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Cooperative Extension South Dakota State University

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Control of Dairy Livestock Pests in South Dakota



**Cooperative Extension Service
South Dakota State University
U. S. Department of Agriculture**

This fact sheet does not contain recommendations for use of any chlorinated hydrocarbon insecticide on or around dairy cattle. Legally registered insecticides other than those mentioned may be available for dairy farm use. Use of a trade name does not imply endorsement of one brand over another.

Control of Dairy Livestock Pests in South Dakota

Dairy herd owners must concern themselves with pest control in their dairy management program. Heavy populations of hornflies, lice, and other livestock pests can reduce milk production.

Coincident with the insect pest problem, regulations by the U. S. Department of Health, Education, and Welfare and the Department of Agriculture prohibit the presence of any pesticide in milk and milk products. As a result, dairy herd owners must be especially concerned about the type of insecticides they use on their dairy animals or crops to be fed to dairy animals.

While the pest problem has remained the same each year, the number of approved insecticides has dwindled annually. The following information will serve as a guide to the dairyman in selecting proper pesticides and application methods for insect control in his dairy program.

SANITATION

Good sanitation is an important step toward fly control. Flies breed in unclean and moist areas around the dairy, in fresh and old manure, moist straw and bedding, spilled feed, or any other decaying organic matter. Infrequent manure disposal contributes more to fly problems in dairies than any other factor. Haul and spread manure onto fields where it will have a chance to dry out and no longer furnish breeding areas for flies.

Clean up wet trash, spilled feed, or areas around bases of silos where drainage is often a problem. Pay attention to drainage around the dairy barn and make dirt fills in troublesome spots. Supplement good sanitation with insecticides in a dairy insect control program rather than trying to substitute insecticides for a sanitation program.

Any control program using insecticides demands extreme care and careful adherence to label directions as to the amount and methods of applications both to livestock and surrounding premises. Insecticide residues in milk are illegal and no tolerances are allowed, thus be sure to follow all label instructions.

The following table lists recommended insecticides for use on dairy animals:

SPECIAL PRECAUTIONS

1. Use only approved insecticides for direct application to lactating dairy animals.

You may use:

SYNERGIZED PYRETHRINS
CIODRIN
DICHLOROVOS (DDVP)

Do not use:

Any of the chlorinated hydrocarbon insecticides or

organic phosphate insecticides other than those mentioned above.

2. Check with your county agent on current recommendations during each season. Changes in recommendations may have occurred since these recommendations were printed.
3. Do **not** feed dairy cattle any hay, forage or feed that is known to have been treated with chlorinated hydrocarbon insecticides.
4. Do **not** store chlorinated hydrocarbon insecticides in or near the dairy barn, milk room, milking parlor, or feed rooms.
5. Read **all** of the information on the label of the pesticide container before using any of its contents and follow the instructions to the letter.

BACKRUBBERS

A 1% solution of Co-Ral, Ciodrin, or combination products used as labelled are approved for charging backrubbers for use by lactating dairy animals. Certain formulations containing Co-Ral, Ciodrin, DDVP, and Synergized Pyrethrins are effective in preventing reinfestation by cattle lice in winter months. Charge the back rubber in the fall and recharge it every 2 to 3 weeks.

Co-Ral may be applied on back rubbers for use by lactating dairy cows.

DAIRY BARN TREATMENT FOR RESIDUAL FLY CONTROL

The following sprays may be used to treat outside and inside walls and ceilings of dairy barns.

1. CYGON (DIMETHOATE)
1 gallon of an emulsion concentrate containing 2 pounds of active ingredient per gallon to 25 gallons of water; or 3 quarts of an emulsion concentrate containing 2.67 pounds per gallon to 25 gallons of water; or 4 pounds of 25% wettable powder in 25 gallons of water. Apply 1 gallon of spray mixture to 1,000 square feet of wall surface.
2. RONNEL (KORLAN)
1 gallon of 12% emulsion concentrate or 8 pounds of 25% wettable powder to 25 gallons of water. Apply 1 to 2 gallons to 1,000 square feet of wall surface.
3. RABON
1 gallon of 24.3% emulsion concentrate to 25 gallons of water; or under severe fly conditions increase concentration to 2 gallons per 25 gallons of water. Apply to 2 gallons of spray to 1,000 square feet of wall space.

By Wayne L. Berndt, Extension Pesticides Specialist and
Benjamin H. Kantack, Extension Entomologist

