

The chemical termination appeared to have increased yields slightly; this is due in part to a better defoliation in the chemically terminated plots.

These results show that the number of diapause PBW larvae can be significantly reduced by termination of fruiting in the fall without adversely affecting yields. Observations will continue to be made in this field next spring to determine the effects on the population of moths that successfully overwinter and subsequently infest cotton.

BIOLOGICAL CONTROL

A. Stoner and R.E. Weeks

Biology of *Copidosoma truncatellum*--Developmental time of the parasite *Copidosoma truncatellum* (Dalman) in the host *Trichoplusia ni* (Hübner) was studied at constant temperatures of 14.8, 20.2, 23.5, 25.0, and 28.9° C; egg to first adult emergence was 122.9, 48.8, 35.8, 29.6, and 22.4 days, respectively. At 32.3° C the unparasitized host develops, but the parasitized host and parasites die. At 35.6° C the host eggs will not hatch. Duration of adult *C. truncatellum* emergence from the host at 14.8, 20.2, 23.5, 25.0, and 28.9° C is 10.8, 4.6, 3.6, 3.0, and 2.9 days, respectively. The duration of a generation ranges from 162.7 days at 14.8° C to 31.2 days at 28.9° C.

Adult longevity of *C. truncatellum* fed water and solutions 20% levulose, and 20% and 49% artificial cotton nectar was investigated. Longevity was greatest on 20% levulose which was similar to 20% artificial cotton nectar. Survival on 49% artificial cotton nectar was poor by comparison. Levulose was superior because of longest survival, only one sugar to weigh and handle, and it was the least expensive.

Emergence counts of *C. truncatellum* according to constant temperature have shown average adult emergence from the host *T. ni* to be 2045 (414 males, 1631 females) at 20.2° C, and 1835 (348 males, 1486 females) at 25° C.

Calco oil red N-1700[®] was incorporated into the host (*T. ni*) diet to tag *C. truncatellum* adult parasites as a survey method for recovery and identification of field released, laboratory reared parasites. The dye was readily taken into the parasites and could be recovered by a chromatographic method in most specimens. A method of squashing and viewing under magnification for the dye was misleading due to red pigment in the eyes of the parasite. Also, parasites stored in a preservative fluid which came from undyed hosts contained a red color in the body due to some action of the preservative. Squashing under magnification would be much more rapid than the chromatographic method, but a color other than red would have to be used.

GENETICS

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Release and recovery of dark body color cabbage looper males in the field--Release of a recessive lethal mutation into field populations can cause a theoretical reduction in the population of up to 40%. A cabbage looper strain exists which