

Section 1
Biological & Cultural Controls

THE ROLE OF *STETHORUS* BEETLES IN THE
CONTROL OF SPIDER MITES ON RED RASPBERRIES

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The coccinellid, *Stethorus punctum picipes*, is the principal predator of the twospotted spider mite, *Tetranychus urticae*, on red raspberries in western Washington. When groups of 15-20 mites are placed on raspberry leaflets, as many as 50% have *Stethorus* beetles on them within a week, even if the natural population in the field is virtually nil. The beetles become active by the time the raspberries are in leaf and are present until early October. Newly planted fields can be populated by the beetle very quickly. They may be found on a wide variety of plants, so there is usually a source of beetles for populating raspberry fields.

The beetle is very susceptible to many insecticides. Prebloom sprays of azinphosmethyl killed beetles but did not eliminate them. Permethrin eliminated the beetle and caused a flare-up of mites but they reappeared by mid- or late summer and mite numbers declined. Bifenthrin killed all the beetles and none reappeared by late summer. Mite numbers rose to 380-1,000 per leaflet in three bifenthrin-treated fields.