



Olive News



June 29, 2007
Vol. IX, No. 3

IN THIS ISSUE

Olive Fly Control Trials

Olive Fly Trapping Results

Olive Fly Control Observations

Bill Krueger
Farm Advisor

In accordance with applicable State and Federal laws and University policy, the University of California does not discriminate in any of its policies, procedures, or practices on the basis of race, religion, color, national origin, sex, marital status, sexual orientation, veteran status, age, medical condition, or handicap. Inquiries regarding this policy may be addressed to the Affirmative Action Director, University of California, Agriculture and Natural Resources, 300 Lakeside Drive, 6th Floor, Oakland, CA 94612-3560. (510) 987-0097.



To simplify information, trade names of products have been used. No endorsement of named products is intended, nor is criticism implied of similar products which are not mentioned.

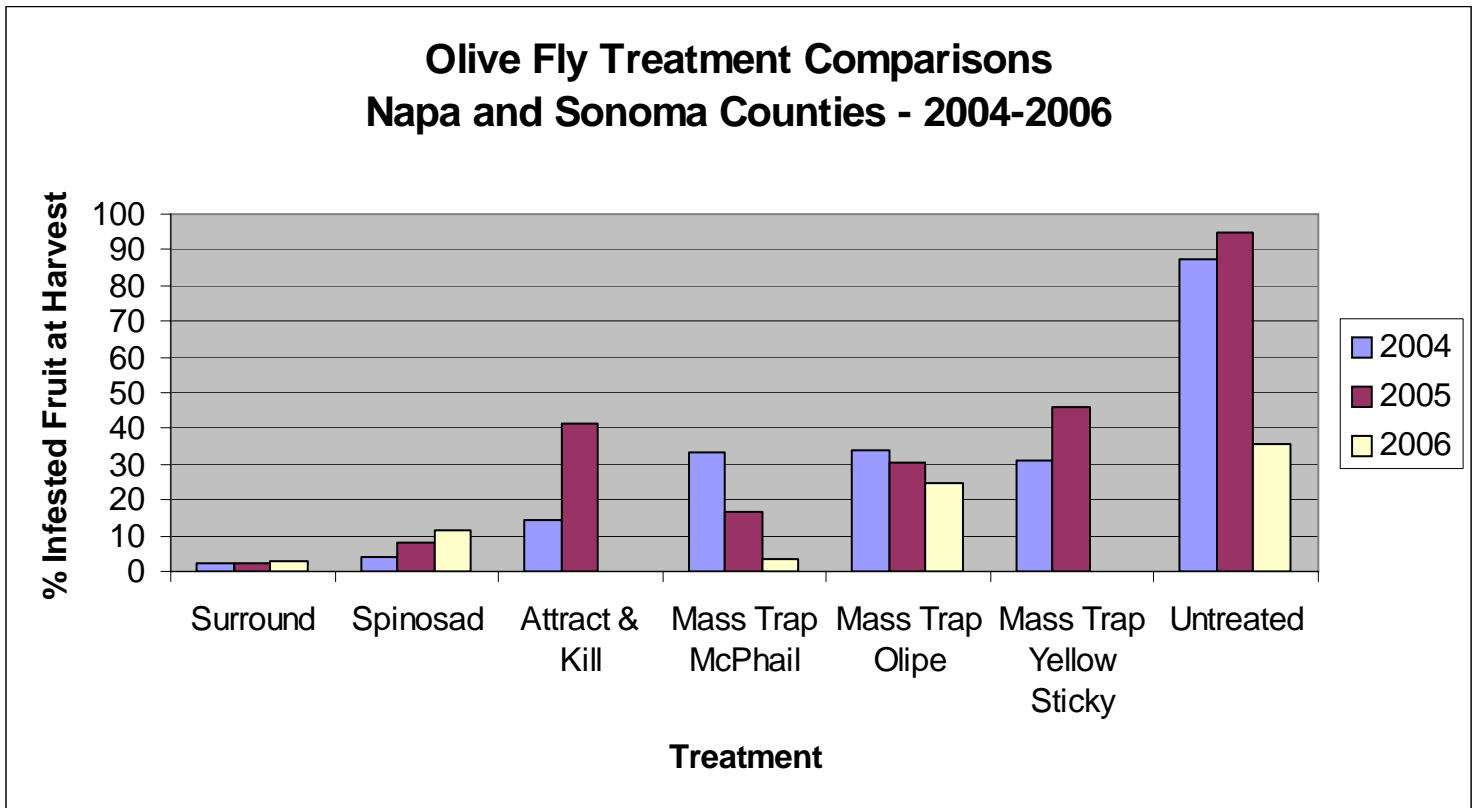
Olive Fly Control Trials

Hot summer temperatures the last two years have helped keep Olive Fly populations low and have reduced the amount of infested fruit delivered to the canners. While this has been good for local producers, the unpredictable olive fly populations have made it difficult to test different control strategies. During 2005, I conducted a trial comparing GF 120, Surround (Kaolin clay), Magnet OL Attract and Kill Traps and mass trapping using plastic bottle traps (Olipe) baited with Torula yeast for control of Olive Fly. A hot summer resulted in very little infestation in any of the treatments and made it difficult to draw many conclusions from the work.

