



FRUIT FLIES IN HAWAII

| | Oriental | Melon | Solanaceous | Medfly |
|---------------------------------|---|--|--|--|
| Altitude Flies Found | 0-4000 ft. | 0-1500 ft. | 0-1000 ft. | 1000-4000 ft. |
| | Banana | (Cucurbits & Solanaceous; will feed on stem shoots and buds of squashes and melons.) | | Apple |
| | Breadfruit , <i>Apricot</i> | | | <i>Apricot</i> |
| | Calamondin | | | Avocado |
| | Carambola (Starfruit) | Bittermelon | | <i>Carambola (Starfruit)</i> |
| | Cherimoya | Melon | | |
| | Citrus | Papaya | | Citrus |
| | <i>Fig</i> | Pumpkin | | Coffee |
| | Grapefruit | | | <i>Date</i> |
| | | Strawberry Guava | | <i>Fig</i> |
| | Guava | <i>Guava</i> | | Guava , Grape |
| | <i>Loquat</i> , Kumquat | | | Loquat |
| | Jackfruit | | | Lychee |
| | Mango , Nectarine | | Poha | <i>Mango</i> , Nectarine |
| | Papaya , Peach , Plum | Cucumber | Cucumber | Papaya , Plum |
| | Passion Fruit | Eggplant | Eggplant | Peach , Pear, Plum |
| | <i>Persimmon</i> , <i>Poha</i> | Gourds | | <i>Persimmon</i> , Quince |
| | Rose Apple, mtn. apple | Peppers | Peppers + chili pepper | Pomegranate |
| | Soursop, Sapodilla | Squash | | Sapote, Surinam cherry |
| | | Tomatoes, Zucchini | Tomatoes | <i>Tomatoes</i> , <i>Peppers</i> |
| Wing Characteristics | Clear wings | Black spot on wing tips Black streak on wings | Clear wings with spot at wing tips | “Picture” wings, brown bands on wings |
| Effective Lure | Methyl Eugenol (male) | Cue Lure (Male) | Torula Yeast tablets Sticky cards | Bio-Lure Medfly® |
| Trap Placement | Hang traps as high as possible in or near fruit trees | Hang at eye level around the crop in roosting hosts | Place traps or sticky cards in/near roosting host, border plants | Hang at eye level in or near fruit trees |
| Trap Service | Every 3-4 months | Every 6 months | Replace as needed | Every 2-2.5 months |
| Protein Spray Location & Timing | Spray ea. fruit tree in several well-saturated 5” spots in foliage/on trunks; spray under sides of leaves. Roosting host*/border crop: Several spot sprays @ ¼-1 ounce solution every 10 feet | | | |
| Protein Spray Timing | Apply GF-120 solution every 7 days once crops begin to flower ; Re-apply bait after rain. | | | |

Italic type indicates that more than one type of fruit fly is a pest for this fruit/vegetable. **Bold type** indicates major hosts to specific fruit fly.

FRUIT FLY SUPPRESSION METHODS

| 1-2-3 | Rationale | Method |
|------------------------|--|---|
| 1. Field Sanitation | <ol style="list-style-type: none"> 1. Infested produce can carry hundreds of fruit fly young. 2. Pesticides can't kill larvae & eggs inside fruits & vegetables. | <p><u>Compost</u>: plastic covered & maintain internal heat of at least 140°F</p> <p><u>Bagging</u>: Bag infested fruit tightly in thick plastic bags; can use as compost after 1 mo.</p> <p><u>Animal Feed</u>: Feed infested fruit to animals; dispose of any uneaten fruit after 1 day</p> <p><u>Burying</u>: Bury culls greater than 18 inches</p> <p><u>Drowning</u>: Submerge fruit for at least 48 hours, then monitor for re-infestation</p> <p><u>Grinding</u>: Grind up thoroughly; garbage disposal will do.</p> <p><u>Augmentorium</u>: tent-like structure, retains fruit flies, allows beneficial insects to escape</p> |
| 2. Monitoring | <ol style="list-style-type: none"> 1. Correct lure (kills males) 2. Good trap placement 3. Timely trap maintenance | <p>See other side of page. Remember to:</p> <ul style="list-style-type: none"> • Handle lures per label instructions • Don't mix lures; limit one lure per trap • Change gloves if handling different lures • Hang traps in shady areas out of reach of children & animals • Keep record of outbreaks & service dates |
| 3. Protein Bait Sprays | <ol style="list-style-type: none"> 1. Nulure® + approved pesticide 2. <u>GF-120 Fruit Fly Bait Concentrate®</u> Pre-mixed. Safe, earth friendly, organic | <ol style="list-style-type: none"> 1. Mix 1 part GF-120 : 4 to 10 parts H₂O 2. Diluted spray should not be stored for future application 3. Wash spray bottles thoroughly after use 4. Application Rates: <ul style="list-style-type: none"> <u>Fruit trees</u>: Several spot sprays per tree ¼-1 ounce solution per tree every 7 days. <u>For Melon Fly, spray Roosting host*/border crop</u>: Several spot sprays @ ¼-1 ounce solution every 10 feet every 7 days. 5. Re-apply bait after rain 6. For very humid, rainy areas, paint 1 part GF-120 to 4 parts water inside a lightweight bucket or the bottom half of an empty water bottle. Hang treated bucket upside down in foliage. Reapply GF-120 every 7 days. 7. Wear personal protective clothing and use protective equipment in accordance with the instructions on the protein bait label. |

*Roosting Hosts: Cassava, castor bean, Christmas berry, cocklebur, corn, hibiscus, panax, ti, wiliwili, Sudex

Condensed from: Fruit Fly Suppression...Easy as 1-2-3 <http://www.ctahr.hawaii.edu/UHMG/EastHI/fruit-fly.asp>