

NUT LOOSENERS

Ethrel: G. C. Martin (exemplary cooperative work with farm advisors)

The timing of application appears to be a matter of convenience as time elapses after P.T.B. quality is reduced. Ground application best as coverage is critical. When the nuts are hullable they must be harvested immediately. Rates of 3-5 pints per acre of active ingredient are necessary. Leaf drop problem in dry orchards. Quality is excellent if harvested as soon as the walnuts are ready. Do not apply when temperatures are below 60 or above 90°F. Future work should focus on adjuvants, concentration, cultivar, method of application, timing, quality and compatibility with other operations (C. S. Davis).

Ethrel: J. W. Osgood

The use of a concentrate sprayer applying 3 pints of Ethrel per acre in 30 gals of water, as compared to a dilute application of 7 pints Ethrel in 430 gals of water per acre was evaluated. There were no detectable differences between these treatments on the cultivars Tehama and Gustine. Both applications advanced the maturity of Tehama so that this mixed planting could be harvested once over.

Evaluation was based on percentage nuts removed, hullability, leaf discoloration, and leaf drop. Quality samples were lost.

Ethrel Trials: G. S. Sibbett, D. E. Ramos, G. C. Martin

Commercial trails: Ground application of Ethrel, applied at 5 pints per acre using a speed sprayer nozzled for 400 gals per acre 10 days to 2 weeks prior to harvest resulted in a 1-shake harvest of 100 percent of the crop in 5 walnut varieties, Payne, Ashley, Marchetti, Midland, and Hartley. Networth per inshell pound of all test varieties except Marchetti, was not reduced. Networth per inshell pound of Marchetti was reduced substantially. Similar harvest and quality effects were found when Payne walnut was treated with Ethrel at 2.5 pints per acre in 90 gals or 105 gals per acre by ground. In all tests except one, where trees were dry, leaf fall was not significant in either test to reduce efficiency of shake/pickup harvest.

Air applications of Ethrel at 2.5 pints and 5 pints in 20 gals of water per acre applied to Payne walnuts had no effect on nut removal or hullability. Leaf symptoms indicative of Ethrel application did not occur.

Variety comparisons: Ethrel at 500 ppm concentration was applied by handgun sprayer 10 days prior to normal harvest to Payne, Ashley, Serr, Eureka, Marchetti, Midland and Hartley walnuts. In all cases, removal and hullability were improved to the extent 1-shake harvest of 100 percent of the crop was possible. Quality was not affected except in the case of Marchetti where networth per inshell pound was decreased by 6.46¢. Leaf fall was not significant except in the Serr variety (which was not dry) where some interference with harvest was thought to occur.

Applications of Ethrel at 500 ppm to Payne walnut at "packing tissue brown" advanced harvest date, increased percent removal and increased hullability. No effect on nut quality occurred if nuts were harvested 11 days following application, although quality was impaired dramatically if harvest was delayed 22 days following treatment. Applications of Ethrel at 500 ppm to Trinta walnut just prior to packing tissue brown resulted in substantial reduction in quality.