Coastal areas in California typically have much higher levels of Olive Fly infestation, due to cooler summer temperatures. In Napa and Sonoma Counties, it is not uncommon to have 90 percent or more of the fruit infested in untreated trees. Paul Vossen, a UC Farm Advisor in Napa and Sonoma Counties, has been conducting Olive Fly Control Trials in that area. From 2004 through 2006 he compared Spinosad (GF 120), Kaolin clay (Surround), Attract and Kill (Magnet OL) traps and mass trapping with plastic bottle traps, plastic McPhail traps and yellow sticky traps to untreated trees. His results are shown in Table 1. Spinosad (GF 120) at recommended rates and timings and Surround (Kaolin clay) were the most effective treatments over the three years. With the mass trapping where a trap was placed in every tree, all three of the trap types tested reduced the infested fruit at harvest usually by more than 50%. However, the level of control was not adequate for a stand alone control. Of the three trap types used, the McPhail trap was generally the most effective but would not be practical because of the cost of the traps and the necessity to refill the traps with water weekly. The Attract and Kill traps, which use a food lure and sex lure to attract flies to a cardboard trap impregnated with an insecticide, reduced fruit infestation, but were not as effective as the Kaolin clay or Spinosad. They could be quite convenient to suppress olive fly populations in landscape situations. They are inconspicuous and only have to be put out once a year. The availability of these traps has been somewhat limited.

Kaolin clay repels, but does not kill the olive fly. It would be applied two to three times per season at the rate of ¼ lb. per gallon of spray and sprayed to drip. It's main drawback is that it will turn the tree white. While USDA tests have shown that it can be washed off the fruit, you should check with your canner before applying it to a large number of trees. It could be useful in a landscape situation if the white color can be tolerated.

For more specific information on these control methods see our web site at <http://ceglenn.ucdavis.edu>.



