

# **Oregon Wine Advisory Board Research Progress Report**

**1994 - 1995**

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## **Evaluation of Thrips in Southern Oregon Vineyards: 1994**

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For several years thrips have been suspected of causing shoot damage in the form of reduced leaf size and stunted vine growth in a vineyard in the Cave Junction area of Southern Oregon. While the symptoms described above can be caused by several problems, it was decided in 1992 to monitor the vineyard to identify thrips species and their seasonal development over a three year period.

### **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 biweekly from the eight collection sites in the vineyard, randomly striking flowers, fruit clusters and foliage against a flat surface (8 1/2 X 11 inches), and collecting any thrips present. All thrips collected were placed in alcohol and species identified and percent of total determined.

### **Results**

In 1994, as in 1993 there was only one major peak in the thrips population with a smaller peak that occurred approximately six weeks later (Figs. 3 & 4), where in 1992 (Fig. 1) three peaks were seen during the same time period. The difference in population trends between 1992 and 1993 was thought to be in part due to a wet, cool spring which caused insect development to occur later. While rain fall was less of a factor in 1994, temperatures and late insect development did appear to play a part in population trends being similar to 1993.

### Thrips Abundance--1992 Cave Junction Vineyard

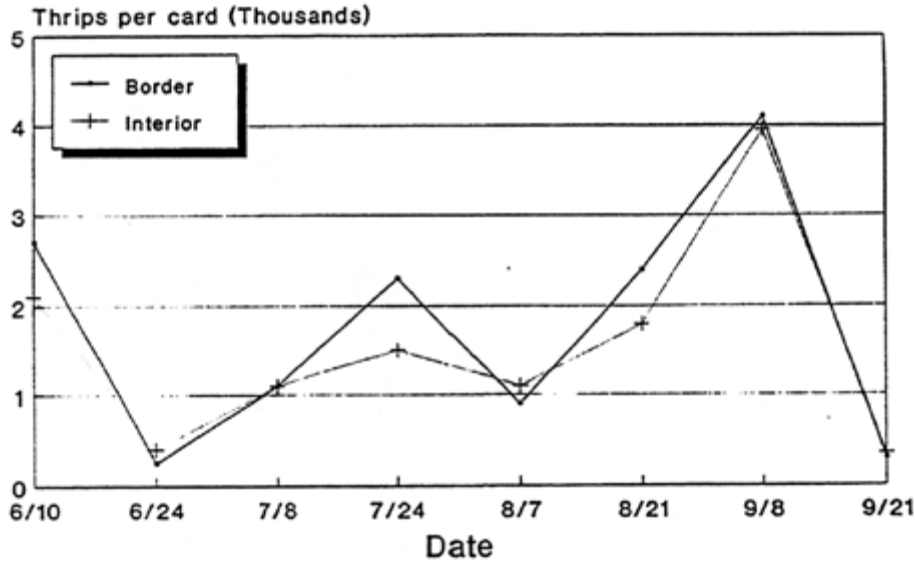


Figure 1.

### Thrips Abundance--1993 Cave Junction Vineyard

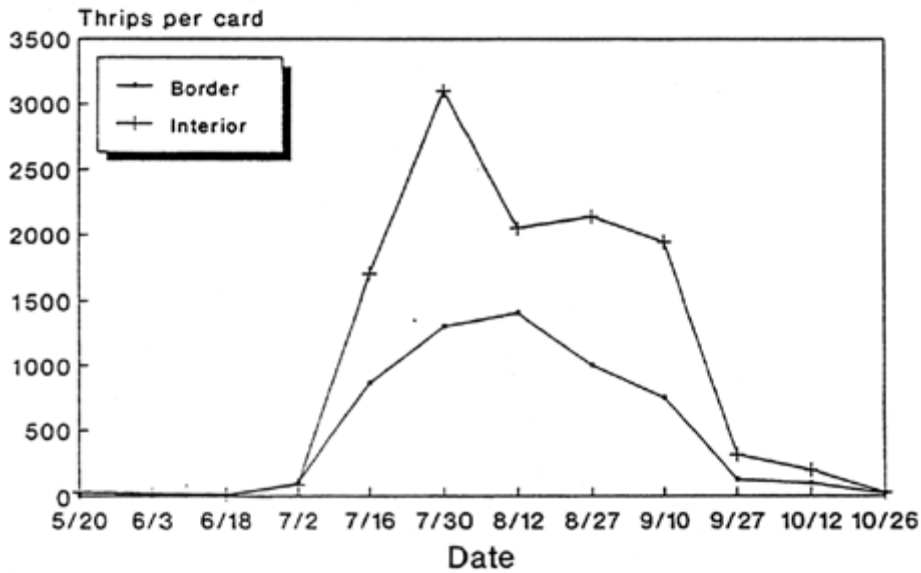
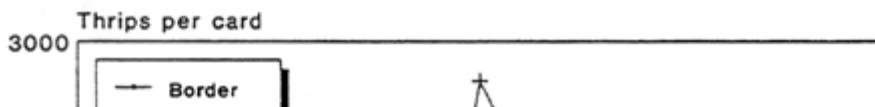


Figure 2.

