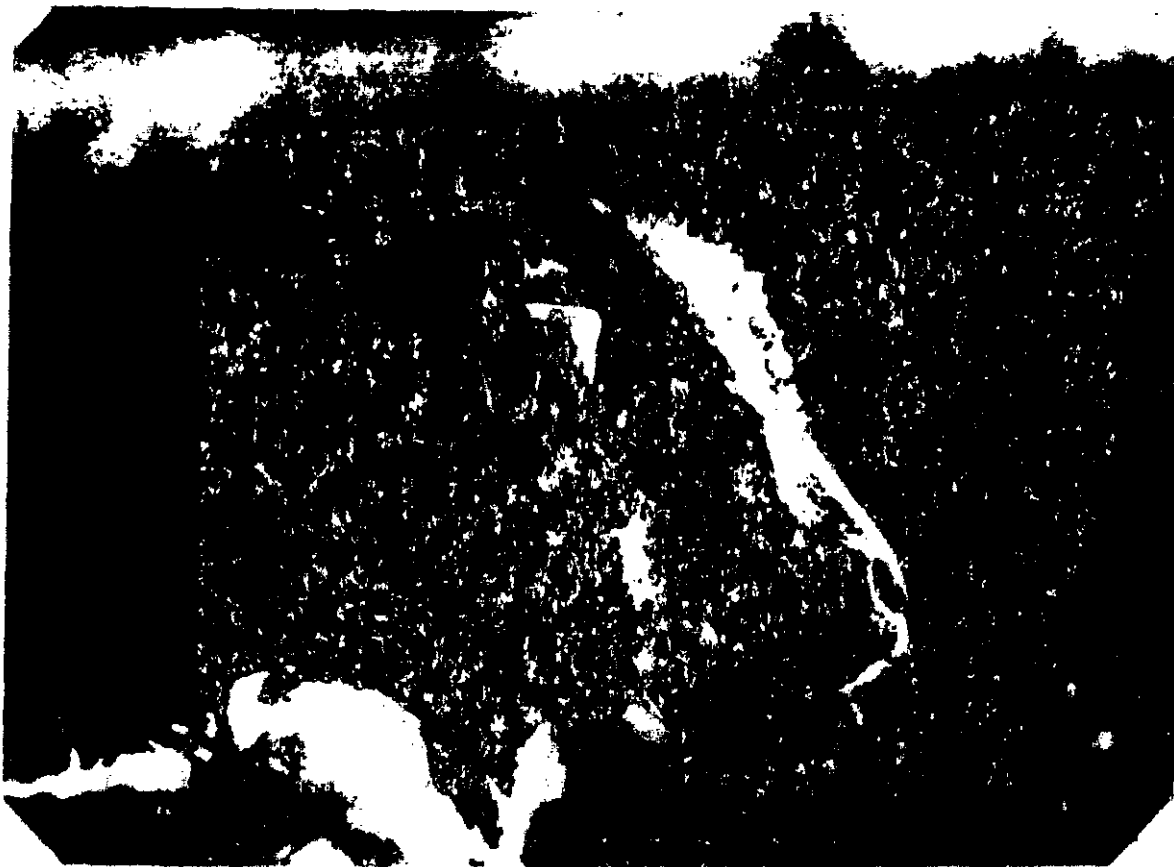


Photo 11



Photo 12

34 3 42

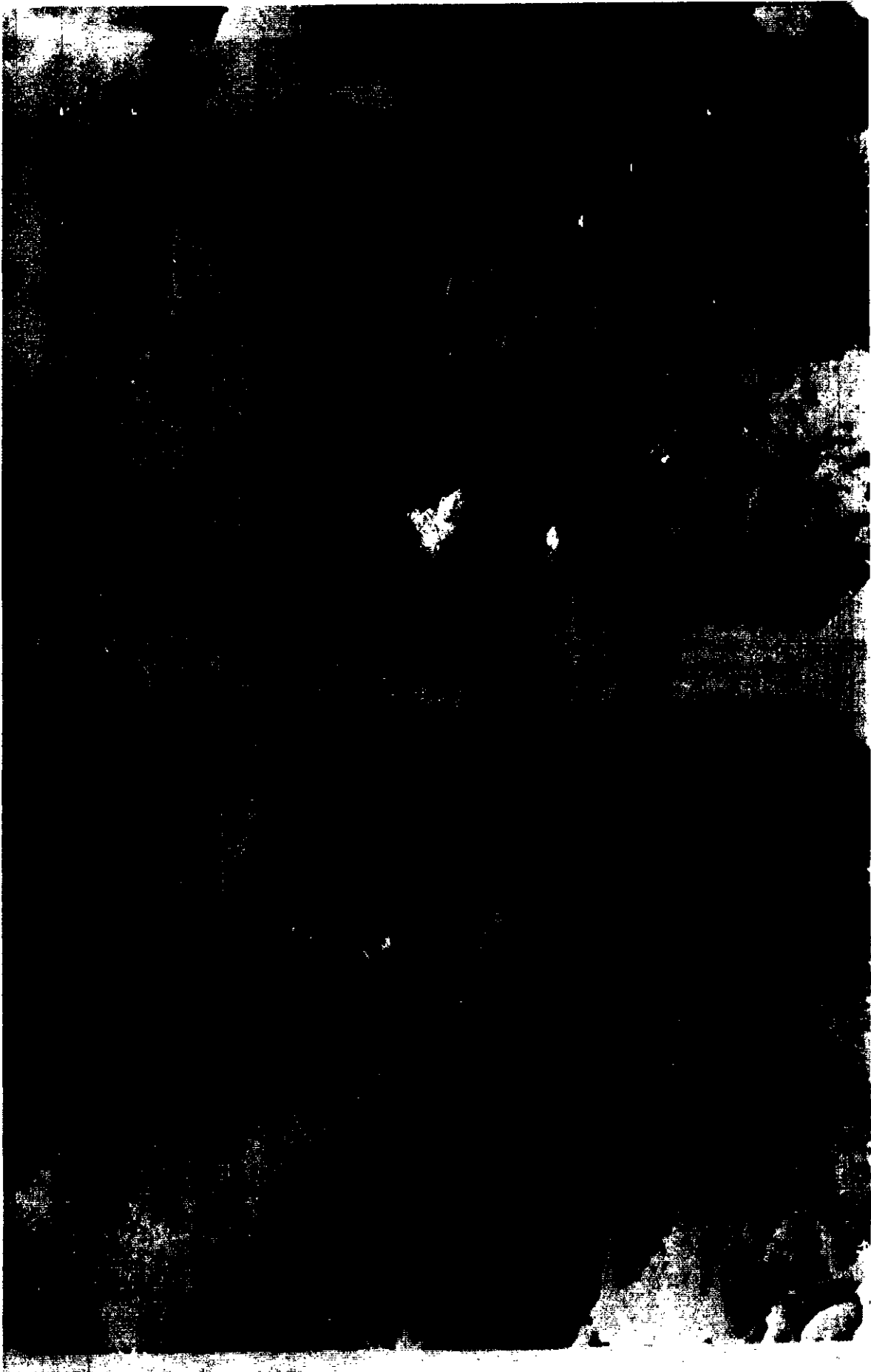


Photo 13

Photo 14



Photo 15



Photo 16

36 3 42

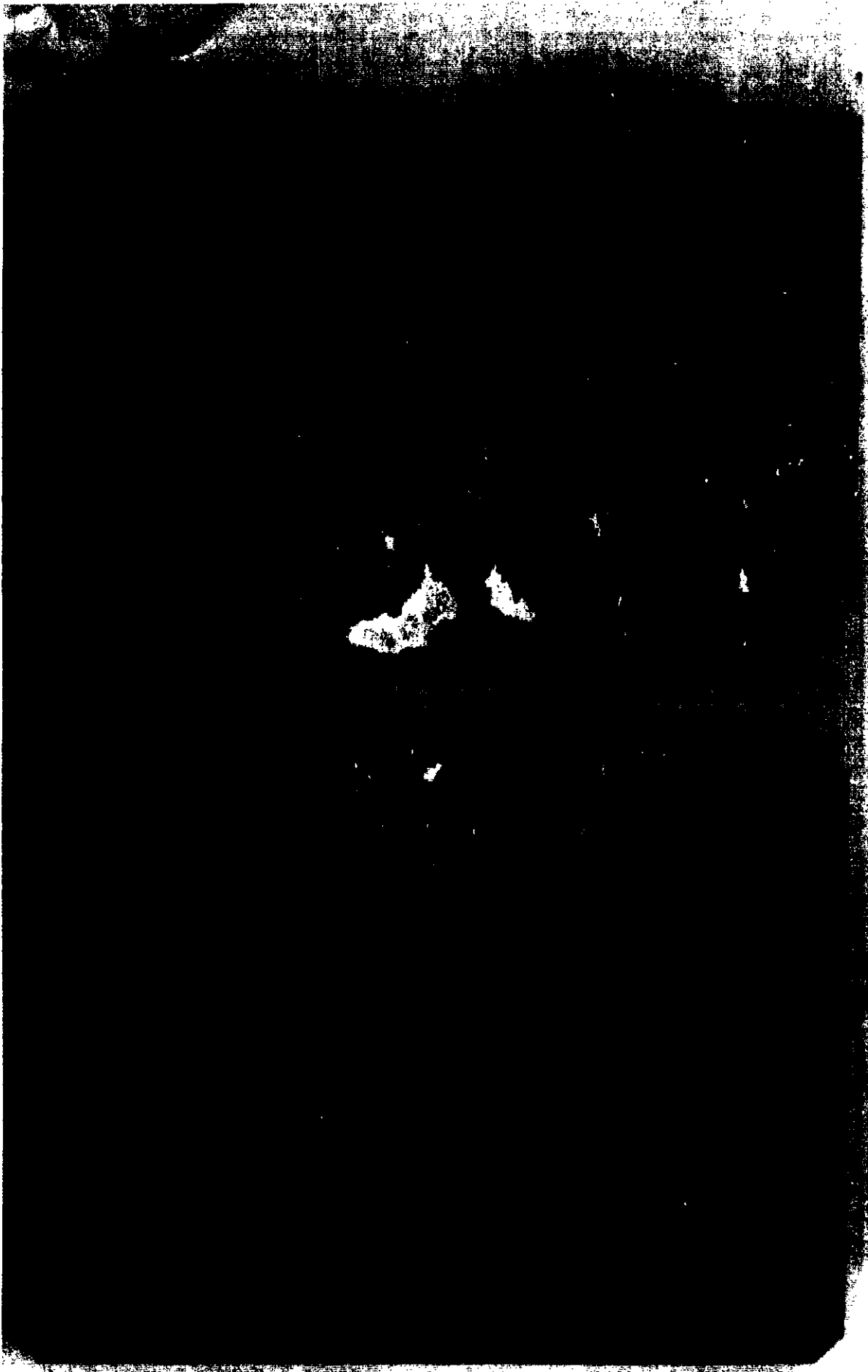


Photo 17

Photo 18

37 7 42

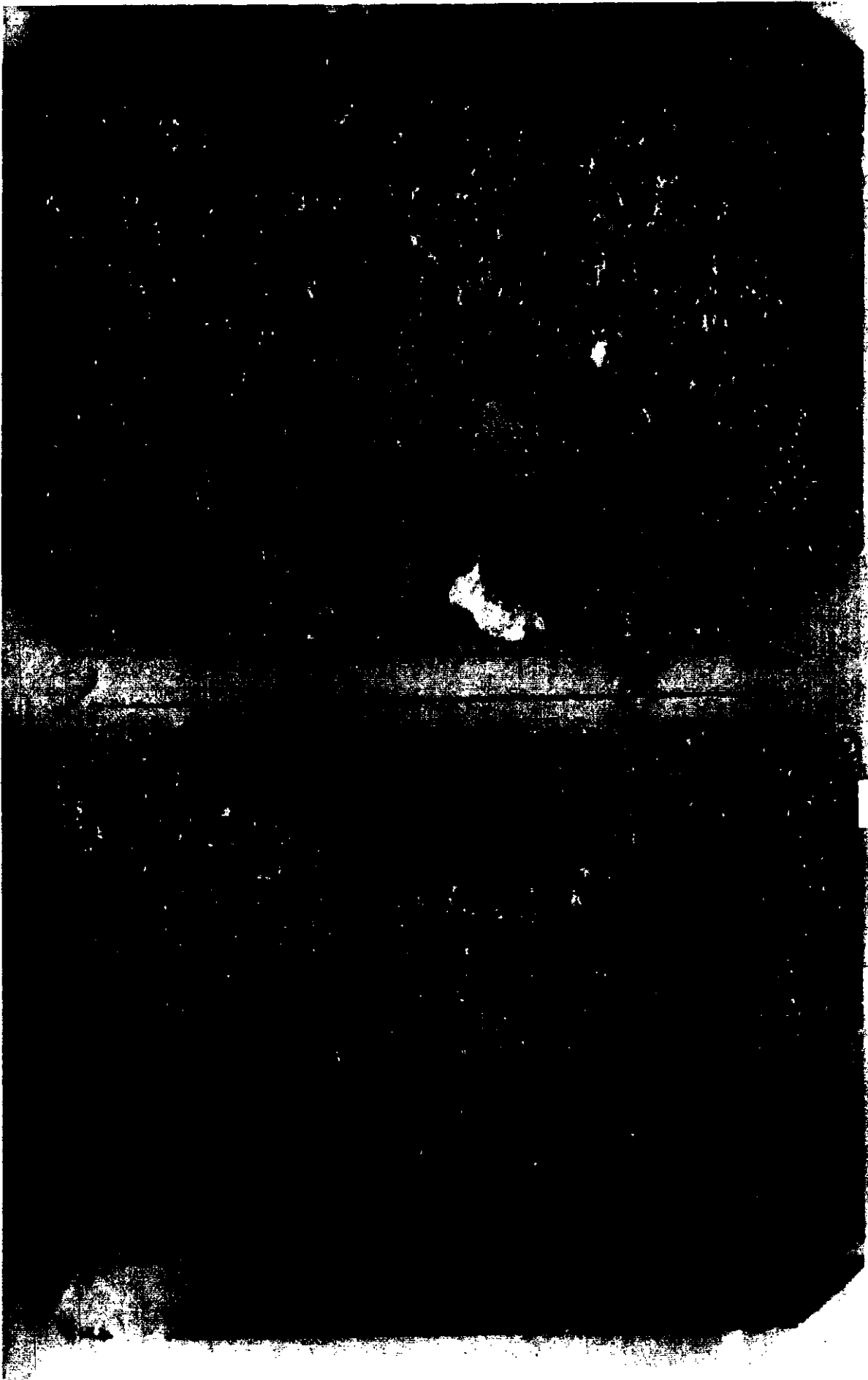


Photo 19

Photo 20

38 8 42

APPENDIX A
REGISTERED LABEL

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND
DOMESTIC ANIMALS**

DANGER

Fatal if swallowed. Wear waterproof gloves when handling collars. Wash hands after handling collars or animals that have been contaminated with 1080 solution. Do not use contaminated animals for food or feed.

ENVIRONMENTAL HAZARDS