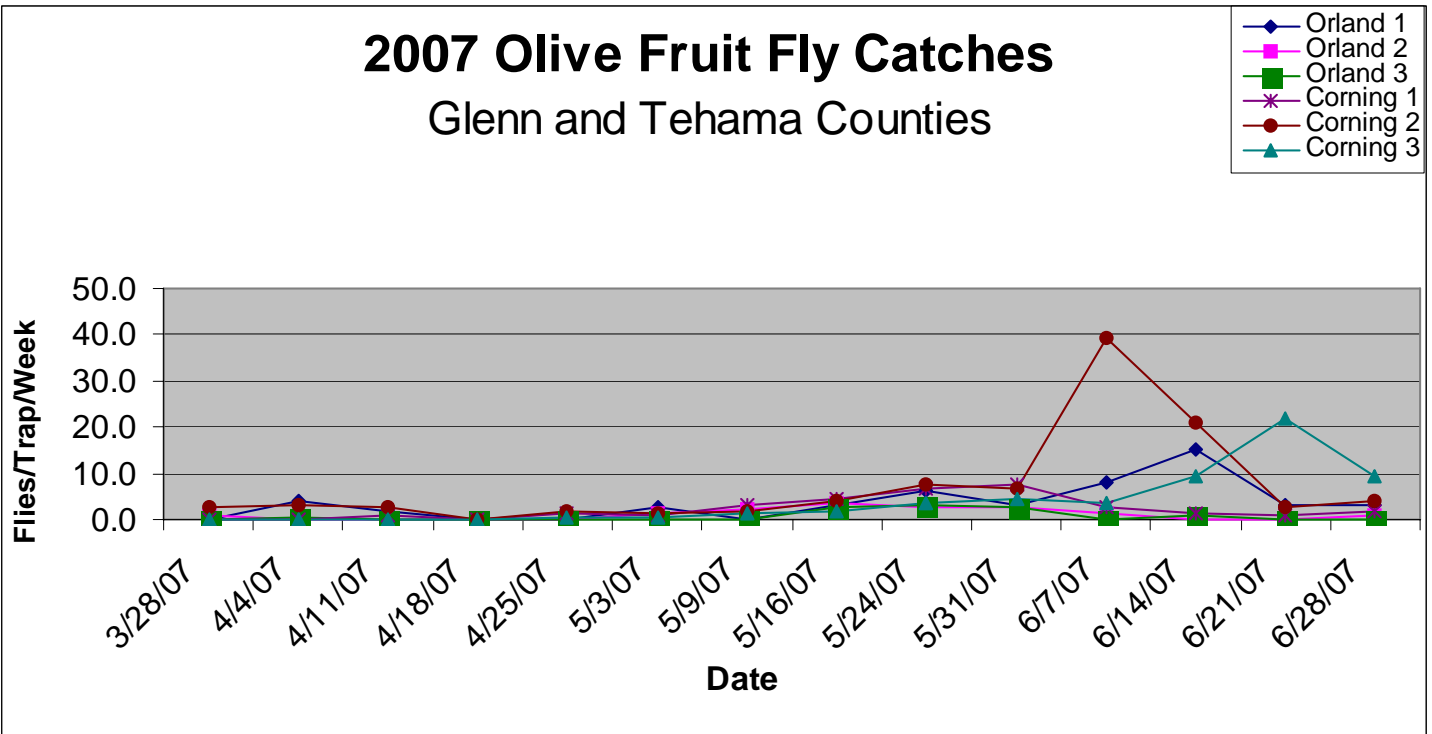
Source - Paul Vossen and Alexandra Kicenik-Devarenne, UCCE Sonoma County

Olive Fly Trapping Results

We are currently trapping olive flies in three locations in Glenn County and three locations in Tehama County. We are trapping in both treated and untreated locations. We post this information weekly (usually Thursday or Friday) on our website at <http://ceglenn.ucdavis.edu>. Following is a graph of the trap catches so far for this year. Also I am including a graph of last year's catches for comparison. This information will give you an idea of olive fly population trends on an area-wide basis and allow you to compare this to population trends from your own orchards based on your own traps.

