Section VII
Forage & Seed Insects

EVALUATING TRICHOGRAMMA AGAINST EGGS OF THE WESTERN BEAN CUTWORM

R. L. Stoltz and N. A. Matteson
University of Idaho, Twin Falls R and E Center
P.O. Box 1827, Twin Falls, ID 83303-1827
208/736-3600
bstoltz@uidaho.edu,nmatteson@uidaho.edu

Western bean cutworm moths were live-trapped and allowed to lay eggs on corn plants in cages in the insectary. Approximately 250 one to three day-old eggs left on corn leaves were stapled to 3 x 5 cards. The cards were then stapled on to the bottom of a bean leaf of an individual bean plant in a commercial bean field. Bean plants with eggs were approximately 2 m apart. After affixing the eggs to the plant, 4-6,000 *Trichogramma* (one square of commercially produced insects) were placed at the base of each plant in a plastic cup. Each plant was then covered with a 5 gal paint bucket that had been modified to allow air circulation and screened to keep insects in the bucket. Five species of *Trichogramma* and untreated check eggs were replicated four times in a RCB. After three days in the cage with *Trichogramma*, the eggs were removed. The egg parasites were allowed to develop and after seven days the no. of parasitized and non-parasitized eggs were counted. Data were analysed using ANOVA and Newman- Keuls mean separation tests.

Eggs in cages without *Trichogramma* received 2.5% parasitism because the wasps were emerging while being put into the field. Percent egg parasitism rates for *T. bactrae*, *T. minutum*, *T. brassicae*, *T. platneri*, and *T. pretiosum* were 3.5, 57.8, 30.4, 33.6, and 38.8%, respectively. Because of variation in parasitism rates, only *T. minutum* was significantly different from the check while the others were intermediate in significance.

Check squares of *Trichogramma* were allowed to emerge in the lab to test for percent emergence. Lab emergence was good for all species. However, emergence is not a good index of vigor. Lack of vigor may have contributed to variation in the results. These results are the reverse of tests conducted in 1995 where *T. bactrae* was the only species to show any degree of egg parasitism of western bean cutworm eggs.

C:\1997pnw\97trich97.doc