

Invasive Species

**Infestation of Cherries by Spotted Wing Drosophila in Relation to Canopy Height and Evaluation of Cover/Trunk Applications of Malathion for Control of SWD**

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*Abstract:* Spotted wing drosophila (SWD) was initially detected in California in 2008, first causing significant economic damage to sweet cherry crops in 2009. These studies were conducted to assess the distribution of SWD infestation within a cherry canopy, and the efficacy of cover/trunk applications of malathion in controlling SWD populations. The number of SWD larvae was determined per 100 fruit using the brown sugar floatation method. Cherries were sampled from the lower, mid and upper canopies of several cultivars in commercial orchards located in San Joaquin and Santa Clara Counties, CA. Larval infestation decreased with increased canopy height in both orchards. There were significantly lower rates of infestation in fruit from the high canopies than from the low canopies of the San Joaquin orchard. The cover/trunk application study was conducted in the inter-planted Burlat and Bing Santa Clara County orchard. Two treatments were replicated six times in a randomized, complete block design. Malathion 8 Aquamul was applied weekly to the bottom three feet of the trunk and ground cover, below fruit and foliage. Sprays began on 26 Apr and continued through harvest. A standard ACV trap in the center of each plot revealed little difference in adult SWD populations between treatments, perhaps due to small plot size. However, larval infestation did show a trend of lower rates of infestation in treated plots.