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Circular 980

# 1965 Insecticide Recommendations

from the Agricultural Extension Service, Virginia Polytechnic Institute

## EXTERNAL PARASITES OF BEEF CATTLE

*J. O. Rowell, Extension Entomologist*

### FACE FLIES

#### VIRGINIA TECH RECOMMENDS:

ciodrin

Others: dichlorvos (Vapona), pyrethrins + synergist--Use according to label directions.

**CIODRIN:** This insecticide, used as a 0.5% spray, is reasonably effective in the control of face flies on beef cattle. Treatments must be made once a week during the face fly season.

Use 1 qt. of Ciodrin emulsion concentrate (2 lbs. Ciodrin per gal.) in 12 gals. of water (to make a 0.5% concentration). Larger quantities of spray can be prepared by mixing 2 gals. of the emulsion concentrate in 100 gals. of water.

Apply the spray with high-pressure, mechanically-agitated sprayers. Cover each animal's body and legs (avoid excessive spraying of the head) by applying 1 to 2 qts. of spray per large animal and proportionately less for smaller animals.

Improved face fly control can be achieved by adding sugar to the spray solution at the rate of 1 lb. per 6 to 10 gals. Repeat the spray applications as needed to maintain control, but not more often than once every 7 days.

**SAFETY PRECAUTIONS:** Do not contaminate feed or foodstuffs. Do not contaminate streams, lakes, or ponds with the insecticide. For protection against Ciodrin during prolonged exposure in spray-mixing and loading operations, wear clean, synthetic rubber gloves and a mask or respirator of a type approved by USDA.

**RESIDUE TOLERANCE:** None established.

**WAITING PERIOD:** None established.

Research shows that dust-bag self applicators can be used as a practical aid in preventing heavy infestations of the face fly and horn fly. Presently, however, there

is not USDA label approval for the use of malathion 5% dust in this manner on beef cattle.

#### IN DUST-BAG SELF APPLICATORS

#### VIRGINIA TECH RECOMMENDS:

Malathion 5% dust

Medium-to-fine mesh feed bags can be used for holding the malathion 5% dust. Place one bag inside another to provide additional strength and dust-holding capacity. Stock each double-layer bag with 10 to 20 lbs. of 5% malathion dust. Arrange the bags over salt boxes or over fenced-in entrances to water troughs, ponds, or loafing areas. With every visit to the area, each animal will brush the head, neck, and shoulders against the bags and treat itself with the malathion dust.

Maintain the bags in good condition. Restock them with 5% malathion dust as frequently as necessary during the face fly season.

**SAFETY PRECAUTIONS:** Do not allow stocked bags to come in direct contact with salt in the boxes. Arrange and maintain the self applicators in a manner to avoid contamination of feed or water.

A separate Extension Leaflet, "Control Face Flies on Beef Cattle with Dust-Bag Self Applicators," is being prepared by the Extension Entomologist. Sketches will illustrate the proper construction and maintenance of these self applicators.

**RESIDUE TOLERANCE:** None established.

**WAITING PERIOD:** None established.

## CATTLE LICE

VIRGINIA TECH RECOMMENDS:  
malathion, coumaphos (Co-Ral)

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Others: ronnel (Korlan), dioxathion (Delnav)--Use according to label directions.

**MALATHION:** Use 6-1/2 oz. of 57% malathion emulsion concentrate (5 lbs. of malathion to the gallon) to 5 gals. of water. Larger quantities of spray can be prepared by mixing 1 gal. of the emulsion concentrate in 100 gals. of water. (Wettable powder forms of malathion can be used in high-pressure power sprayers, but are not satisfactory in low-pressure, hand-operated sprayers.)

Cover each animal completely with spray; saturate the hair to point of run-off. Repeat treatment in 10 days, but only if needed.

**SAFETY PRECAUTIONS:** Do not apply malathion spray to lactating or to non-lactating dairy animals within 2 weeks of freshening. Do not treat sick animals or calves less than 1 month old. Avoid contaminating feed, watering troughs, and food containers.

