

III. Stone Fruits

b. Thresholds, monitoring and sampling

1. Peach Twig Borer, Almonds

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Peach twig borer pheromone trap catches characteristically exhibit a bimodal flight pattern during the emergence of adults of the overwintered generation. Although it has been well demonstrated that treatments applied 400 degree days after the beginning of the flight provides optimum control of this pest, some growers have also been treating second peak.

In order to determine if pheromone trap catches accurately reflect what is happening in the field an experiment was conducted in a 3 year old almond orchard located near Snelling in Merced County. Corrugated cardboard bands were placed around the trunks of the trees and larvae trapped as they crawled down the tree to pupae. Within 1 day after the first moth was trapped in pheromone traps bands were removed weekly to determine what percent of the pupae had emerged. The number of PTB eggs deposited on 100 fruit was also monitored.

Data indicate trap counts are not an accurate indicator of adult emergence. Ninety five percent emergence from the bands occurred at 400 degree days, the recommended treatment timing. Trap counts declined at approximately 300 degree days and remained low until about 600° D from the beginning of the flight. Egg laying closely followed the emergence curve from the bands except for a small increase at 600° D which corresponded to the second peak of the flight. This accounted for less than 10% of the total eggs deposited by moths of the overwintered generation indicating that unless populations were very high the second flight was of little consequence.

Pheromone trap catches of PTB are not a good indicator of either adult emergence or egg laying by females. This demonstrates the timing for PTB control of 400° D after the beginning of the flight is still valid. Residues from treatments applied at 400 degree days will cover the second peak and treatment of the second peak is seldom if ever needed.