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# The economic impact of *Scirtothrips perseae* Nakahara (Thysanoptera: Thripidae) on California avocado production

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## Abstract

In 1996, *Scirtothrips perseae* Nakahara (Thysanoptera: Thripidae) invaded California avocado orchards and moved pest management practices that relied almost exclusively on biological control to strategies dependent on insecticides to maintain thrips densities below economically damaging levels. By 1998, average losses due to thrips feeding damage in untreated infested groves reduced industry revenues by 12%. Producer costs increased by about 4.5% when *S. perseae* populations required management. In the short run (i.e., the time period during which the industry adapts to managing a new pest), producers cannot fully adapt to increases in production costs and the annual cost of *S. perseae* to producers with a thrips infestation is estimated to be \$8.65 million (US). In the long run (i.e., the time period after which the industry has fully adapted to the effects of a new pest), producers are able to fully reallocate resources to their most efficient use and the annual cost of *S. perseae* is calculated to be \$5.22 million (US) per year. For the entire USA avocado industry, the annual short-run loss attributable to *S. perseae* in California is calculated to be \$8.51 million (US) and \$4.45 million (US) in the long run.

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