

Thresholds/Monitoring/Sampling

Comparisons of Trap Type and Long-Lasting Lures to Monitor Codling Moth in Pheromone Treated Orchards

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Trials were conducted in the 500 acres of the Medford codling moth areawide management site to assess different long lasting lures and trap types in monitoring codling moth within a pheromone treated orchard. In 1998 the delta trap design was compared to the standard wing trap and the Pherotech bubble lure was also evaluated. In 1999, both the Pherotech bubble lure and the Trécé Megalure were compared to a standard 10 mg red septa. Relative trap catch and lure longevity were assessed in these trials. A paired or block design was used in conducting the trials, traps were not rotated but a high level of replication was employed, n=26 or higher. The Pherotech bubble lure and the Trécé Megalure were replaced following completion of the first generation codling moth flight, while the red septa was replaced every three weeks during the first generation flight and every two weeks thereafter.

In 1998, during the first generation the Pherotech bubble lure was very comparable to the red septa for approximately eight weeks. In the second generation, the moth capture with the bubble lure remained comparable for 4 to 5 weeks. Using the 10 mg red septa the delta trap caught 50% more moths than the standard ICP wing trap (see table below).

In 1999, the bubble lure (with an increased pheromone reservoir) yielded moth catches similar to the red septa for 10 weeks with a noticeable drop off in week 11 prior to the mid-season lure change. The Trécé Megalure was still catching relatively high numbers of moths in week 11. In the second generation, the moth catch with the bubble lure was comparable to the red septa for at least 4 weeks and then moth capture in all traps dropped to extremely low levels for the remainder of the season. The second generation moth catch in the Trécé Megalure was lower than either the bubble lure or the red septa, however, the generally low moth catch during that period makes it difficult to generate meaningful comparisons.

1998 Trap type comparison—cumulative number of moths captured

Trap Type (n=26)	1st Gen.	2nd Gen.	Total
Delta trap with 10 mg red septa	8.0 a	2.4 a	10.5 b
ICP trap with 10 mg red septa	5.3 a	1.5 a	6.8 a
p-value	0.083	0.24	0.04

Means within a column followed by the same letter are not significantly different (p<0.05 Fisher's protected LSD).