This pesticide is highly toxic to wildlife. Birds and mammals feeding on carcasses of contaminated livestock may be killed. Keep out of any body of water. Apply this product only as specified on this label.

(REVISED 09/05)

**ENDANGERED SPECIES
CONSIDERATIONS**

NOTICE: It is a Federal offense to use any pesticide in a manner that results in the death of a member of an endangered species.

The use of 1080 in the Livestock Protection Collar has been determined to pose a hazard to several endangered species. See technical bulletin (use restriction III.D.18) for specific area where the 1080 collar cannot be used or approval must be obtained from the U.S. Fish and Wildlife Service prior to use.

NOTE TO PHYSICIAN

WARNING SYMPTOMS: 1080 poisoning results from the transformation of fluoroacetate into fluorocitrate within cell mitochondria. Poisoning is characterized by a symptom-free latent period of ½ to 2 hours or longer between ingestion and onset of symptoms (nausea, vomiting, diarrhea, and hyperactive behavior leading to convulsions, coma, and cyanosis). Ventricular fibrillation is commonly noted and is the primary cause of death. Early symptoms include alteration of heart sounds and premature weak contractions.

TREATMENT: No effective antidote is known, but symptomatic treatment may be effective. Establish respiration: create artificial airway if necessary. Check adequacy of tidal volume. Initiate emesis. If patient is comatose, convulsing, or has lost the gag reflex, endotracheal intubation should precede gastric lavage with large bore tube. Administer activated charcoal and magnesium sulfate. Treat seizures with IV diazepam. Monitor cardiac function closely. Treatment with glyceryl monoacetate (monoacetin) may be effective; however, it is experimental and unproven in humans. **CONSULT NEAREST POISON CONTROL CENTER FOR CURRENT INFORMATION.** Symptoms of non-lethal intoxication will usually subside within 12-24 hours.

RESTRICTED USE PESTICIDE

**Due to Acute Oral Toxicity and the Need
For Highly Specialized Applicator Training**

Collars may be sold or transferred only by registrants or their agents and only to certified Livestock Protection Collar applicators. Collars may be used only by specifically certified Livestock Protection Collar applicators or by persons under their direct supervision.