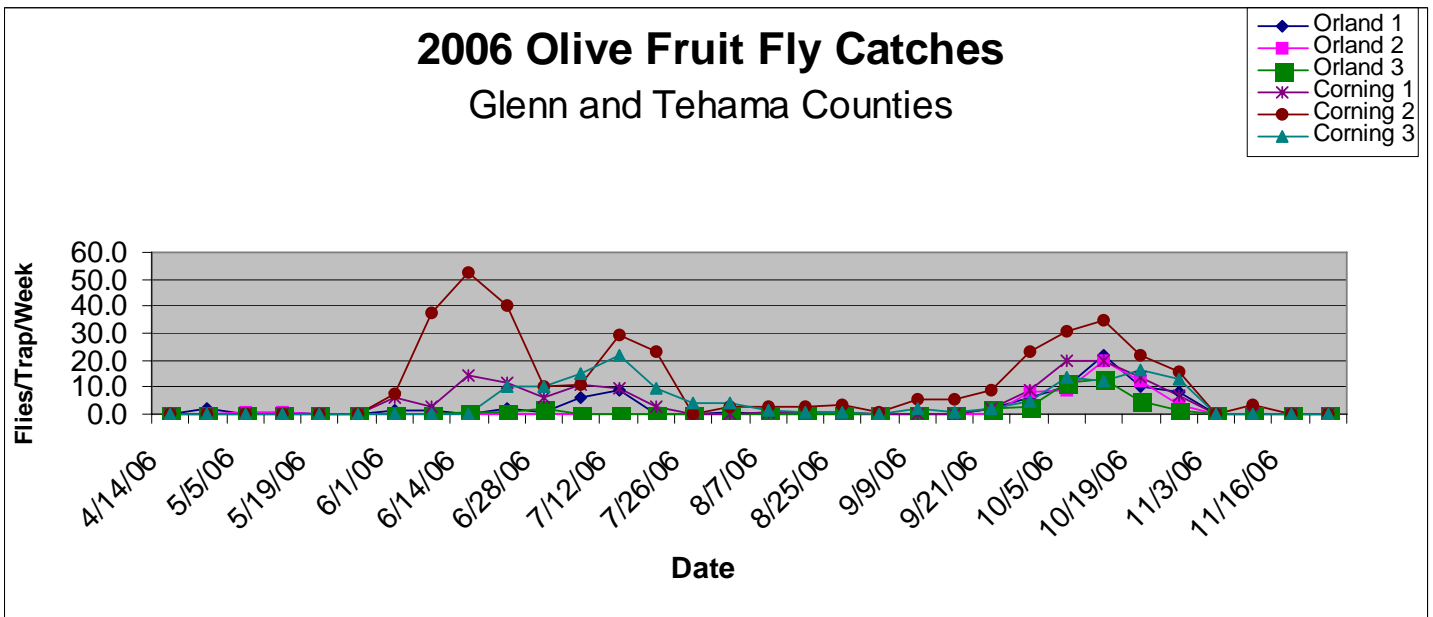
2007 Olive Fruit Fly Catches

Glenn and Tehama Counties



2006 Olive Fruit Fly Catches

Glenn and Tehama Counties



Olive Fly Control Observations

The above trap catch data shows a similar pattern so far for 2007 as was seen in 2006. Trap catches have declined somewhat with the onset of warmer temperatures. Weather patterns from here on out will have a lot to do with the olive fly pressure that we experience this year. The olive fruit are susceptible to infestation from about the time of pit hardening. We are just about there now (June 28th). Last year we began to see oviposition (egg laying) stings on the fruit at just about this time. Luckily it turned hot and these eggs did not survive. Eggs and young larvae (first instars) are the most susceptible to heat mortality. Eggs will die when exposed to about 2 days with 100 degree maximum temperatures. First instar larvae will take about 5 days of similar temperatures to die. As the larvae develop and tunnel into the fruit, they become more resistant to heat. In 2004, much of the fruit infested at harvest appeared to have gotten infested early before many growers started spraying in July. Cooler temperatures that year allowed the eggs and first instars to survive until they became more resistant to the heat. This early infestation showed up as lumpy distorted fruit at harvest.

It has been shown that the presence of honeydew in the orchard from Black Scale infestation can significantly reduce the efficacy of GF 120 sprays. If the trees have been pruned and are open and airy, last year's heat should have resulted in low black scale levels. However, if your orchard is bushy and black scale populations are building and producing honeydew, they should be treated to control black scale.

At this time, the most reliable and economic method of controlling olive fly is Spinosad (GF 120) sprays. Regular sprays should have begun by now. The recommendation is every other row weekly or every row every two weeks. The GF 120 label recommends a range of concentrations from 4 parts water to 1 part GF 120 to 1.5 parts water to 1 part GF 120. The higher concentrations have been shown to kill flies for a longer period of time. In areas with low populations, such as here, where the flies will not consume all of the bait, higher concentrations extend the efficacy of the treatments.

If this is a cooler summer and trap catches persist in orchards, it will be necessary to stick with the regular program. Last year, when the weather turned hot and trap catches declined, many growers successfully increased spray intervals during hot periods and then resumed normal spray program when the weather cooled and trap catches resumed. Some growers had problems when they did not resume spray programs in September when temperatures cooled and trap catches resumed.

Nonprofit Organization
U.S. Postage
PAID
Orland, CA
Permit No. 63

Glenn County
Cooperative Extension
P. O. Box 697
Orland, CA 95963