

Livestock & Poultry

Department of Entomology

CONTROLLING FLIES ON DAIRY FARMS

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Several kinds of flies live in and around dairy buildings or in the pasture. Whether feeding upon the animals or just annoying them, flies can reduce milk production. Besides, flies are unsanitary and may contaminate milk.

House flies are the most common species around farm buildings, but the stable fly, little house fly, and others may also be present. The house fly and the little house fly are pests because of general annoyance to the cattle. The stable fly is a bloodsucker. In the pasture, cattle may be attacked by horn flies, face flies, horse flies, deer flies, and mosquitoes. All of these pasture flies except the face fly are bloodsuckers. Face flies feed upon secretions from eyes, nostrils, and wounds, including those made by blood-sucking flies.

FLY CONTROL IN AND AROUND DAIRY BUILDINGS

Flies around dairy buildings develop in moist manure or other wet decaying organic matter. No insecticide can be expected to control flies under poor sanitary conditions. A

thorough sanitation program is a must to hold down fly populations in and around dairy buildings. Manure that is wet but not saturated is conducive to fly production. Flies can complete a generation from egg to adult fly in as few as 10 days. Thus, manure removal at least twice a week is needed to break the breeding cycle. This can be done by spreading the manure to dry or by adding the manure to water to liquefy. If you use a liquid manure pit, do not allow accumulations of manure above the water line, either floating or sticking to the sides, since this is ideal for fly production. Do not let wet straw or other decaying organic matter accumulate in or near the buildings.

Table 1 lists the insecticides recommended for fly control around dairy buildings. All except the products listed as KNOCKDOWN SPRAYS are considered residual sprays and should give control up to 4-6 weeks. Knockdown sprays have little or no residual activity. Residual sprays should be applied when the first flies appear in the spring.

Table 1. Insecticides For Spraying Dairy Premises

Insecticide	Formulations*
<i>Residual Sprays</i>	
dimethoate (Cygon)	23.4% EC
permethrin (Ectiban, Atroban, Purina Hard Hitter, Insectrin, Overtime, permectrin, others)	25% WP, 5.7% EC, 11% EC
stirofos (Rabon)	50% WP
Ravap	EC (contains 23% Rabon and 5.7% dichlorvos)
crotoxyphos (Ciodrin)	12.5% EC
Ciovap	EC (contains 10% Ciodrin and 2.5% dichlorvos)
<i>Knockdown Sprays</i>	
dichlorvos (DDVP, Vapona)	23.4% EC
pyrethrins	Several formulations
naled	58% EC, 1% ready-to-use
permethrin	5.7% EC

A number of fly baits are available in either wet or dry form containing insecticides such as dichlorvos, naled (Dibrom), stirofos (Rabon), and trichlorfon (Dipterex). Baits are most useful as a supplement to residual sprays. They alone cannot be expected to control fly populations. Commercial dry baits, in granular form, are readily available, but liquid baits will have to be prepared by the user, usually from emulsifiable concentrate formulations.

Larvicides can be used directly on manure and other fly breeding sources. This type of application is best utilized when reserved for treatment of fly breeding spots not eliminated by normal sanitation practices. Recommended larvicides are listed in Table 2.

Insecticide	Formulations*
stirofos (Rabon)	50% WP
dimethoate (Cygon)	23.4% EC
*EC = emulsifiable concentrate; WP = wettable powder	

Feed additives as larvicides employ the principal of incorporating an insecticide in the feed. The insecticide then passes through the digestive system of the animal into the manure. Flies around a dairy often breed in non-manure sources including various forms of decaying organic matter. Therefore, without thorough elimination of all non-manure breeding sites, feed additives cannot be expected to provide adequate control. Rabon oral larvicide is registered for dairy cattle, including lactating cows, as a premix, loose mineral, or mineral block.

INSECTICIDES FOR MILK HOUSES OR MILK ROOMS

Synergized pyrethrins is the preferred insecticide for use in milk rooms. Use as a spray or fog. Cover or remove milk and utensils before applying insecticide.

Proper use of screens and fly traps are two methods of mechanical fly control that can be employed. Where possible, doors and windows should be screened to prevent entry of flies. Many kinds of fly traps are available. These traps are usually electrical, employing a black light with an electrically charged grill to kill the insects, or they may be baited traps with a fly attractant material. Traps do appear to be helpful in tight, enclosed areas where good sanitation practices are followed. However, in areas of heavy fly populations, traps are not effective in reducing fly numbers to satisfactory levels. They are best used as a supplement to other fly control practices.

READ AND FOLLOW ALL LABEL INSTRUCTIONS. THIS INCLUDES DIRECTIONS FOR USE, PRECAUTIONARY STATEMENTS (HAZARDS TO HUMANS, DOMESTIC ANIMALS, AND ENDANGERED SPECIES), ENVIRONMENTAL HAZARDS, RATES OF APPLICATION, NUMBER OF APPLICATIONS, REENTRY INTERVALS, HARVEST RESTRICTIONS, STORAGE AND DISPOSAL, AND ANY SPECIFIC WARNINGS AND/OR PRECAUTIONS FOR SAFE HANDLING OF THE PESTICIDE.

Revised 10/2007

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Calf pens are often a source of fly breeding. Therefore, remove manure every day, and maintain the same sanitation standards here as in the rest of the barn. Spray pens as needed with one of the residual insecticides suggested for dairy buildings. If flies are numerous, fog the pens daily with pyrethrins.

INSECTICIDES FOR DAIRY ANIMALS

In Table 3 are the materials recommended for use on dairy animals. All have federal and state registration for this purpose and will not cause milk contamination when used in the manner prescribed. Follow all label precautions.

Insecticide	Formulations*
coumaphos (Co-Ral)	1% dust, 11.6% EC
stirofos (Rabon)	3% dust
malathion	4% dust
crotoxyphos (Ciodrin)	12.6 EC
Ciovap	EC (contains 10% ciodrin and 2.5% dichlorvos)
Permethrin (Ectiban, Atroban, Purina Hard Hitter, Insectrin, Overtime, Permethrin, others)	25% WP, 5.7% EC, 11% EC
pyrethrins	Several formulations
*EC = emulsifiable concentrate; WP = wettable powder	

INSECTICIDE-IMPREGNATED EAR TAGS

Several insecticide ear tag products are available under various trade names and designs. These devices are not suitable against house flies or stable flies in and around dairy buildings. Stable flies feed on the legs of cattle, an area not treated by ear tags, and house flies have many feeding sources other than cattle. However, control of face flies and horn flies on pastured cattle can be achieved with such devices. Products available incorporate the insecticides permethrin and fenvalerate (Ectrin).