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Control of the Carmine Spider Mite Tetranychus cinnabarinus Boisduval by the Predatory Mite Phytoseiulus persimilis (Athias-Henriot) in Protected Strawberries in Aydın, Turkey

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Abstract: The potential of the predatory mite Phytoseiulus persimilis (Acarina: Phytoseiidae) to control the carmine spider mite Tetranychus cinnabarinus (Acarina: Tetranychidae) on strawberries (cv. 'Camarosa') grown under plastic tunnels was investigated in 2 fields during the 2001 and 2002 growing seasons in Aydın, Turkey. Three study plots, grower's practice, chemical control and biological control, were established. The population of T. cinnabarinus was controlled in the grower's practice plots by using 1 or 2 acaricide applications. However, it was suppressed with only 1 acaricide application in the chemical control plots at a population level below economic threshold levels. When the pest population level reached 2-3 individuals per leaflet in the biological control plots, P. persimilis was released once at the rate of 1 predator to 20 prey. Predatory mites provided an effective control 15-20 days after release, and no additional release was needed during the rest of the growing season. However, when T. cinnabarinus populations were high (11 mites per leaflet) early in the season, control by P. persimilis proved ineffective. In addition, no significant difference was found in strawberry yields among the 3 treatments, either in terms of fields or years.

**Key Words:** Strawberry, Tetranychus cinnabarinus, Phytoseiulus persimilis, natural enemies, Turkey

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