

Invasive Species

### **Timing of Spotted Wing *Drosophila* Control in Cherry**

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*Abstract:* The study was conducted in a commercial Bing cherry orchard in Santa Clara, CA. Six treatments were replicated three times in a RCB design. The application timing was based on fruit color, i.e. Diazinon at green fruit, Warrior at straw fruit, Malathion at pink fruit, Success at red fruit and Entrust three days before harvest. Each of the six treatments successively removed one insecticide: treatment 1 was Diazinon, Warrior, Malathion, Success and Entrust; treatment 2 was Warrior, Malathion, Success and Entrust; treatment 3 was Malathion, Success and Entrust; treatment 4 was Success and Entrust; treatment 5 was Entrust followed by Entrust and treatment 6 was a check. Treatments were applied with an air-blast speed sprayer. Treatment efficacy was evaluated with ACV bait traps. One hundred fruit from each replicate were sampled weekly starting with the first pink Bing fruit. The SWD were counted and sexed and all other drosophila species were counted. All larvae that were reared to adults were SWD until three wks after harvest. The number of females in the bait traps was significantly lower in all treatments compared to the untreated check but there was no significant difference among the insecticide treatments. The number of larvae per one hundred Bing fruit was significantly lower in all treatments compared to the check until two weeks after commercial harvest. At two and three weeks after commercial harvest the two applications of Entrust had increased counts and were not significantly different from the check.