

Biological Control

Conservation biological control in California stone fruit: A case study of San Jose scale and its aphelinid parasitoids

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Abstract: The aphelinid parasitoids of San Jose scale, *Diaspidiotus perniciosus* (Comstock), were monitored using pheromone-baited traps for three growing seasons (2000-2002) throughout the central San Joaquin Valley of California. The fields monitored were commercial blocks of peach, plum, and nectarine under two insecticide regimes: reduced-risk materials (low mammalian toxicity, low persistence) and conventional materials (neurotoxins). Trapping data suggest *D. perniciosus* populations were suppressed primarily by dormant-season insecticide applications and spring parasitism. Acreage using reduced-risk insecticides tended to have higher San Jose scale populations, although several blocks that had been using reduced-risk materials for many years had very low San Jose scale populations.