

Biology/Phenology

Codling Moth on Apple

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Codling moth populations were monitored on a daily basis in a Granny Smith apple orchard located in Arvin, CA, from 1983 to 1993. Traps used were Pherocon 1C (1983-1989) or 1CP (1990-1993). The pheromone caps used were manufactured by Trécé and loaded with 1 mg of codlemone. These caps were changed on a monthly basis, while the bottoms were changed after 100 moths had been trapped.

Codling moth activity, as measured by trap capture of adult male moths, is described. In seven of ten years, two distinct peaks of the overwintering generation males occurred. The magnitude of the peaks was not equal. In four of the seven years, the first peak was greatest. The presence of two peaks does not appear to be the result of insecticide applications made to the overwintering flight.

Earliest capture of the first male moth was detected on March 7 in 1986, and the latest first male capture was on March 30, 1984. The last moth captured during the season ranged from September 1 in 1983 (3,405 dd from first to last moth) to October 2, 1991 (4,220 dd from first to last moth). This is using a base threshold of 50°F and an upper threshold of 88°F.

In the southern San Joaquin Valley, three full generations were present each year; most years had at least a partial fourth generation. A full fourth generation was possible in 1986 (3,981 dd), 1990 (4,013 dd) and 1992 (4,694 dd). This is based on an average of 1,060 dd for the first generation and 1,220 dd for the remaining generations.