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GUIDE

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1981 Fly Control in Dairy Buildings

Robert D. Hall and Flernoy G. Jones, Department of Entomology, College of Agriculture

Note: Chlorinated hydrocarbon insecticides, excepting methoxychlor and seed treatment, are not recommended for *any* use on Missouri dairy farms.

The most common flies found around dairy buildings are house flies and stable flies. They are important to the dairy farmer because they may carry disease and other organisms which can contaminate milk and because they annoy the animals at milking time.

Control

Fly control around the dairy barn depends on good sanitation with screens kept in good repair, the use of baits, residual sprays or space treatments to kill adult flies, and the use of larvicide sprays to kill maggots.

Sanitation

Proper sanitation practices include frequent removal and proper disposal of straw, manure and waste feed from inside and around milking parlors, barns and loafing sheds. Material collected should be thinly scattered in fields or pastures, away from the buildings so that it will dry and not be suitable for fly breeding. This reduces the number of fly breeding areas and helps to maintain low populations of flies.

If good sanitation practices are followed, less insecticide will be needed and that used will be more effective.

Controlling Adult Flies in Barns, Loafing Sheds and Milking Parlors

Residual Sprays leave a deposit of insecticide which the fly contacts when it lands on the treated surface. Residual sprays remain effective for a few days up to several weeks. Apply the first spray to walls and ceilings in late spring or early summer as soon as flies begin to be a problem. Repeat applications as needed. Apply 1 gallon of spray per 500 to 1,000 sq. ft. of surface. Use a compressed air sprayer for small areas and a power sprayer for larger areas. On unfinished wood, brick or concrete surfaces, wettable powder formulations will give longer lasting control than will emulsifiable concentrates.

DO NOT USE RESIDUAL SPRAYS IN MILKROOMS

Recommended residual sprays:

1. Dimethoate—Use 1% dimethoate made by mixing 1 pint 23.4% dimethoate emulsifiable concentrate in 3 gallons of water.
2. Fenthion (Baytex)—Use 1% fenthion made by mixing 15 tablespoons 46% Baytex emulsifiable concentrate in 3 gallons of water.
3. Permethrin (Ectiban, Atroban or Permectrin)—Use 0.1% permethrin made by mixing 1 cup 5.7% emulsifiable concentrate or 8 level tablespoons 25% wettable powder in 3 gallons of water.
4. Rabon—Use 1% Rabon made by mixing ½ pound 50% Rabon wettable powder in 3 gallons water.
5. Ronnel (Korlan)—Use 1% ronnel made by mixing 1 pound 25% Korlan wettable powder or 1 pint 24% Korlan emulsifiable concentrate in 3 gallons of water.

Restrictions: DO NOT contaminate feeds, feed troughs, water or milk utensils. Cover feed and water troughs before spraying. Remove all animals from the buildings when applying residual wall sprays and keep them out until spray has dried and building has aired out.

Baits consist of an insecticide and an attractant which serves to draw flies to the insecticide. Start baiting buildings as soon as flies begin to be numerous. Place bait where flies congregate during the day—window ledges, doorways, alley-ways, doorway to feed room, areas near standing water in buildings etc.

During the first four or five days, scatter *dry bait* heavily enough so that it can be seen. Continue to put out bait each day for the next week, but lesser amounts can be used. After the first 10 days, apply bait every two to four days to those places where the most flies were killed during the initial baiting.

To make a *liquid bait,* mix the proper amount of insecticide with water and add sugar, corn syrup or molasses. Follow the directions on the container label. Use a sprinkling can to spread the bait on the floor. Where a dirt floor is present or the floor is dirty, apply the bait on pieces of burlap, cardboard etc. Apply new, fresh bait every two to four days.

Continue to use bait regularly during the summer. DO NOT stop as soon as fly numbers are knocked down. If you do and the numbers build back up, you will have to start all over again with the heavy initial baiting.

Recommended ready-to-use dry baits:

1. Dichlorvos—Use 0.5% bait.
2. Malathion—Use 1% bait.
3. Ronnel (Korlan)—Use 1% bait.
4. Trichlorfon (Dipterex)—Use 1% bait.

Recommended liquid baits—prepared by user:

1. Dichlorvos—Use 0.1% bait.
2. Malathion—Use 1% bait.
3. Ronnel (Korlan)—Use 2% bait.
4. Trichlorfon (Dipterex)—Use 0.1% bait.

Restrictions: DO NOT place baits where animals may come

in direct contact with the material. DO NOT contaminate feed, water, food utensils, milk or milk utensils.

Space Sprays may be applied with permanently mounted foggers, or from aerosols, or with hand operated mist sprayers in barns and milking parlors.

Space sprays leave no residual deposit, but kill only those flies that are hit by the spray. Applications of space sprays usually will have to be made daily.

Use ready-to-apply sprays specifically formulated for use in dairy barns. Use either:

1. Dichlorvos—Use 0.5% spray daily or as needed.
2. Pyrethrin plus piperonyl butoxide—Use 0.1% daily or as needed.

Restrictions: DO NOT apply dichlorvos while the cows are in the barn if the cows have had direct application of dichlorvos within the past eight hours. DO NOT apply space sprays in barns or milking parlors while milking.

Resin Strips may be used in addition to sprays and baits. They will not be successful if they are used in rooms or buildings where a constant change of inside and outside air occurs. Hang one 10-inch 20% dichlorvos resin strip from the ceiling for each 1,000 cu. ft. of space.

Restrictions: DO NOT place resin strips over feed troughs, water troughs and milking utensils. Keep out of reach of children and animals.

Adult Fly Control in Milk Rooms

Because of the possibility of contaminating milk, the insecticides that can be used and the methods of their application in the milk room are very restricted.

The importance of following good sanitation practices to eliminate as many flies as possible in and around the milk room must be emphasized. Remember that if good sanitation practices are followed, less insecticide will be needed and that used will be more effective.

Screens must be used at windows, and screen doors should be spring loaded to prevent many flies from entering the milk room.

Before using any insecticide in the milk room, consult your milk inspector about possible local restrictions.

Where sanitary codes permit, use 20% dichlorvos resin strips. Doors and windows must be kept closed to reduce air circulation to a minimum for this control method to be effective. DO NOT hang the strips directly over the milk tank and keep tank covered when it contains milk.

Where sanitary codes do not permit the use of insecticide, hang old fashioned sticky fly strips from the ceiling, near the milk tank, windows and doors. Electric fly grids have also given excellent control in milk rooms.

Maggot Control

If the manure can't be scattered in fields and must be accumulated in piles, using a larvicide spray will help hold down fly breeding.

Apply insecticide to manure accumulations as a coarse spray or with a sprinkling can. Apply one gallon per 100 sq. ft. of surface area on a regular basis. Flies may continue to lay eggs on the sprayed manure, but the insecticide will kill most of the maggots before they become adult flies.

Use either of the following:

1. Dimethoate—Mix 1 pint 23.4% dimethoate emulsifiable concentrate in 2½ gallons of water.
2. Rabon—Mix ½ pound 50% Rabon wettable powder in 3 gallons of water.

Restriction: DO NOT apply where animals may come in contact with the treated manure.

General Precautions: DO NOT contaminate feed, feed troughs, water, water utensils, milk or milk utensils. All of these insecticides must be handled with caution, since most of them are relatively highly toxic to warm blooded animals. Be sure to read and follow the safety precautions given on the label of the containers.

Missouri insect control recommendations are revised annually and are subject to possible change during the season. This guide is intended for use during the 1981 season only. No discrimination is intended, and no endorsement is implied.

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