

## I N S E C T S

### Relationship of Walnut Aphid Population and Sunburn Protection to Quality of Payne Walnut - G. S. Sibbett, C. S. Davis, M. M. Barnes

Walnut quality was not significantly improved by spring application of Sungard<sup>(R)</sup> regardless of walnut aphid population. Severe spring frost reduced yield substantially in this experiment and potential for nut sunburn. The test is being terminated.

### Walnut Insect Population Survey - L. C. Brown

Six orchards were sampled weekly during the summer for insect populations. Three orchards were under non-cultivation (sod culture) and three cultivated. Ten leaves were collected from each of ten trees, making a 100-leaf sample from each orchard. These were sent weekly to Clancy Davis for insect counts and identification of insect populations.

The purpose of this survey was to determine if cultural practices had influences on insect populations.

This first year's survey indicated that the walnut aphid tended to build up larger numbers in August in cultivated orchards than it did in non-cultivated orchards. Walnut aphid in cultivated orchards averaged 1-2 leaflet in August as compared with practically zero populations in nontillage orchards. Duration of the aphid population in cultivated orchards lasted for two weeks before dropping. Whether this was enough to lower the walnut grade is not known.

Mites built up in all six orchards and were sprayed with either Kelthane or Omite during mid and late-July. The mite counts, with the exception of one, did not reach economic levels before miticides were applied.

### Walnut Husk Fly - J. L. Joos, B. Bearden, D. Twilleager, W. C. Batiste, C. S. Davis, Don Brittsan

A study was made in the North Coast Counties and San Joaquin Valley on the most effective trap for walnut husk fly, Rhagoletis completa Cresson.

Monitoring: Population density tests were made with the new UC DBJ, Frick, Sector (Zoecon), Dixie Cup, and wing trap (Zoecon), and Ammonium carbonate were tested for performance.

The mean of replicated orchard plots showed that the UC DBJ trap gave higher performance on population counts. Ammonium carbonate lure generally gave higher performance for the acceptance of walnut husk fly than Maggottract lure.