**RESIDUE TOLERANCE:** 4.0 ppm in meat and meat by-products.

**WAITING PERIOD:** 0 days from last application to slaughter.

**COUMAPHOS:** Use 2 lbs. of 25% wettable powder in 25 gals. of water. (Coumaphos

is available only in 25% wettable powder form.) Larger quantities of spray can be prepared by mixing 8 lbs. of the wettable powder in 100 gals. of water.

Use in high-pressure, mechanically-agitated sprayers only. Maintain a pressure in the sprayer of 250 lbs. or more per square inch. Wet completely all parts of each animal. From 2 to 6 quarts of spray will be required per animal, depending on its size and length of hair. One treatment is usually sufficient. Repeat applications only when necessary.

**SAFETY PRECAUTIONS:** Do not apply coumaphos spray to lactating dairy animals, or to animals less than 3 months old. Do not spray sick, convalescent, or stressed livestock. Do not treat non-lactating dairy animals within 14 days of freshening. Do not apply in conjunction with oral drenches or other internal medications, nor with natural or synthetic pyrethroids or their synergists.

**RESIDUE TOLERANCE:** 1.0 ppm in meat.

**WAITING PERIOD:** 7 days from last application to slaughter.

## HORN FLIES

VIRGINIA TECH RECOMMENDS:  
malathion, coumaphos (Co-Ral)

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Others: ronnel (Korlan), dioxathion (Delnav), ruelene--Use according to label directions.

**MALATHION:** Same as for Cattle Lice.

**COUMAPHOS:** Same as for Cattle Lice.

### IN BACK RUBBERS

VIRGINIA TECH RECOMMENDS:  
malathion 2% oil, ronnel 1% oil,  
dioxathion 1.5% oil.

Use 1 gal. of any one of the recommended insecticides to each 20 ft. of cable. Saturate the back rubber cables as often as needed, usually about every 2 to 3 weeks during the horn fly season. Back rubbers will aid in lice control.

**SAFETY PRECAUTIONS:** Use of ready-prepared oil solutions of the insecticide is preferred. Prepare your own by dissolving the correct amount of the technical insecticide in No. 2 fuel oil. Do not use heavy oils such as motor oils.

Locate the back rubbers near a salt lick, watering pond, or troughs, but avoid contamination of feed and drinking water.

For details on constructing and maintaining back rubbers, see the current revision of Extension Circular 812, "CONTROL HORN FLIES ON BEEF CATTLE WITH BACK RUBBERS."

## CATTLE GRUBS

### VIRGINIA TECH RECOMMENDS:

trichlorfon (Neguvon), coumaphos (Co-Ral), ruelene

**TRICHLORFON:** In a spray, mix 10 lbs. of 80% trichlorfon soluble powder in 100 gals. of water. Proportionately smaller or larger quantities of the spray can be made as desired.

Use in high-pressure, mechanically-agitated sprayers only. Apply the spray for complete wetting of each animal; spray to point of run-off. For best results maintain a nozzle pressure of 250 to 350 lbs. Only one application is necessary. Do not treat within 14 days of slaughter. Treat as soon as possible after activity of heel fly has ceased and preferably at least 6 weeks prior to expected appearance of grubs in the back.

**SAFETY PRECAUTIONS:** Do not treat dairy animals, animals less than 3 months old, sick, convalescent, or stressed livestock. Do not spray in a confined, non-ventilated area. Do not apply in conjunction with oral drenches, other internal medication, or other organic phosphate sprays.

**RESIDUE TOLERANCE:** None established.

**WAITING PERIOD:** 14 days from last application to slaughter.

**COUMAPHOS:** In the spray treatment, use 4 lbs. of 25% wettable powder in 25 gals. of water. Larger quantities of spray can be prepared by mixing 16 lbs. of the wettable powder in 100 gals. of water.

Use in high-pressure, mechanically-agitated sprayers only. Maintain a pressure in the sprayer of 250 lbs. or more per square inch. Wet to the skin all parts of each animal. From 2 to 6 quarts of spray will be required per animal, depending on its size and length of hair. One treatment is usually sufficient; repeat only when necessary.

