

Oregon Wine Advisory Board Research Progress Report

1993 - 1994

Vineyard Thrips Survey 1993

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INTRODUCTION

During the last two years thrips have been suspected of causing shoot damage in the form of reduced leaf size and stunted vine growth in one vineyard in the Cave Junction area of Southern Oregon. While there can be several problems that can cause this symptom in grapes, it was decided in 1992 to monitor the vineyard to identify thrips species and seasonal development.

METHODS

The trends in the thrips population were determined by placing 3 X 5 inch blue sticky cards at eight sites (4 on the borders and 4 interior) in the vineyard. Sticky cards were collected biweekly and total number of thrips determined. Thrips species and percent of population were determined by collecting thrips bi-weekly from the same eight collection sites in the vineyard, randomly striking flowers, fruit clusters and foliage against a flat surface (8 alcohol and species identified and percent of total determined).

RESULTS

Unlike 1992 where three peaks in the thrips population were seen (late May, 24 July and 8 August), only one peak was recorded in 1993 (July 30) (Fig. 1). This difference in population trends between 1992 and 1993 may be in part due to the cool, wet spring and cooler summer temperatures which slowed the development of many insect pest in Southern Oregon.

While there was some early thrips damage seen in 1993 in the form of shoot stunting and scarring, this damage was quickly overgrown and did not appear to be a problem. The peak population of thrips for 1993 reached over 2,200/card during one two week period, where the highest of the three peaks seen in 1992 reached only about 1,000/card during any one two week period. Visual observations of late season (Aug 13, 1993) thrips damage, in the form of shoot stunting, cupping and bronzing of leaves followed the peak in thrips population density. By August 28 the entire vineyard was bronze in color and some defoliation of the vines did occur.

As in 1992, there were two thrips species identified from samples collected, the western flower thrips (*Frankliniella occidentalis*) and the grape thrips (*Drepanothrips reuteri*). Samples collected late May and early June 1993 contained 100% gape thnp., (Fig. 2). By June 18 the number of grape thrips slowly declined until July 16 when the 'Acstern flower thrips composed 100% of the samples collected. On July 30 we again saw the return of the grape thrips which increase to 100% of the samples by August 27. The

thrips damage seen in 1993 appeared to coincide with the increase in western flower thrips was first noted in mid-June and peaked in mid to late July.

In summary, thrips populations in excess of 2,200/card over two weeks caused stunting of growth, cupping and bronzing of leaves in the vineyard being monitored in 1993. This damage also appeared to be related to an increase in the number of western flower thrips collected.

Thrips Abundance--1993 Cave Junction Vineyard

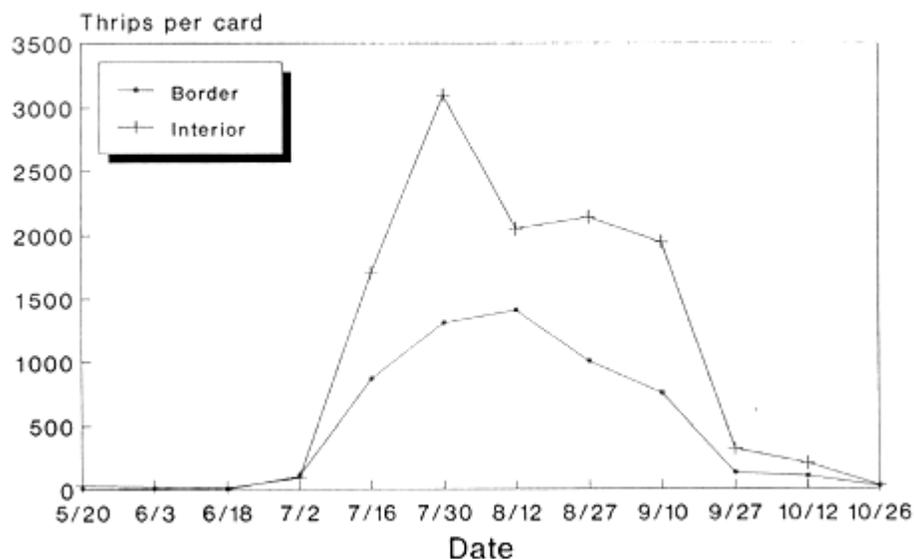


Figure 1.

Type of Thrips In Cave Junction Vineyard Summer 1993

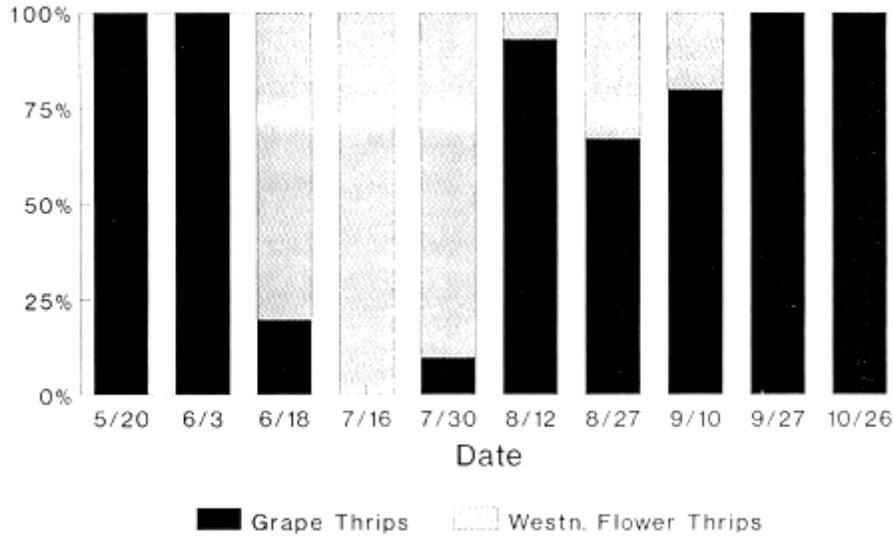


Figure 2.