PEST PROFILE

Common Name: Mediterranean Fruit Fly

Scientific Name: Ceratitis capitata (Wiedemann)

Order and Family: Diptera, Tephritidae

Description: The Mediterranean fruit fly is slightly smaller than a housefly with an average length of 3.5-5.0 mm. The adult has a predominantly dark body with two white bands on the yellowish abdomen. The wings have brown, yellow, black, and white markings. The female has a pointed, slender ovipositor to deposit eggs beneath the skin of the host fruit. The larvae is a legless maggot, creamy white in color, and may grow to a length of 0.4 inch within the host fruit.

History and Economic Importance: The Mediterranean fruit fly was first discovered in the Hawaiian Islands in 1910. With an abundant supply of host fruit in which to lay its eggs, the fly multiplied rapidly, seriously reducing the yield and quality of many crops such as mango, guava, avocado, papaya, coffee, peach, and persimmon. A great number of crops in California would be threatened by the introduction of this pest including; apricot, avocado, grapefruit, nectarine, orange, peach, and cherry. It has been estimated that the permanent presence of this pest in California would result in yearly losses of over $205 million in crop damages, additional pesticide use, and quarantine requirements. This pest has been introduced periodically in the State since 1975. All previous infestations have been eradicated in California.

Distribution: The Mediterranean fruit fly is widespread throughout Australia, Central and South America, Europe, and Africa. Its distribution in the United States is restricted to the Hawaiian Islands.

Life Cycle: A female lays eggs in groups of one to six eggs within the fruit, and may lay as many as 1,200 eggs in her lifetime. The larvae tunnel through the fruit feeding on the pulp, shed their skins twice, and emerge through exit holes in seven to 24 days. The mature larvae drop from the fruit and burrow beneath the soil to pupate. In eight to 46 days, the adults emerge from these puparia. The newly emerged adults require from four to 10 days to mature prior to egg-laying. Breeding is continuous, with several annual generations. The average life span of the adult is about 30 days. Under optimum conditions the entire life cycle may be completed in 30 days, but requires longer time intervals at lower temperatures.

Host and Damage: The Mediterranean fruit fly has been recorded infesting over 250 different types of fruits and vegetables. Fruit that has been attacked may be unfit to eat; larvae tunnel through the flesh as they feed. Decay organisms enter, leaving the interior of the fruit a rotten mass.

Partial Host List

COMMON NAME	SCIENTIFIC NAME
Akee	Blighia sapida
Almond with husk	Prunus dulcis = (P. amygdalus)
Apple	Malus sylvestris
Apricot	Prunus armeniaca
Argan tree	Argania sideroxylon = (A. spinosa)
Avocado	Persea americana
Barbados cherry	Malpighia glabra and M. punicifolia
Bourbon orange	Ochrosia elliptica
Calamondin orange	Citrus mitis
Canistel	Pouteria campechiana
Ceylon-gooseberry	Dovyalis hebecarpa
Chanar	Geoffroea decorticans
Cherimoya	Annona cherimola
Cherry (sweet and sour)	Prunus avium, P. cerasus
Citrus citron	Citrus medica
Coffee	Coffea Arabica
Custard apple	Annona reticulate
Date	Phoenix dactylifera
Dwarf papaya	Carica guercifolia
Fig	Ficus carica
Gourka	Garcinia xanthochymus
Grape	Vitis vinifera
Grapefruit	Citrus paradise
Guava	Psidium qualava
Hawthorn	Crataegus spp.
Hog plum	Spondias mombin
Japanese persimmon	Diospyros khaki

COMMON NAME	SCIENTIFIC NAME
Japanese plum	Prunus salicina
Jocote	Spondias purpurea
Kei apple	Dovyalis caffra
Kiwi	Actinidia chinensis
Kumquat	Fortunella japonica
Lemon (except commercially grown Eureka, Lisbon, and Villa Franca cultivars)	Citrus limon
Lime	Citrus aurantiifolia
Litchi	Litchi chinensis
Longan	Euphorbia longana
Loquat	Eriobotyra japonica
Mandarin orange (tangerine)	Citrus reticulate
Mango	Mangifera indica
Mock orange	Murraya exotica
Mombin	Spondias spp.
Mountain apple	Malaccensis
Natal plum	Carissa macrocarpa and Terminalia chebula
Nectarine	Prunus persica
Olive	Olea europea
Opuntia cactus	Opuntia spp.
Papaya	Carica papaya
Passion fruit	Passiflora edulis
Peach	Prunus persica
Pear	Pyrus communis
Pepper	Capsicum annum and C. frutescens
Pineapple guava	Feijoa sellowiana
Plum	Prunus Americana
Pomegranate	Punica granatum

COMMON NAME	SCIENTIFIC NAME
Pomiform guajava	Psidium guajava 'Pomiform'
Pond apple	Annona glabra
Prune	Prunus domestica
Pummelo (Shaddock)	Citrus grandis
Pyriform guajava	Psidium guajava 'Pyriform'
Quince	Cydonia spp.
Rose apple	Syzygium jambos = (Eugenia jambos)
Sapodilla	Manilkara zapota
Sour orange	Citrus aurantium
Spanish cherry (Brazilian plum)	Eugenia dombeyi, E. brasiliensis
Spanish plum	Spondias mombin
Star apple	Chrysophyllum spp.
Strawberry guava	Psidium cattleianum
Sugar apple	Annona squamosa
Sugarplum	Arenga pinnata
Surinam cherry	Eugenia uniflora
Sweet orange	Citrus sinensis
Tomato (pink and red ripe)	Lycopersicon esculentum
Tree tomato	Cyphomandra betacea
Tropical Almond	Terminalia catappa
Walnut with husk	Juglans spp.