

# HARVEST QUALITY

## Nut Looseners

Nut Looseners - G. S. Sibbett, L. C. Hendricks, W. Schreader, G. C. Martin

The work this year on ethephon focused on the use of concentrate applications of the compound. For details of this work, see the reports of G. S. Sibbett, Lonnie Hendricks, Wally Schreader, and L. C. Brown.

Dilute vs Concentrate Application of Ethrel<sup>(R)</sup> - G. S. Sibbett, G. C. Martin  
D. E. Ramos

Concentrated rates of Ethrel<sup>(R)</sup>, 3, 4 or 5 pints in 50 gallons of water per acre, applied as packing tissue turned brown, had more influence on advancing hullability, leaf fall, and percent removal than similar amounts in 100 or 300 gallons of water per acre. No significant difference in kernel quality, insect, or networth per inshell pound occurred due to treatment although the "grower" check, harvested 2 weeks later, was of substantially less quality and contained more insect injury than treated samples.

Ethrel<sup>(R)</sup> - L. C. Hendricks

Ethrel<sup>(R)</sup> was used in two orchards in 1972. In a Eureka orchard, Ethrel<sup>(R)</sup> was applied at three pints, four pints, and five pints in 50 gallons per acre and five pints in 400 gallons per acre. This was applied on September 6, 1972 and the plots were harvested between September 14 and September 19.

A 1-shake harvest was not possible with any of the treatments on these old Eureka's. The check had 75% harvested in the first shake and the best treatment was three pints Ethrel<sup>(R)</sup> in 50 gallons of water, which resulted in 83% removal in one shake. The following grades were obtained with these ethephon treatments:

	Grade			Price/lb
	% light	% edible	% offgrade	
Check	28	39.7	4.7	24.1
5 pt/400 gal	27.7	40.7	5.0	24.3
3 pt/50 gal	34.3	44.3	2.3	27.1
4 pt/50 gal	39.3	44.3	2.0	27.84
5 pt/50 gal	38.0	42.0	3.0	26.5

The price per pound was increased by treatment with concentrate machine even though a 1-shake harvest was not accomplished.

With Trinta variety four pints per 200 gallons was applied on August 31 and harvest was on September 11, 1972. The check was harvested September 24. Almost 96% of the treated nuts were harvested in one shake. The treated nuts had 28.3% light and the checks had 22.3% light. There was a slight drop in edible from 44.3 for the checks to 41.3 for the treated. This drop may be explained by the higher percentage of offgrade due to shrivel with the treated nuts. This treatment was made quite early and they were not quite at packing tissue brown.

The price for both the treated and check were approximately 24.5¢ per pound.

#### Nut Looseners - W. Schreader, G. Martin

Three treatments were made on the Hartley variety on September 13, using 3 pints per 50 gallons per acre, 5 pints per 50 gallons per acre, and 5 pints per 250 gallons per acre. Heavy rains and winds occurred about 3 or 5 days later. At that time the 5 pints concentrate had the most nuts open and down, followed by the 3 pints concentrate and 5 pints dilute. By harvest September 20, not much difference between concentrate treatments was observable. The dilute was slightly less effective. These tests were not considered "normal" due to the unseasonal nature of the rain. Nut samples from each treatment were provided for residue analysis.

#### Ethrel<sup>(R)</sup> Application to Walnut Trees - L. C. Brown

A 12-year-old walnut orchard was selected for the ethephon trial. The orchard had been irrigated 1-1/2 weeks previous to the ethephon application. Each row had alternate trees of Marchetti and Gustine. At the time of spraying it was estimated that 25-30% of the hulls of the Gustine variety were cracked and 15-20% of the Marchetti.

Two dosages were used; there were 23 trees to a row. Two rows (1 acre) were sprayed at the rate of 3-1/2 pints of ethephon per acre and one row at 1-1/2 pints.

Trees were sprayed with ethephon on September 6, and shaken 5 days later on September 11. The nuts were machine harvested September 12, and hulled the same day. By September 27, there were some yellow leaves appearing on both varieties and in both treatments. By October 5, all leaves had dropped that were yellow. There was minimal leaf drop.

Trees were shaken the second time on November 3 and harvested November 5.