RECOMMENDATIONS FOR INSECT CONTROL ON DAIRY ANIMALS

Insect	Time	Insecticide and Concentration	Dosage Rate	Application	Limitations
Horn flies, horse flies, stable flies, face flies, mosquitoes and other nuisance insects (on animals)	As flies appear—June, July, and August	Pyrethrins .05-.1% + .5-1% Synergist* oil solution	1-2 oz/animal	Mist spray hand or automatic	Not more than 2 oz/day
		Pyrethrins .05-.1% Synergist.5-1% in water	1-2 qt/animal	Wet spray	Wet spray every 2-3 days
		Ciodrin .5% solution in water	1-2 qt/animal	Spray	Do not apply Ciodrin more than once/wk except as a mist spray
		Ciodrin 2% daily mist spray	1-2 oz/animal	Mist spray	Mists may be applied daily
		Dichlorovos (DDVP) 1% oil solution	1-2 fl. oz. mist spray daily to back, flanks and legs	Mist spray	Do not apply more than 2 fl. oz/animal/day when applying mist sprays containing Ciodrin or DDVP
		Dibrom 1%	1 oz./3000 cu. ft.	Mist spray as directed by label	Apply around and above—not directly at—the animals.
		Ciodrin-DDVP	Follow label		As directed by label
Face flies	June, July, August	Ciodrin 3% dust	1-2 heaping tblsp/animal	Dry dust by hand	Sprinkle over poll, neck, and upper back. Do not repeat for 14 days
		Malathion 4-5% dry dust	1.5 oz/animal of 5% or 2 oz. of 4%	Dry dust by hand	Sprinkle over neck and upper back. Must be at least 5 hours before next milking period. Repeat at 10-14 day intervals
		Methoxychlor 50% dust	1 rounded tbsp./animal	Dry dust by hand	Sprinkle over back, neck, and poll—work well into hair. Repeat in 3 weeks.
Lice	October, November	Pyrethrins+synergist .025%+.25% in water	Cover animal thoroughly — amount depends on size of animal and thickness of hair coat	Apply as spray	Apply second application 14 days later
		Ciodrin 0.5% spray	1-2 qt. per animal		Do not apply Ciodrin more than once/week
		Co-Ral 1 qt. of 11.6 E.C. to 100 gal. of water	Cover animal thoroughly		Repeat as necessary
Cattle grubs	No insecticide is recommended for cattle grub control on lactating cows. It is recommended that systemics (as recommended for beef cattle) be used in a control program on replacement heifers, yearling calves, and bulls. Dry cows can also be treated provided they are beyond the time from freshening, as specified on the product label.				

*Piperonyl-butoxide
 W.P.=wetable powder.

These materials may also be sprayed outside the barn and milk room. (See section on "Milk Room" for sprays that may be used **inside** the milk room.) Apply the above wall sprays only when the dairy animals are not in the barn. Repeat only as often as the flies again become annoying. Do not depend too heavily upon insecticides as a substitute for good sanitary practices.

BAITS

Prepared dry baits of 0.5% **DIBROM**, **DDVP**, **RONNEL**, **DIPTEREX**, or 3.5% **MALATHION** may be sprinkled on floors in dairy barns. A wet bait of ½ pint of 57% **MALATHION** plus a cup of sugar syrup added to 3 gallons of water may be applied to dairy barn floors with a garden-type sprinkling can. Carefully follow the label directions for all baits. Take special care not to contaminate feed troughs or watering cups or tanks.

TREATED STRIPS

A band containing **DIMETILAN (SNIP)** is recommended only for use in dairy barns but not in milk rooms. Use one **SNIP** band for each 100 square feet of barn room. When the insecticide has dissipated, replace with new bands; do not attempt to retreat the old bands. Burn or bury the old bands. Make sure the band is entirely consumed by fire. Stand upwind of the fire and smoke while it is burning.

BARN FOGGING OR MISTING

There are a number of electrical or compressed air fogging apparatuses available with which dairy barns may be fogged or misted. The unit is usually hung overhead near the center of the barn; if the barn is over 60 feet long, hang a unit near each end.

Recommended materials to be used in foggers are: **PYRETHRINS**, 0.10% plus 1.0% **PIPERONYL BUTOXIDE**, in refined deodorized kerosene, may be applied at 1 ounce per 3,000 cubic feet of barn space.

DDVP, 0.5% or 1% special oil mixture, may be applied at the rate of 1 pint of a 1% or 2 pints of 0.5% solution per 8,000 cubic feet of barn space.

Hold the cattle in the barn and close the doors and windows. Run the fogger for the specified time

to deliver the desired amount of insecticide. Allow the mist to settle for 2 to 5 minutes; open the barn and begin milking.

Special precautions:

Do not use fly controls to be used directly on the cattle if **DDVP** is used.

Wall sprays in the barn need not be used if a barn fogging program is followed.

Take special care not to contaminate milk equipment and milk utensils. Cover all equipment.

Other materials (such as **DIBROM**) may be used for barn fogging; however, the dairy animals **cannot** be in the building during the time it is being fogged. Follow the manufacturer's recommendations on the label for these materials.

MILK ROOMS

Fly control in milk rooms, milking parlors, or wash rooms may be accomplished by periodical fogging with **SYNERGIZED PYRETHRINS**. Take special care not to contaminate milk utensils with the fog spray.

Vapona (DDVP) 20% resin strips are registered for use in milk cooling rooms with pipeline systems and are recommended for milk cooling rooms. Care should be taken to hang them where the strips will not drip onto utensils or milking equipment.

SPECIAL PRECAUTIONS

Legally registered insecticides other than the previously mentioned insecticide materials are available for dairy farm use. Other "safe" insecticides may be recommended by others; however South Dakota State University highly recommends those in this fact sheet.

Do *not* feed dairy cattle silage or forage that has been treated with chlorinated hydrocarbon insecticides. Treat forage and pasture crops with **DIAZINON**, **CARBARYL (SEVIN)**, **MALATHION**, **DIBROM**, or other such short residual insecticides. Even then, closely observe the prescribed waiting period before pasture harvest or feeding. If there is any doubt, consult your South Dakota State University Extension Entomologist, County Extension Agent, or other competent authority.

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