

POTENTIAL INDIGENOUS AND EXOTIC PREDATORS FOR THE BIOLOGICAL CONTROL OF THE NEWLY INTRODUCED PERSEA MITE, *Oligonychus perseae* IN AVOCADO ORCHARDS OF ISRAEL

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Oligonychus perseae is a new pest of avocado in Spain and Israel. In Israel, while monitoring perseae mite on field, we observed *Euseius scutalis* (Phytoseiidae) feeding on *O. perseae* within torn nests and outside of the nests. Subsequently, laboratory studies were performed to evaluate this predator effectiveness. To enhance biological control, the exotic predator *Neoseiulus californicus* was released in 2004 and 2005. To determine whether other generalist predators can feed upon and tear the nests of perseae mite, insects and arachnid predators were collected from avocado trees using a beating tray, placed individually on newly infested leaf discs and monitored for several days. Although *E. scutalis* reduced adult perseae mite populations in the lab with or without torn nests, egg predation was improved by tearing the nests. Seasonal *O. perseae* levels following *N. californicus* releases were reduced by 30%, but leaf damage was still considerable. In our no-choice bioassays on leaf discs, we observed nest tearing and predation by green lacewing *Chrysoperla carnea*, dusty wing *Conwentzia* sp. and others. Developing methods for augmentation and conservation of *E. scutalis* and nest-tearing predators may prove valuable for enhancing perseae mite control. *Euseius scutalis*, as other species of *Euseius*, feed on avocado and other pollens that are abundant on avocado leaves from spring to summer. Extending the period of pollen availability by the establishment of cover crops that would release wind-borne pollen, such as Rhodes grass, could be a viable way of keeping high *E. scutalis* populations, thereby preventing perseae mite outbreaks.

