

Ethrel: L. Hendricks

Ethrel was applied to Eureka walnuts at the rate of 5 pints in 330 gallons of water per acre by ground rig and at the rate of four pints and three pints per acre in twenty gallons of water using an airplane. These applications were made on Sept. 14, the day after packing tissue brown. The ground application advanced harvest by approximately one week but the percentage of crop removed in one shaking was 77½% on Sept. 23. The hullability on Sept. 23 was not commercially accepted and was approximately 60%.

The air applications gave almost no noticeable effect. The dates of harvest were nearly the same as check and nut removal on October 5 was 88%. Air temperatures on the day of application approached 100° and this may have reduced the amount of effectiveness of the Ethrel.

Payne trees were sprayed with five pints of Ethrel per acre on September 16 and harvested September 7-8. On date of harvest the nuts were 100% hullable and 100% of the nuts were removed in a single shake. Leaf drop was no problem in this orchard, but the time of harvest was no earlier than check. Percent light nuts was 4½% less in the treated lot than in the check lot due to late harvest.

Hartley trees were sprayed on September 16 about six days before packing tissue brown and harvested September 22, which was about the day of packing tissue brown. The five pint rate per acre was used. These nuts were approximately 50% hullable but 100% of the nuts were removed from the tree. The check was harvested a month later on October 25. Leaf coloration and early leaf drop occurred in this block approximately three weeks before the check. Total kernel yield was 2% less in the treated plot than in check.

Older Hartley sprayed on September 23, the days of packing tissue brown were harvested on October 6. The check plot was harvested October 9. The rate of application of 4½ pints per acre in 300 gallons of water. These nuts were hullable and harvestable five to seven days after treatment, but were not harvested for fourteen days. At the time of harvest of the treated and check plots 100% of the nuts were removed with one shake, and were commercially hullable. This orchard was dry and leaf drop was excessive. There was 80-90% leaf color and 50-75% leaf drop at shaking. Total kernel yield was ½% less than the treated plot, percentable light kernels was 11.3% less, and total edible kernel was almost 2% less in the treated plot than in the check. This test plot work in 1971 indicates some of the pitfalls and dangers of using Ethrel.

Hull Loosening with Ethrel Sprays: F. Perry

Since 1969, we have experimented with Ethrel sprays in one orchard in Chico. During this time we have found a one-shake harvest to be our biggest advantage in using Ethrel. We have not been able to show an improvement in nut quality. It was obvious during the 1969 trials that good spray coverage was essential. In the 1971 trials, the trees did not respond as well as they did in previous years. The grower applied large amounts of irrigation water late in the season just previous to harvest. There is a possibility that this may have diluted the effects of Ethrel. In this area, late irrigations seem to hasten harvest to some degree.

Importance of a Multiple Harvest Operation: F. Perry

During the past year samples were taken from a dense Ashley orchard. Based on nut quality only, there was no difference between harvesting a portion of the crop early and the remainder two weeks later versus waiting and harvesting the entire crop two weeks later. This is contrary to popular belief and it is possible that these results may not be duplicated next year if weather conditions during harvest are different.