

Biological Control

Codling Moth, *Cydia pomonella* (L.); Apple, *Malus domestica* L.

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Laboratory studies showed that *Trichogramma platneri* lives 8 days (TD50) with constantly available carbohydrate nutrition but only 1 day without it. A single feeding on carbohydrate upon emergence extended time to death by 36 hours. Supplementation of carbohydrates (honey) in apple orchards weekly during the season showed a modest increase in parasitism of sentinel eggs by *T. platneri* released weekly. Supplementation with honey did not reduce fruit damage produced by codling moth. *Trichogramma platneri* showed little promise for controlling codling moth in apples.

California collaborator, Dr. Nick Mills, visited Kazakhstan in June and returned with a small collection of codling moth parasitoids. Trap bands placed in 7 orchards in the vicinity of Almaty, Kazakhstan, were retrieved in October and hand carried to the U.S.A. in late November by Kazakh collaborator, Dr. Andrey Slivkin. *Urolepis (Microdes) rufipes*, from 1994 fall collections in Kazakhstan, were released directly into unsprayed apple orchards in California in June of 1995. *Mastrus ridibundus* derived from the fall 1994 collection was permitted for release by APHIS. A few hundred females were released in Yakima, WA, in early September and several thousand were released in central California in August through November 1995. The biology of various parasitoids of the codling moth will be reviewed.