**SODIUM FLUOROACETATE
(COMPOUND 1080)**

LIVESTOCK PROTECTION COLLAR

For use on sheep or goats to kill depredating coyotes

ACTIVE INGREDIENT:	Sodium fluoroacetate	1.00%
INERT INGREDIENTS:		99.00%
	TOTAL	100.00%

**KEEP OUT OF REACH OF CHILDREN
DANGER -- POISON**



**STATEMENT OF PRACTICAL TREATMENT
IF SWALLOWED: CALL A PHYSICIAN OR POISON CONTROL CENTER
IMMEDIATELY!!**

IF SWALLOWED: Induce vomiting at once with an emetic such as syrup of ipecac; use as directed. If an emetic is not available, drink 1-2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. **PROMPT TREATMENT IS MANDATORY. GET MEDICAL ATTENTION IMMEDIATELY!**
IF ON SKIN: Wash the exposed area twice with soap and water.
IF IN EYES: Wash eyes with plenty of water for at least 15 minutes.
IF ON CLOTHING: Remove contaminated clothing and wash before re-use. Dispose of all contaminated leather, including shoes, boots, and gloves according to the PESTICIDE DISPOSAL section. See disposal instruction on side panel.
SEE LEFT SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

MANUFACTURED BY:
Rancher's Supply, Inc.
PO Box 725
Alpine, TX 79830-0725

MANUFACTURED FOR:
Montana Department of Livestock
PO Box 202001
Helena, MT 59620-2001

U.S. Pat. 3,842,808
EPA Est. No. 46779-TX-01
NET CONTENTS: 30.4 GRAMS (1.1 oz.) per collar
NOTICE

EPA Registration No. 35975-4
EPA Est. No. 35975-MT-1

Seller makes no warranty, expressed or implied, concerning the use of this product other than that indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

STORAGE: Store Livestock Protection Collars only in original container, in a dry, locked place away from food, feed, domestic animals and corrosive chemicals. Do not store in any structure occupied by humans.

When snow or frozen ground make on-site disposal impractical, up to one cubic foot of wastes may be stored in a leakproof container, dry locked place for up to 90 days.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of such materials is a violation of Federal law.

Dispose of collars and other wastes vegetation, contaminated by 1080 (carcasses, wool, hair, soil, leather clothing, and water) under three feet of soil, at a safe location, preferably on property owned and managed by the applicator and at least one half mile from human habitations and water supplies.

Alternatively, contact your state pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in disposing of wastes at approved hazardous waste disposal facilities.

CONTAINER DISPOSAL:

Metal Containers: Triple rinse contaminated and uncontaminated containers with water. Then puncture and dispose of contaminated containers as above.

Plastic containers: Triple rinse with water. Then puncture and dispose of container as above.

COLLAR DISPOSAL: Dispose of punctured or unserviceable collars as above, except that not more than 10 collars may be buried in any one hole. If buried in trench, groups of 10 collars must be at least 10 feet apart.

**SEE BACK PANEL AND TECHNICAL BULLETIN
FOR DIRECTIONS FOR USE**

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DIRECTIONS FOR USE

It is a violation of state and federal law to use this product in a manner inconsistent with its labeling or the Compound 1080 cancellation order. Misuse may result in civil or criminal enforcement action.

DO NOT REMOVE TOXICANT FROM COLLARS. DO NOT USE TORN, DAMAGED OR LEAKING COLLARS. Dispose of damaged collars in accordance with the "Storage and Disposal" instruction on this label.

Put collars on the necks of sheep or goats in fenced pastures where coyote predation is occurring or is expected to occur. Use collars only in accordance with the User Instructions and Use Restrictions contained in the accompanying Technical Bulletin.

40342

BILINGUAL WARNING SIGN

TO CONTROL STOCK-KILLING COYOTES
SHEEP OR GOATS IN THIS AREA WEARING
NECK COLLARS THAT CONTAIN A POISON, COMPOUND 1080
(Sodium Fluoroacetate)

**DO NOT TOUCH COLLARED LIVESTOCK,
COLLARS, OR DEAD ANIMALS.
DO NOT RELEASE LIVESTOCK**

PELIGRO - VENENO

PARA CONTROLAR COYOTES QUE ATACAN AL GANADO,
ALGUCAS OVEJAS O CABRAS EN ESTA AREA LLEVAN
COLLARES QUE CONTIENEN UN VENENO, COMPUESTO 1080
(Fluroacetato de sodio)

**NO TOQUE LOS ANIMALES, LOS
COLLARES, NI LOS ANIMALES MEURTOS.
NO SEULTE A LAS OVEJAS O CABRAS**