

Lifecycle of a Fruit Fly



Egg Stage: Eggs are deposited by the adult fly into the fruit or vegetable. Eggs hatch within 24–48 hours at 25°C.



Larval Stage: Larvae damage fruits and vegetables through feeding and tunneling.



Pupal Stage: Larvae form a puparium that allows the insect to develop into an adult fruit fly.



Adult Stage: Adult flies emerge from the puparium. Female adults cause blemishes inside fruits and vegetables.

For more information, contact:
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HAW-FLYPM

Hawaii Area-Wide Fruit Fly Integrated Pest Management

The HAW-FLYPM program integrates cultural, chemical, and biological control measures to suppress and maintain pest populations below economic injury levels.

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Fruit Fly Identification and Lifecycle



HAW-FLYPM

Hawaii Area-Wide Fruit Fly Integrated Pest Management

Improving Hawaii's Agriculture Through Research, Education, and Innovation

A USDA/Agricultural Research Service-funded partnership with the University of Hawaii College of Tropical Agriculture and Human Resources Cooperative Extension Service and the Hawaii Department of Agriculture

Oriental Fruit Fly



Identification:
 Clear wings with black T-shaped mark on the top of abdomen.

Oriental fruit fly, introduced in 1945, became a major pest of

almost every economically important fruit in the Hawaiian Islands. Important hosts include citrus, guava, mango, peach, and papaya. Wild guava serves as a reservoir host from which the fly attacks cultivated crops. This fly is widely distributed but is more abundant in wet, lowland areas.

Lifecycle (at approx. 25°C)

Adult: Lifespan may exceed 4 months
Egg Deposition: As many as 1000 eggs
Egg Stage: 1–2 days completed in fruit
Larval Stage: 11–15 days
Pupal Stage: 8–11 days
Sexual Maturity: Reached in 25–35 days

Host crops include guava, mango, cashew apple, papaya, cherimoya, soursop, custard apple, velvet apple, breadfruit, jack fruit, fig, loquat, peppers, apricot, peach, tomato, orange, tangerine, grapefruit, other citrus, star apple, sapodilla, canistel, nectarine, and persimmon.

Mediterranean Fruit Fly



Identification:
 Smaller "picture wing" with a brownish yellow band across the middle of each wing.

Medfly, introduced in

1907, became well established throughout the Hawaiian Islands within four years. Important hosts include coffee, citrus, loquat, persimmon, guava, papaya, and peach. Medfly is distributed in patches near leeward, dry areas at both high and low elevations.

Lifecycle (at approx. 25°C)

Adult: Lifespan usually 1–2 months
Egg Deposition: 700 eggs in batches of 2–10
Egg Stage: 2–3 days completed in fruit
Larval Stage: 6–10 days
Pupal Stage: 6–13 days
Sexual Maturity: Reached in about 10–15 days

Host crops include peach, nectarine, apricot, plum, loquat, orange, kumquat, calamondin, other citrus, coffee, guava, mountain apple, sapote, eggplant, pepper, tomato, papaya, cherimoya, custard apple, mango, persimmon, strawberry guava, java plum, rose plum, Jerusalem cherry, and poha.

Melon Fly



Identification:
 Large black spot on wing tip and black cross streak on wing.

Melon fly, introduced in 1895, is a major economic pest of

cucurbits such as melons, squashes, and pumpkins as well as solanaceous vegetables such as eggplants, tomatoes, and peppers. Wild cucurbits such as bitter melon and ivy gourd serve as a reservoir from which flies attack cultivated crops. Melon flies are common near coastal areas. Their abundance declines with increasing rainfall and elevation.

Lifecycle (at approx. 25°C)

Adult: Lifespan may exceed 3–4 months
Egg Deposition: 400 eggs in batches of 1–2 up to several dozen
Egg Stage: 24–36 hours completed in fruit
Larval Stage: 5–15 days
Pupal Stage: 9–11 days
Sexual Maturity: Reached in 25–35 days

Hosts crops include, squash, gourds, cucumber, melon, tomato, pumpkin, guava, papaya, cowpea, string bean, lima bean, bitter melon, strawberry guava, spiny cucumber, and ivy gourd.