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Fruit Flies

Introduction

You find them, sometimes in alarming numbers, flitting around the fruit bowl on the kitchen table, garden tomatoes ripening on a windowsill, last night's tossed salad remains on the shelf, or the garbage can behind the stove. Fruit flies, various species of the insect genus *Drosophila*, seem to appear out of nowhere in mid to late summer, then disappear with the arrival of cold weather in fall.

Description

Adult fruit flies are about 1/16" to 1/5" long, dull brownish-yellow to brownish-black with red eyes in some species. The head and thorax are tan-colored, while the abdomen is black and gray underneath. The wings have two "breaks" in the leading edge near the body. The third antennal segment is oval or long with the outer bristle (*arista*) nearly always feathered. Eggs are pearly white with two to four threadlike tubes seen under magnification. Larvae are about 1/10" to 1/5" long, cream-colored, legless, eyeless and tapered to a point at the head end. Larvae have an extended stalk-like breathing tube at the tail end of the body. Pupae are about 1/8" long, brown and seedlike, with two hornlike stalks at one end.

Life Cycle

Depending on temperature, the fruit fly's entire life cycle is completed in one to two weeks, one reason why this insect is bred commercially for study by geneticists.

Female fruit flies lay as many as 2,000 eggs singly on the surface of moist, unrefrigerated organic materials such as fruits and vegetables, tossed salad remains, materials collected indoors for later transfer to the compost pile. The insects also breed on organic slime in drains and compost buckets and in wet mops. The flies locate food by its odor.

Fruit fly eggs hatch in about a day. Larvae then feed five or six days on the yeast produced by overripe or rotting organic materials before moving into to drier portions of the food or even out of it to pupate. Newly emerged flies mature sexually about two days and mate more than once. They are strong fliers, traveling up to 6-1/2 miles a day.

Control

Prevention and non chemical control

Although fruit flies are mainly a nuisance, they do have the potential to contaminate food with bacteria and other disease-producing organisms. Good sanitation to eliminate the flies' breeding and feeding grounds is key to preventing an infestation or controlling fruit flies,

Refrigerate all fresh fruits and vegetables. Rinse well all empty soda, juice and food containers before placing them in the trash or recycling bin and keep the bins themselves clean. Cover containers of kitchen scraps headed for the compost pile and get them outdoors soon, rather than letting them sit inside. Keep kitchen drainpipes, traps and garbage disposal pipes clean. Don't forget the rotting onion or potato in the kitchen cupboard, the spilled juice in the tray under the refrigerator and the apple cores in the children's wastebasket.

Although trapping is nowhere near as effective as practicing good kitchen sanitation, some commercially available traps use vinegar to lure fruit flies into a container the flies cannot escape. You can make your own trap inserting a paper funnel (rolled from a sheet of notebook paper) into a jar baited with a few ounces of cider vinegar. Place the jar trap(s) wherever you see fruit flies. Simply release the trapped flies outdoors.

Chemical control

Although there are some pesticide sprays formulated for indoor use that will kill adult fruit flies, we do not recommend chemical controls. Fruit flies breed so quickly that sanitation is the only effective means of control. If you find fruit flies frequently in or around a sink in the winter, they are probably breeding down in the train and trap. You can eliminate the problem by regularly cleaning the drain with standard drain products.

We have used information from these University websites in preparing this fact sheet:
University of Kentucky www.uky.edu/Agriculture/Entomology/entfacts/struct/ef621.htm
University of Iowa http://www.ent.iastate.edu/ipm/iiin/ffruitfl.html

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