

Treatment of Animals for Ticks with Coumaphos (Co-Ral®)

1. Purpose and Background

This document provides information and instructions on the official use of coumaphos (Co-Ral®, Bayer HealthCare LLC) for supervised dip and spray treatments of bovines (beef and nonlactating dairy cattle) and equines for ticks and screwworms and scabies (*Psoroptes bovis*).

This guidance document represents the Agency's position on this topic. It does not create or confer any rights for or on any person and does not bind the U.S. Department of Agriculture (USDA) or the public. The information it contains may be made available to the public. While this document provides guidance for users outside Veterinary Services (VS), VS employees may not deviate from the directions provided herein without appropriate justification and supervisory concurrence.

2. Document Status

- A. Valid until October 27, 2017.
- B. This document replaces Veterinary Services Memorandum No. 556.1, Supplement No. 6, which is cancelled. The content of the document is the same as that of the former memorandum; only editorial and formatting changes have been made.

3. Reason for Reissuance

Not applicable.

4. Authority and References

- A. Authorities (*Code of Federal Regulations* (CFR)):
 - [7 CFR 371.4](#)
- B. References:
 - [VSM 556.1, Supplement No. 1, "Permitted Pesticides for Official Use Against Cattle Fever Ticks," \(11/1/06\)](#)
 - [VSM 556.1, Supplement No. 10, "Procedures for Storage and Disposal of Permitted Pesticides," \(5/7/09\)](#)
 - [VSG 7002.1, "Guidelines for Use of Spray-Dip Machine for Treating Cattle," \(10/18/12\)](#)

5. Audience

VS employees, other Federal and State agencies, and members of the public.

6. Guidance

A. Use of Permitted Brands

Coumaphos (Co-Ral) 42 percent flowable insecticide has been added to the VS list of permitted pesticides for use in the treatment of ticks. The formulations that may be used for official treatments are listed in VS Memorandum 556.1, Supplement No. 1. Products not included on the permitted pesticide list should not be used. All field personnel, supervisors, and other individuals who supervise official treatments should be familiar with the guidance provided in this supplement and should have this document in their possession during treatment procedures.

CAUTION: Be sure to verify the required concentration needed for your particular application and the weight or volume of measuring units available.

B. Precautions When Handling Co-Ral

Prolonged exposure to Co-Ral and other organic phosphorus insecticides may cause severe reactions in animals and humans. Carefully read the product label for symptoms and antidotes.

Organic phosphorus compounds may be harmful if inhaled, absorbed through the skin, or swallowed. Persons handling these compounds should not breathe the dust or spray mist and should avoid getting the chemical in the eyes or on the skin. Respirators with organic vapor-removing cartridges and approved prefilters and protective clothing, such as chemical-resistant gloves, aprons, and goggles or face shields, must be worn during spraying operations. Respirator filters should be changed immediately if personnel are subjected to a blast of spray or mist.

After handling the chemical, personnel should immediately wash thoroughly with soap and warm water, especially if direct skin exposure occurs. Personal protective equipment and contaminated clothing should be immediately removed and disposed of according to the manufacturer's recommendations. All personnel should wear uncontaminated clothing at the beginning of each procedure and should bathe after exposure to the pesticide.

C. Methods of Treatment

Vat dipping is the preferred method for treating cattle with tick infestations. Cattle may also be treated using a spray-dip machine (review VS Guidance 7002.1, "Guidelines for Use of Spray-Dip Machine for Treating Cattle"). Engine-driven spray equipment may be used for easily restrained horses, certain zoo or domestic animals, or when specifically authorized by VS personnel.

D. Species of Animals That Can be Treated with Co-Ral

The current Co-Ral label provides for treatment against scabies (*P. bovis*) on cattle, and screwworms, horn flies, lice, and ticks on beef and nonlactating dairy cattle and horses.

Note: Do not dip excessively thirsty animals.

