

Invasive Species

**Seasonal Phenology, Trap Comparisons, and Damage Observations
for Spotted Wing *Drosophila* in California Cherries**

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Abstract: The flight patterns of *Drosophila suzukii* (SWD) were tracked in unsprayed and sprayed cherry orchards in the Northern San Joaquin Valley (NSJV) and the Santa Clara Valley (SCV) using standard “yogurt” style traps baited with apple cider vinegar. SWD damage was assessed in the NSJV. Seasonal flight patterns varied between regions but were similar within each region for 2010 and 2011. The NSJV flight began in late April, peaked in early June during harvest, had a second peak in November and was very low during summer and winter months. Damage in unsprayed orchards ranged from 0.5-77%. In sprayed orchards, flight was suppressed during harvest and damage varied with spray program. The SCV flight began in mid-April and continued through fall, dropping to very low levels in winter. In sprayed orchards, flights were suppressed from mid May to early August. Populations were higher in the moderate SCV climate than in the NSJV. The SWD gender distribution varied from orchard to orchard and over the season. An additional trial in the NSJV compared the standard yogurt traps with the same container using a screen top instead of side holes (the Van Steenwyk trap). Captures began, ended and peaked on the same dates for both traps. The screen top traps caught more SWD but also had greater contamination from non-target species.