For satisfactory results, apply the spray at any time between August 1 and November 1. Most beneficial results will be achieved by treating early in the grub cycle--as soon as possible after heel fly activity has ceased and at least 6 weeks prior to expected appearance of grubs in the back.

If the coumaphos pour-on treatment is used, apply at any time during August 1 to November 1. However, with the pour-on

treatment, apply the ready-to-use preparation that requires no further dilution. Use it at the rate of 1/2 fluid ounce per 100 lbs. of body weight, with a maximum of 4 ounces per animal. It is convenient to use a dipper which holds 4 fluid ounces. For animals under 800 lbs., measure the correct amount needed in relation to the body weight. Pour the correctly measured quantity down the center of the backline from withers to hip.

**SAFETY PRECAUTIONS:** Do not apply coumaphos to lactating dairy animals, or to animals less than 3 months old. Do not treat sick, convalescent, or stressed livestock. Do not treat dairy animals within 14 days of freshening. Do not apply in conjunction with oral drenches or other internal medications, nor with natural or synthetic pyrethroids or their synergists.

**RESIDUE TOLERANCE:** 1.0 ppm in the meat.

**WAITING PERIOD:** 7 days from last application to slaughter.

**RUELENE:** In the spray treatment, use 1/2 gal. of 25% ruelene emulsion concentrate to 25 gals. of water. Larger quantities of the spray can be prepared by mixing 2 gals. of the emulsion concentrate in 100 gals. of water.

Use in high-pressure, mechanically-agitated sprayers. Pressures of 300 lbs. or higher are recommended. Wet the skin thoroughly on the back and sides of each animal. Cattle weighing 300 lbs. and over will require 1 gal. of spray. Animals under 300 lbs. and those with short hair coats may require less spray. Treat animals only once. Spray at any time between August 1 and November 1--but not after November 1. Best results will be obtained by treating early in the grub cycle.

If the ruelene pour-on treatment is used, apply at any time during the period mentioned above. However, with the pour-on treatment, first mix 1/2 gal. of ruelene 25% emulsion concentrate in 1 gal. of water and stir thoroughly. Pour 1 fluid ounce of the mixture per 100 lbs. of body weight along the animal's back, using a long-handled

dipper. For animals weighing 800 lbs. and over, use 8 ounces (1 cup) per head.

**SAFETY PRECAUTIONS:** Do not apply after November 1 to avoid toxic reactions in animals. Do not apply within 28 days of slaughter. Do not apply to lactating dairy cows or to dry dairy cows within 28 days of freshening. Do not treat sick animals. Do not treat animals under stress from disease, overexertion, excitement; or with-

in 10 days after shipping, weaning, or exposure to diseases. Cattle should have free access to water and feed before and after treatment. If cattle react abnormally, exercise treated animals; if conditions persist, consult a veterinarian.

**RESIDUE TOLERANCE:** None established.

**WAITING PERIOD:** 28 days from last application to slaughter.

*Trade and brand names are used only for the purpose of information and the Virginia Agricultural Extension Service does not guarantee nor warrant the standard of the product, nor does it imply approval of the product to the exclusion of others which may also be suitable.*

### **Keys to Proper Use of Pesticides**

1. Read the label on each pesticide container before each use. Follow instructions to the letter; heed all cautions and warnings, and note precautions about residues.
2. Keep pesticides in the containers in which you bought them. Put them where children or animals cannot get to them, preferably under lock and away from food, feed, seed, or other material that may become harmful if contaminated.
3. Dispose of empty containers in the manner specified on the label. If disposal instructions are not printed on the label, burn the containers where smoke will not be a hazard, or bury them at least 18" deep in a place where water supplies will not be contaminated.

**SEE YOUR DOCTOR IF SYMPTOMS OF ILLNESS OCCUR DURING OR AFTER USE OF PESTICIDES.**

*Issued in furtherance of cooperative extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, in cooperation with the U. S. Department of Agriculture. W. H. Daughtrey, director, Agricultural Extension Service, Virginia Polytechnic Institute, Blacksburg, Virginia.*