### Thrips Abundance--1994 Cave Junction Vineyard



Early season shoot stunting and scarring which had been associated with the presence of thrips in 1993-93 were not present in 1994. Population densities were similar for both 1993 and 1994, less than 100 thrips per card, but in 1994 no damage was observed. No explanation for this lack of damage in 1994 can be found.

The peak population during 1994 reached approximately 2,500/card in July. This was very similar to the population trends seen in 1993. Two major differences between 1993 and 1994 were that: 1) the peak population in 1993 was associated with the migration of Western Flower Thrips into the vineyard as the grass and brush on the surrounding hillsides dried up in July, this association in 1994 was not as apparent: and 2) in 1994 the grower applied a thrips spray (very low rate of dimethoate 0.6 lb. ai.), which appears to have suppressed the population enough so that bronzing of foliage or defoliation of vines did not occur as it did in 1993.

Again, in 1994 as seen in 1993 the predominate thrips species found during the season were, the western flower thrips (*Frankliniella occidentalis*) and the grape thrips (*Drepanothrips reuteri*) (Figs. 4 & 5). Samples collected late May and early June 1994, as in 1993, continued to be primarily grape thrips (Fig. 2). One difference to note concerning species composition of thrips is that in 1993 grape thrips populations declined in mid to late July for about a month and western flower thrips became the predominate species, where in 1994 grape thrips remained the predominate species for the entire 1994 season.

### Type of Thrips In Cave Junction Vineyard Summer 1993

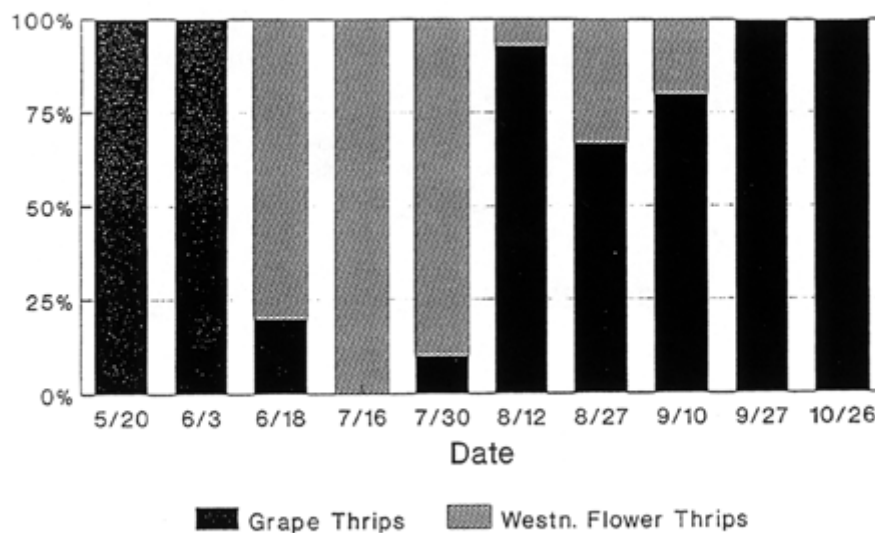


Figure 4.

### Thrips Species--1994 Cave Junction Vineyard

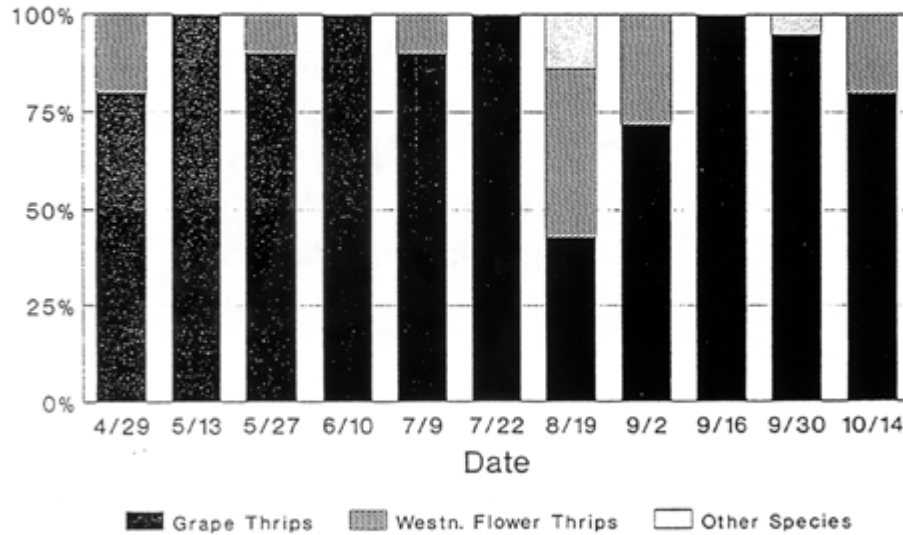


Figure 5.

In summary, based on three years of data, when thrips populations exceed 1,800-3,000 thrips per card during any two week period, stunted growth, cupping and bronzing of leaves may occur and a spray to suppress populations should be considered.