

Pome Fruits—Chemical Control

European Red Mite on Pears

B. Zoller  
Pear Doctor, Inc., Finley, CA

*Keywords:* European red mite, Volck supreme oil, pear

The relationship between spray oil use at the time of ERM overwintering egg hatch and "June drop" of Bartlett pears in monocultures was studied over a 2-year period in Mendocino and Lake Counties of California. Trees in oil treatment areas were matched with trees in no oil treatment areas of the same plantings. Dropped fruit under each tree were counted at intervals and removed from the orchard floor during the month of May 1990 and May-June 1991. Full bloom was March 30 in 1990 and April 4 in 1991.

In all, 80 pairs of counts were made in 1990 comparing Volck supreme oil 10 days after petal fall (2 1/4 to 3 gal/acre on 4/18/90) and again at first cover (2 1/2 to 3 gal/acre on 5/3/90) with no oil use. In 1991 trees receiving 1) UAP 415 oil at petal fall + 10 days (one application of 4 gal/acre on 4/26/91), 2) UAP 440 oil at petal fall + 10 days (one application of 3 gal/acre on 4/26/91) and 3) UAP 415 oil at petal fall + 10 days, then again at first cover (4 gal/acre on 4/26/91 and 3 gal/acre on 5/31/91) were each compared with matched trees in the same plantings with no oil use.

Drop of green fruit in May ("June drop") increased in the oil use areas in 1990 (Table 1) and in 1991 (Table 2).

**Table 1.** June drop in oil treatment areas, May 1990.

Count period	% of drop in no-oil treatment areas			Total drop
	May 1-17	May 18-25	May 26-31	
Mean	161a	162	130a	147b
Standard dev.	91	124	4.3	81
t	1.895	1.411	1.984	1.639

a: results are significant at the 5% level of probability.

b: results are significant at the 10% level of probability.

**Table 2.** June drop in oil treatment areas, all count periods, May to June 1991.

	Treatment at ERM egg hatch		
	415 Oil (1X)	415 Oil (2X)	440 Oil (1X)
Mean % of drop occurring from untreated trees	118	144	125
Number of pairs	200	40	180
Standard deviation	158	120	120
Probability of error	6%	2%	0.2%