E. Required Co-Ral Concentrations and Treatment Schedules for Use Against Ticks

1) Maximum application rates

- a. Dipping vats: Co-Ral label recommended application rate = 1/2 to 1 gallon per 200 gallons of water. VS recommended Co-Ral application rate = 42 ounces of Co-Ral per 100 gallons of water for a final concentration of approximately 0.18 percent–0.20 percent coumaphos.
- b. Hand sprays: Co-Ral label recommended application rate = 1/2 to 1 gallon per 200 gallons of water. VS recommended Co-Ral application rate = 64 ounces (1/2 gallon) of Co-Ral per 100 gallons of water for a final concentration of approximately 0.25 percent–0.30 percent coumaphos.
- c. Spray-dip machines: Co-Ral label recommended application rate = 1/2 to 1 gallon per 200 gallons of water. VS recommended Co-Ral application rate = 64 ounces (1/2 gallon) of Co-Ral per 100 gallons of water for a final concentration of approximately 0.25 percent to 0.30 percent coumaphos.

2) Frequency of application, application intervals, and maximum number of applications per season

- a. Every 7 to 14 days as necessary until the mandatory quarantine period (6 to 9 months, depending on the time of year) is complete. The treatment interval is based on the life cycle of the ticks.

F. Required Co-Ral Concentrations and Treatment Schedules for Use Against *P. Bovis*

- 1) Maximum application rate: Dipping vats: 128 ounces (1 gallon) of Co-Ral per 165 gallons of water.
- 2) Frequency of application, application intervals, and maximum number of applications per season: Two treatments 10 to 14 days apart, and no more than twice per year unless additional treatments are required by VS personnel.

G. Required Co-Ral Concentrations for Use Against Screwworms

- 1) Maximum application rate: Spray treatments: 128 ounces (1 gallon) of Co-Ral per 200 gallons of water.

- 2) Frequency of application, application intervals, and maximum number of applications per season: Spray treatments should occur no more than six times per year, and be no fewer than 10 days apart.

H. Mixing or Adding Detergents, Wetting Agents, Water Softeners, or Other Products to Dipping Baths

None of these products should be added to dipping baths except on specific authority. Usually, these substances have been included in the formulation in the required amounts, and adding additional chemicals may interfere with the stability or action of the dip. Do not use Co-Ral with internal medication containing phenothiazine, natural or synthetic pyrethroids or their synergists, or in strong alkaline dips. Copper sulfate should not be added to flowable Co-Ral.

I. Submitting Dip Samples

VS Memorandum 556.1 provides information and instructions for submitting dip samples. This information is also available on the reverse side of VS Form 5-14.

J. Dipping Certificates

A tolerance of 1 part per million (ppm) has been issued by the Food and Drug Administration for residues of Co-Ral in or on meat, fat, and meat byproducts from cattle, sheep, goats, hogs, horses, and poultry. The FDA has further issued tolerances of 0.5 ppm in cow and goat milk fat; and 0.1 ppm in eggs. The certificate should include the name of the pesticide and concentration used.

There is no required delay between treatment and slaughter and no statement recommending delay should be placed on the dipping certificate prepared by the person supervising treatment. However, the owner should be advised that animals dipped in Co-Ral should be withheld from streams, ponds, and lakes for a minimum of 3 days.

K. Changing Vat Contents

The time that Co-Ral can remain in the vat has been extended from 720 days to 1,460 days (4 years); however, the vat must be emptied, cleaned, and charged within 4 years or if:

- 1) Sediment exceeds 10 milliliters per 100 milliliters of bath (10 percent).
- 2) The bath becomes too foul for satisfactory use.
- 3) The number of animals dipped is equal to twice the initial volume of the dip in gallons; for example, when the initial volume of the dip is 3,000 gallons and 6,000 animals have been dipped.

L. Disposal of Used Dip and Empty Pesticide Containers

Consult the local environmental quality agency or other environmental authorities for instructions on the appropriate disposal procedures. Additional guidelines for safe use and handling of pesticides are provided in VS Memorandum 556.1, Supplement No. 10, "Procedures for Storage and Disposal of Permitted Pesticides."

7. Inquiries

Please direct any questions regarding the instructions in this document to the

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