

## **Olive Fly Trapping Results for Glenn and Tehama Counties for 2008**

### **Project Leader**

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**Reporting period:** April 2008 to November 2008.

### **ABSTRACT**

Olive fruit fly populations were monitored weekly at five sites in Glenn County (Orland area) and five sites in Tehama County (Corning area) using plastic McPhail traps. Monitoring started on 4 April 2008 and ended 14 November 2008. In addition to the three sites in Glenn County and three in Tehama County that have been monitored since 2006, two more unsprayed sites were added in each county, bringing the total number of sites to 10. Trap results and observations were posted weekly on the Glenn County UC website (<http://ceglenn.ucdavis.edu>) and made available to the California Olive Committee for further distribution. Trap catches began in early April, peaked between 13 – 20 June, and declined to near zero flies with the onset of heat by 11 July. The resumption of trap catches with the onset of cooler weather in October was less pronounced than in previous years. Only three of the 10 sites caught any flies after 11 July. All, but 2 flies caught after this time, were in an unsprayed site that was added in 2008. This one site accounted for over 50% of all flies caught at all locations all season. Fly catches at the six sites that have been monitored since 2006 have declined every year going from 1583 in 2006 to 801 in 2007 to 110 in 2008. Total trap catches in all 10 sites monitored in 2008 were 444.

### **INTRODUCTION**

Since the detection of olive fruit fly in California in 1998, it has been a concern to olive growers. In commercial orchards, preventative sprays are necessary. Trapping to monitor olive fruit fly populations in individual orchards is recommended. This will allow growers and PCAs to follow trends in their orchards and help evaluate spray program efficacy. Knowledge of area-wide population trends will help growers and PCAs interpret results from their orchards.

### **OBJECTIVES**

1. Provide timely information to area growers regarding area wide olive fruit fly population trends.
2. Begin to develop a historical perspective of olive fruit fly populations for the area.

### **PROCEDURES**

Starting on 4 April 2008, plastic McPhail traps, using *Torula* yeast dissolved in water as bait, were hung in olive trees. Earlier work in Glenn and Butte Counties showed that these traps catch more flies than the commonly used yellow panel trap. Traps were placed in the same six locations as in 2005 and 2006, three sites in Glenn County (Orland area) and three sites in Tehama County (Corning area). In response to a concern about the limited number of sites and to check more unsprayed sites, additional traps were placed in four unsprayed sites (two in Glenn County and two in Tehama County). With the exception of an original site at the Glenn County Fairgrounds and a new site in Glenn County, where

there was a limited number of trees, two traps were placed at each site. Flies were counted and the traps were serviced weekly. The results and field observations were posted weekly on the Glenn County UC website (<http://ceglenn.ucdavis.edu>) and reported to the COC for further distribution. Trapping results were reported as male and female flies for individual traps and combined and averaged by site for a graphic presentation of the data (Fig. 1). Trapping and reporting continued through 14 November 2008.

### RESULTS AND DISCUSSION

We began catching flies on 4 April 2008 (Fig. 1). Trap catches peaked between 6 – 13 June. With the onset of high temperatures towards the middle of July, trap catches declined to zero flies in all locations. Trap catches in all sites were zero from 1 August until 3 October. Seven of the ten sites caught no flies after 11 July. Trap catches in the six sites monitored since 2006 have continued to decline going from 1583 in 2006 to 801 in 2007 to 110 in 2008. In fact, only 444 flies were caught in 2008 at all ten sites and more than half of the total catches came from an unsprayed site, that was added in 2008 and was suspected to be in an area of high fly concentration.

Lower trap catches in 2008 corresponded with lower levels of reported damage compared to 2007. It is interesting to note the steady decline in trap catches, but it is not completely understood. Generally, trap catches did not rebound with the onset of cooler weather as they had in the previous two years. With the exception of a site in Orland, which was responsible for more than half the total fly catches, only 2 flies were caught from 11 July onwards.

### CONCLUSIONS

This information is valuable to growers and PCAs to visualize what is happening on an area-wide basis and to help interpret what is going on in their particular situation, but it should not be used to make treatment decisions in specific locations. It is easily available through the internet.

We would like to continue the monitoring program in 2009. We are planning to use the same sites as 2008 to continue developing a historical perspective. As more information becomes available on the effect of environment (temperature and food and water availability) on olive fly populations, it may better explain what is observed in the traps and allow us to use trapping information as part of the information used to determine when and if sprays are necessary.

**Funding Sources:** California Olive Committee.

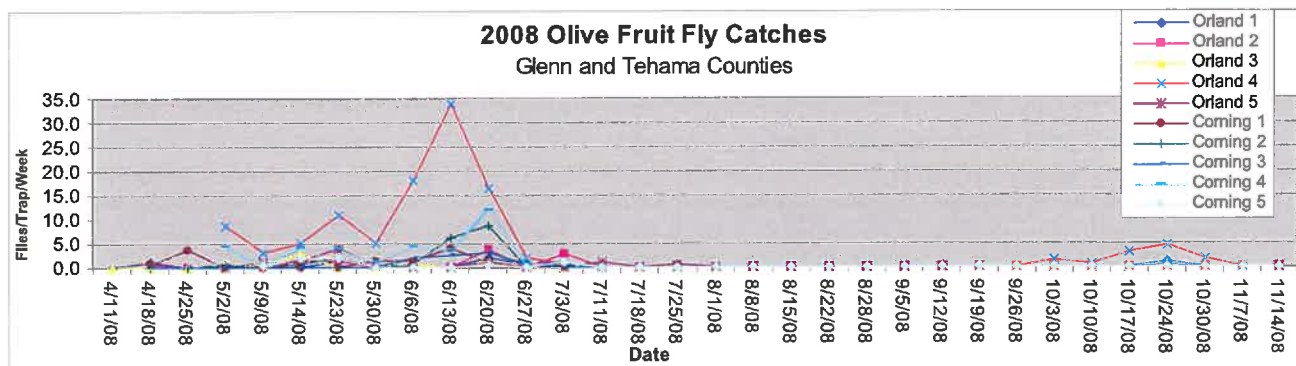


Fig. 1. Olive fruit fly trap catches for 2008 in selected orchards in Glenn and Tehama Counties.