

## ORIENTAL FRUIT FLY ERADICATION PROJECT WORK PLAN

### DETECTION

#### 1. Detection Trapping

The Department maintains a cooperative State/County trapping program for the various fruit flies to provide early detection of any infestation in the State. Traps are serviced by county personnel funded by the Department of Food and Agriculture. The program uses two types of traps- the cardboard Jackson trap baited with methyl eugenol, a male attractant, and the McPhail trap, an invaginated glass flask baited with yeast in water, a food attractant for both sexes of the fly. Traps are hung from branches of host trees at specified densities in susceptible areas of California. County or state employees inspect these traps weekly or bi-weekly throughout the year in Southern California and from May through November in Northern California.

#### 2. Intensive Trapping

Intensive trapping is triggered after a single fly is caught. Following confirmation of the specimen, trap densities will be increased over an 81-square-mile area (9 mi. x 9 mi.). Within the next 24 hours, 25 Jackson and McPhail traps each are placed in the square mile core around each find. Five Jackson traps and five McPhail traps are placed in each mile of the remaining delimitation area. Traps in the core will be checked daily during the first week. Traps in the first buffer zone will be serviced every two days, those in the remainder of the delimitation area at least once during the first week. All traps in the delimitation zone will be checked weekly following a week of negative trap catches. Intensive trapping ends after the third complete life cycle following the last fly find. This time period is determined by a temperature-dependent developmental model run by the Pest Detection/Emergency Projects Branch in Sacramento.

#### 3. Post-Treatment Monitoring

The success of the eradication program is monitored by intensive trapping levels for three life cycles of the fly after the last fly has been detected. If no flies are caught during that time, trap densities return to detection levels.

#### 4. Fruit Cutting

Fruit on a property where a fly has been trapped will be inspected for possible larval infestation. Small circular oviposition scars are occasionally visible indicating an infested fruit. Fruit on properties adjacent to a trap catch may also be inspected.

If two or more flies are trapped in proximity, fruit cutting may be extended to all properties within a 200-meter radius of the finds, concentrating on preferred hosts. Larvae have been found in citrus, peaches, figs, apples, Catalina cherries, pineapple guava, strawberry guava, tomatoes, and bell peppers in California.

## TREATMENT

### 1. Male Annihilation

The male annihilation technique makes use of small amounts of attractant (methyl eugenol) and pesticide (Naled) to lure the male flies in a population to bait stations. The flies are killed when they feed at the stations. The Naled/lure mixture is applied to utility poles, street trees, and other unpainted surfaces (such as fences) using pressurized tree marking guns. The current project boundaries will be nine square miles around the sites where the adult flies were trapped. Project boundaries may be enlarged if the number of flies trapped warrants it. Application is made to at least 600 evenly distributed sites in each square mile. Treatment is repeated every two weeks and continues for two fly life cycles beyond the date of the last fly find or for a minimum of four applications.

### 2. Foliar Sprays

If larvae or a mated female fly are found on a property, the foliage of host shrubs and trees on the infested and adjacent properties will be treated within 24 hours with malathion/protein bait sprays using hydraulic spray or hand spray equipment. If the trap catches warrant it, foliar sprays may be extended up to a 200-meter radius around an infested property. Affected properties will be notified in writing at least 24 hours prior to treatment. Following treatment, completion notices are left with the homeowners detailing precautions to take and post-harvest intervals applicable to any fruit on the property. Treatments are repeated at six- to 14-day intervals.

### 3. Soil Drenches/Host Removal

Soil drenches will be applied to the dripline of hosts with fruit known or suspected to be infested with Oriental fruit fly eggs or larvae. Application is made using hydraulic spray equipment operating at low pressure to wet the ground to a depth of approximately one-half inch. The material used is diazinon.

If larvae are found, host removal (fruit stripping) may be used in conjunction with other elements of this program.

## PUBLIC INFORMATION

Public information concerning the Oriental fruit fly project will consist of press releases to the general public and direct notification of project developments to concerned local and state political representatives and authorities. Press releases are prepared by the Department's information officer and the county agricultural commissioner, in close coordination with the project leader responsible for treatment. Either the county agricultural commissioner or the public information officer serves as the primary contact to the media. Since treatments are applied primarily to street trees and utility poles, further notification to the residents will be through the news media. Any resident whose property will be treated with foliar sprays or soil drenches following the discovery of infested fruit on or near their property will be notified in writing prior to treatment.