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EC1571 Practical Housefly Control

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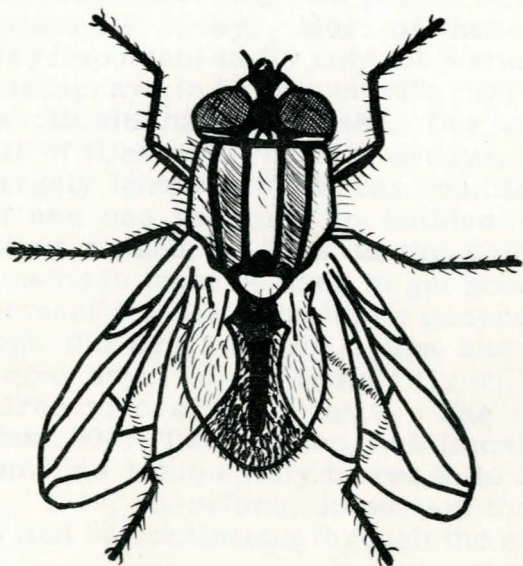
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Practical Housefly Control



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PRACTICAL HOUSEFLY CONTROL

By E. Hixson and Robert E. Roselle

The housefly has long been a major problem both in cities and towns and on farms. It is a pest primarily because of its unsanitary habits, its great capacity for spreading diseases, and its habit of invading residences, food processing plants and other places where it becomes a pest by contaminating food and annoying people and livestock. Before the release of DDT in 1945, the principal methods used to control houseflies were sanitation to reduce breeding, exclusion with screens and killing with poison baits, traps, and pyrethrum fly spray. Most of these practices are still very important as fly control methods. Since 1945 residual sprays in buildings with DDT and other similar insecticides have been used. Due to the spectacular kill of flies with residual sprays, sanitation has been largely ignored. This has resulted in poor fly control and has hastened the buildup of insecticide-resistant strains of flies to the point that the very best methods must be used to get good housefly control. Houseflies can complete a generation from adult through the egg, maggot, pupa and egg laying adult in twelve days. Each female fly will lay from a few hundred to over 2000 eggs. The average is probably about 800. Twenty flies, half females, on the premises on June 1 can easily increase to 3,000,000 by June 25. It is, therefore, important that control start early and be continuous through the season.

Sanitation, the Key to Control

The housefly develops in wet, fermenting or decaying organic material such as manure, straw, animal bedding, waste feed, and garbage. Practically all of the housefly breeding areas are man made, and can be eliminated or prevented from accumulating.

It has been shown experimentally that houseflies can not be controlled without good sanitation regardless of the insecticide used. Breeding material that accumulated during the winter should be removed by May 1. Such material should be removed each week during the warm part of the year, May to October, to prevent attracting flies for egg laying. These wet, fermenting materials are necessary for egg laying and larval development, therefore, removing and spreading or burying such materials is essential in fly control.

Insecticides

Insecticides are used to kill adult flies which have developed on the premises or migrated from other breeding areas. Insecticides are usually applied as contact space sprays or as residual sprays applied to the resting places of flies.

The most effective, economical and practical insecticides for premises fly control are the residual types such as DDT, methoxychlor, lindane and others. As a barn spray or other building spray, a two percent concentration from a water suspension wettable powder has given the best results. Oil solutions should not be used due to the fire hazard. In dairy barns where there is danger of milk contamination, methoxychlor or a methoxychlor-lindane combination should be used.

Residual spray applications should be made as soon as flies become active. The ceiling and walls should be swept down or washed to remove loose debris. A clean surface will take and hold spray much better than a dirty one. Apply the spray to wet the surface without "runoff". Any size sprayer may be used. The smaller ones take longer to do the job. High pressure is not necessary, but hastens the job.

Contact space sprays usually contain pyrethrum, allethrin or lethane in kerosene solution or water-

emulsifiable concentrate. These insecticides kill on contact but only for a short time after they are sprayed into the air. In some mixtures an activator is added such as piperonyl butoxide or sulfoxide to increase the insecticides' toxicity. Contact insecticides are effective for housefly control only in closed buildings or applied directly to animals to kill the flies on them. This type of spray is highly effective for quick kill and is relatively safe. Where flies have developed a resistance to DDT and other similar insecticides, the use of contact sprays for a season may be the only means of control. When flies have built up resistance to DDT they quickly become resistant to methoxychlor, TDE, chlordane, toxaphene and lindane. One of these may give control for a short period, but to overcome resistant strains the best method consists of good sanitation to reduce the population and space sprays to eliminate those that reach the adult stage.

Poison Baits

Malathion bait: Mix $3/4$ pints of molasses, syrup or granulated sugar in one gallon of water. Add one tablespoon 50% malathion emulsion concentrate or 2 tablespoons of 25% wettable powder. Prepare as much bait as you need for one application. Sprinkle in strips six inches wide in different locations on the barn floor where flies congregate, on dirt or litter apply it to burlap bags, wood or sheets of tin. Treat daily until the population has been reduced, then every three or four days, or as necessary.

A highly effective dry bait may be prepared by using three tablespoonfuls of 25 percent malathion wettable powder and one pound of granulated sugar which should be colored with $1/4$ teaspoonful of food coloring. Stir thoroughly with a paddle until all the grains of sugar are coated with the powder, and colored. Distribute the dry bait from a shaker-top can or jar. Sprinkle thinly in strips on the floor or in other places where flies congregate but where it will

not contaminate animal feed, human food or utensils. Usually about two tablespoonfuls are needed for each 500 to 1000 square feet. Apply daily while flies are abundant.

Diazinon bait: Diazinon, a new phosphate insecticide, is hazardous to handle as a concentrate. A one percent dry bait is available commercially for use in calf barns, loafing sheds, chicken and hog houses. It is not recommended for use in dairy barns or milk rooms.

TEPP bait: A TEPP and lindane combination has been used as a poison bait. This combination has not been widely recommended because of the extreme danger of handling TEPP. Poisoned baits are not recommended for use in buildings occupied by humans.

Vaporizers

Vaporizers are being offered for sale to control flies and other insects in buildings. These devices vaporize DDT or lindane with heat. The fumes spread in the building and recrystallize on the surface, thus acting as space contact and residual insecticides. Unless the amount of insecticide vaporized in a given time for a certain space is regulated and the air currents in the building controlled these devices give poor control. Housefly resistance to DDT and lindane may also result in ineffective control. In many situations they are considered health hazards. Their use is not recommended.

Fly traps

Various kinds of fly traps are being offered for sale. Traps in general have never given good fly control, although they may collect large numbers of flies. Some of the traps now offered will not attract houseflies.