

Implementation

Use of Steinernematid Nematodes for Postharvest Control of Navel Orangeworm in Pistachios

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Abstract: The ability of *Steinernema carpocapsae* (Weiser) and *Steinernema feltiae* (Filipjev) to control navel orangeworm, *Amyelois transitella* (Walker), in fallen infested pistachios was evaluated in four trials employing 1-m² plots in sandy loam soil. The trials were conducted between November 2002 and April 2003 in Madera County, CA. Nematodes were applied with a backpack sprayer at concentrations ranging from 5-100 infective juveniles (IJs)/cm² in 374 ml/m² water. A total of 4,300 larvae was recovered from 17,593 laboratory-infested pistachios. *S. carpocapsae* was more effective than the formulations tested of *S. feltiae* when nighttime temperatures were above freezing. *S. carpocapsae* was equally effective in bare and leaf-covered plots and persisted longer in sandier soil (8 weeks) than did *S. feltiae*. Our trials demonstrated *S. carpocapsae* can play a role in the postharvest control of navel orangeworm and the formulation tested produced greater mortality than formulations of *S. feltiae* applied at the same concentration.