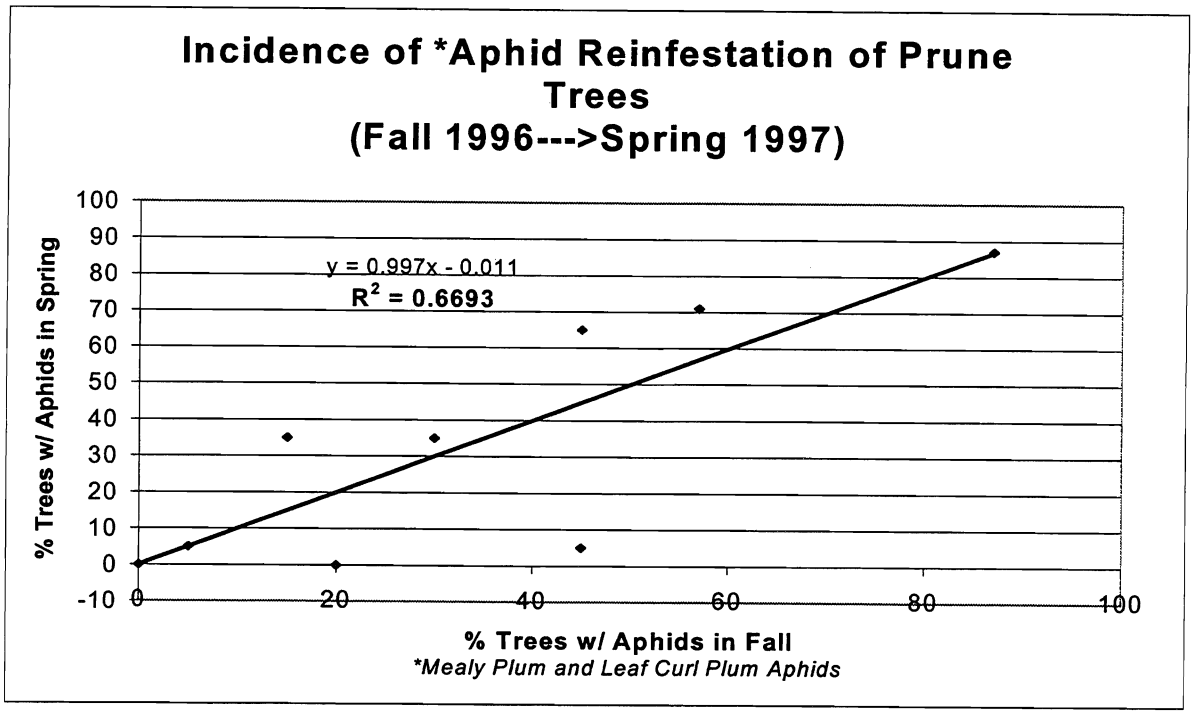
would be monitored in the spring. The orchard was then sampled again during the last 2 weeks of April. In 1996 we looked at 13 blocks in Sutter, Butte, Glenn, and Tehama County. The data was analyzed by a linear regression and is shown in the figure. The results from the winter of 1996/97 show promising results for a simple method for growers to determine the need to spray a dormant insecticide for aphid control.



Effect of Prune Rust on Fruit Quality

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Introduction

Prune rust is caused by a fungus, *Tranzschelia discolor*, which damages prune trees by causing defoliation. If defoliation occurs before harvest, yield can be reduced, and can cause the tree to bloom again in late summer or fall. Prune rust is most severe in areas with high humidity and/or late spring rains, and orchards in such locations should be protected with fungicide treatments.

The experiment looked at the effect on fruit caused by leaf rust infection other than defoliation. This paper deals only with the treatment that provided the best rust control; a

combination of Rovral, Mannex, and Omni oil sprayed three times during the growing season, and compares it to the untreated control.

Materials and Methods

This fungicide evaluation took place at a young prune orchard in an area prone to substantial rust infections. Three applications of Mannex 37F, Omni oil, and Rovral 50W were sprayed throughout the season; one at bloom (3/19), and two more during the summer (6/17 & 7/15). Mannex was sprayed at 4.8 quarts/acre, Omni oil at 2.0% of the application, and Rovral at 2 pounds/acre. Three gallons were sprayed on each tree (372 gallons/acre) at 200 psi with hand-gun sprayers. Five trees were sprayed in this fashion, another five trees were left unsprayed as a control.

Leaves of the prune trees were evaluated for rust by collecting 50 leaves and observing them for rust. This data was collected on August 21st, about five weeks after the last fungicide application, and shortly before harvest. Fruit samples were also taken at this time from the treated and control trees (about 4 pounds per tree) and were evaluated for soluble solids, dry away ratio, and size.

Results and Discussion

Results from the leaf evaluation showed that 99.3% of the leaves of the control trees were infected by prune rust, compared to only 21.3% of the leaves of the Rovral/Mannex treated trees (Table 1). This was a five fold improvement in control.

Fruit samples from both treatments had no significant differences in soluble solids content, number of green and dry fruit per pound, and the dry away ratio, using Duncan's multiple range test.

In conclusion, we found that a mixture of Rovral, Omni oil, and Mannex worked very well in controlling prune rust, and that the presence of infected leaves (not defoliation) plays no part in the fruit quality parameters measured.

Table 1: Rust infection and fruit quality.

Treatment	% leaves w/ rust	defoliation	soluble solids	fresh count/lb.	dry away	dry count/lb.
Treated	21.30%	none	21.9	20.2	3.1	61.9
Control	99.30%	none	21.8	18.5	3.2	58.2