Section VIII.
Mites & Sap-Sucking Insects

Willamette Mite Injury in Oregon Vineyards

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The Willamette mite, Eotetranychus willamettei (McGregor), is widespread on grapes in the Pacific states. In CA, it has caused economic damage to some varieties, but has also been regarded as a useful alternate host for Phytoseiid predators of twospotted spider mite, Tetranychus urticae (Koch), and Pacific spider mite, T. pacificus (McGregor). Willamette mite has not been considered an economic pest in Oregon vineyards. However, in the Red Hills of Dundee, SW of Portland, an economic infestation of Willamette mite may be developing.

A small block of grapes (cv. Pinot Noir) had areas of spider mite damage in 2000 & 2001. The affected block was sampled every two weeks during the 2002 season to estimate spider mite densities and to survey for mite predators. Five samples of 10 leaves each were collected on each date and mites were counted in the field with a 10X hand lens. Willamette mite densities were +/- 1.0/leaf from late May through late July. No spider mite predators were found on either 5/27 or 6/10, so a release of 3000 insectary reared Neoseiulus fallacis/acre was made on 6/18. Only four Phytoseiid predators were found subsequent to this release and Willamette mite had increased to 11/leaf by 8/5. The vineyard was treated with Acramite on 8/14, which suppressed spider mites to less than 4/leaf for the remainder of the season.

Symptoms of spider mite injury began to appear in other Red Hills vineyards in September. Vineyard managers estimated that more than 200 ac. were severely affected. A survey of a few blocks adjacent to the study site was conducted on 9/27/02. Willamette mite densities ranged from 1 to 112/leaf. Only one Phytoseiid predator and four Stethorus sp. predators were found in 12 samples. A survey of Oregon vineyards in 1999, had found only low densities of Willamette mite (Pischmann, 2000. MS Thesis, OSU). Increased cultivation over the past three years and hot, dry weather in 2002, may have contributed to this Willamette mite outbreak.

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