



The University of Georgia

Cooperative Extension Service

College of Agricultural and Environmental Sciences / Athens, Georgia 30602-4356

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BROILER TIP...

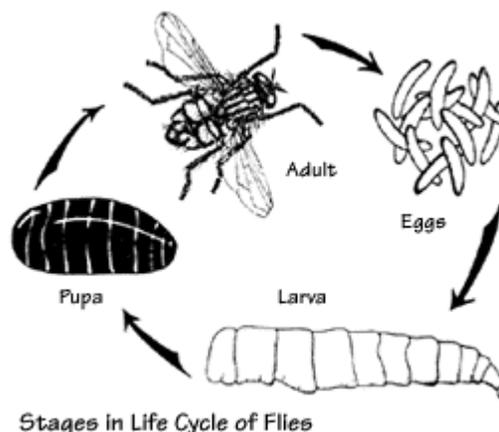
HOUSE FLY CONTROL STRATEGIES THAT CAN PREVENT PROBLEMS DOWN THE ROAD

House flies are a nuisance due to their high reproductive rate, their ability to disperse several miles from a breeding source, and their pestiferous activity. In addition to the annoyance they produce by their mere presence, there is the potential for disease transmission as flies move from contaminated areas into other areas. Fortunately these diseases are virtually non-existent in North America, and incidence of infection vectored by flies is rare due to modern sanitation and hygiene. On a poultry farm, fly suppression is one of the main pest management challenges. It is useful to understand the fly's lifecycle as it can be helpful in diagnosing fly problems, as well as, knowing which control strategies will be most effective.

LIFE CYCLE

Flies have complete metamorphosis with egg, larva (maggot), pupa and adult stages in their development. The female deposits her eggs in moist organic material. One female may deposit as many as five batches of 50 to 250 eggs (a possible 1250 eggs) in her 3-week life span. The eggs are usually white, very small (1 mm long), and will hatch in 12 to 24 hours. Under good conditions the egg to adult development may require only a couple of weeks.

The larvae, or "maggots," develop in decaying organic material. With house flies, this means developing in food waste, manure, animal carcasses, and similar decaying plant and animal materials. When maggots have completed their development and are ready to undergo the next step in their metamorphosis, they convert the last larval skin into the puparium, a hardened shell in which the pupa will develop. The pupa then transforms into the adult fly, and the adult emerges from the puparium. Using internal pressure, the fly unfolds its wings, allowing them to dry and harden before it can fly.



FLY CONTROL

Understanding the life cycle of the fly is the first step in knowing how to control and prevent fly development. Two foundations of fly suppression on poultry farms are source reduction and sanitation. "Source reduction," or elimination of larval habitat, is the preferred method of fly suppression. Fly larvae require moist organic material for food and for their developmental habitat. Removing the food source and the material in which larvae develop will break the fly life cycle, preventing subsequent production of adult pests. On poultry

farms, litter management is important in controlling fly development. Leaky water lines can result in gallons of water being deposited on an hourly basis and should be controlled. Proper ventilation and water line maintenance will provide substantial improvements in litter moisture and will reduce suitable breeding habitats. Sanitation not only limits larval development sites, it reduces odors that lure flies and prevents drawing flies in from surrounding areas. While chemical pesticides may be helpful for reducing adult fly populations, they are no substitute for prevention by means of source reduction or elimination of breeding sites.

As mentioned previously, fly larvae require moist organic materials to survive and develop into adult flies. Because poultry manure is such a superb larval habitat, tremendous numbers of flies can be produced from small amounts of bird droppings. Poultry manure and litter must be managed to prevent it from serving as a fly breeding site. Fly management programs incorporate biological, mechanical, and chemical strategies to minimize fly production.

BIOLOGICAL CONTROL

Natural biological control occurs within the manure by the beetles, mites, parasites and other predators that ordinarily occur in the poultry house. Unnoticed, these beneficial creatures suppress the majority of fly production. To conserve these good insects it is important to avoid spraying insecticides on manure, except as needed on isolated wet spots.

Parasitic wasps can be purchased from suppliers to supplement the naturally-occurring wasp populations. These wasps attack the immature stages of flies by inserting their eggs into the pupa stage. The wasp larvae emerge from the eggs and feed off of the fly pupa which eventually kills the pupa and reduces the fly population. If this course of fly control is chosen, insecticides must not be sprayed in the house, or they will destroy the tiny wasps. Likewise, tiny predaceous beetles called Hister beetles can be purchased from biocontrol producers and released in poultry houses to supplement natural populations. In appropriate situations, predators and competitors like black soldier flies and black dump flies can also be used to augment existing beneficials, if sources can be located.

MECHANICAL CONTROL

Adult fly traps use either food lures or sex pheromones to entice flies into traps. Zapper traps use light to attract flies, which are then electrocuted. Similar light traps attract flies to glue boards. Flies can be trapped on sticky strips when they land to rest.

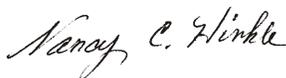
CHEMICAL CONTROL

Chemical control can be conducted by using residual and bait sprays, contact sprays, larvicides or baits. Up to date information on insecticides that can be used in poultry facilities can be found online in the Georgia Pest Management Handbook. Information on fly control in poultry operations can be located at http://www.ent.uga.edu/pmh/Animals/poultry_fly.htm.

Through proper manure and litter management, regular maintenance of drinker lines and adequate ventilation, the broiler house environment can be made unattractive to flies as a breeding ground. Understanding the life cycle of the fly and which control strategies are most effective at each stage of development can help producers make informed decisions how best to prevent fly outbreaks.



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Consult with your poultry company representative before making management changes.

“Your local County Extension Agent is a source of more information on this subject”