

Moth Trapping in West TN during 2005.

Methods

Pheromone moth traps for corn earworm (CEW or bollworm), tobacco budworm (TBW), and beet armyworm (BAW) were run on a weekly basis from early May through August. Traps were located in cotton growing areas of each county and were usually placed on the borders of cotton fields. All pheromone lures were obtained from Great Lakes IPM (Vestaburg, MI) and were changed weekly. At least one, and usually two, sets of bollworm and tobacco budworm traps were run in each of the following 11 counties in West Tennessee: Carroll, Crockett, Dyer, Fayette, Gibson, Hardeman, Haywood, Tipton, Lake, Lauderdale, and Madison. One beet armyworm trap was located in each of the above counties. Unfortunately, bollworm moth traps were baited with mislabeled pheromone during the first one-half of the growing season.

Results

Catches of beet armyworm, tobacco budworm and corn earworm (i.e., bollworm) moths in pheromone traps were unusually low during 2005 (Fig. 1), although corn earworm catches were higher than in 2004. Corn earworm moths were caught more frequently than either tobacco budworm or beet armyworm. Corn earworms composed 88% of all moths caught based on average trap catches made from early June through early September. In contrast, tobacco budworms and beet armyworms composed about 4% and 7% of the moths caught, respectively. Treatable infestations of beet armyworm in cotton fields were non-existent in 2004

A small peak in tobacco budworm moth catches occurred in early June but never exceeded 15 moths in any single trap during this time. However, a single trap in Lake County captured 52 moths during the late August, and more tobacco budworm moths were caught in this county than any other (Fig. 2). To my knowledge, no fields of cotton were specifically treated for tobacco budworm infestations in 2004. However, only about 5% of the fields in Tennessee are non-Bt cotton.

The corn earworm (i.e., bollworm) is Tennessee's most significant caterpillar pest in cotton because this species is able to cause economic injury to Bt cotton, which composes the vast majority of the acreage. Compared to the other species, more corn earworm moths were caught in our pheromone traps. Two peaks of moth catches were recorded on late July and late August (Fig. 1). Peak trap catches were 2-3 times higher than those observed in 2004. However, the August moth flight generally occurred too late to impact most cotton fields. The highest corn earworm moth catches were recorded in Crockett, Gibson, Madison, Lake and Hardeman counties (Fig. 3). The highest number of moths caught in any one trap was 192 moths/week, on August 17, in a trap located on the West Tennessee Research and Education Center (Madison Co.). The generally low trap catches observed in 2005 coincided with the light to moderate corn earworm infestations that were observed in cotton fields throughout the state.

Overall tobacco budworm and corn earworm moth catches were about the same as those observed in 2004 but considerably lower than in 2003. Trapping did not necessarily reflect all local variations in population densities observed in cotton fields, in part because trap density was not high and because other factors influence oviposition and survival of these pests in cotton.

However, the pheromone trapping program did an excellent job of predicting the low pest populations observed in 2005.

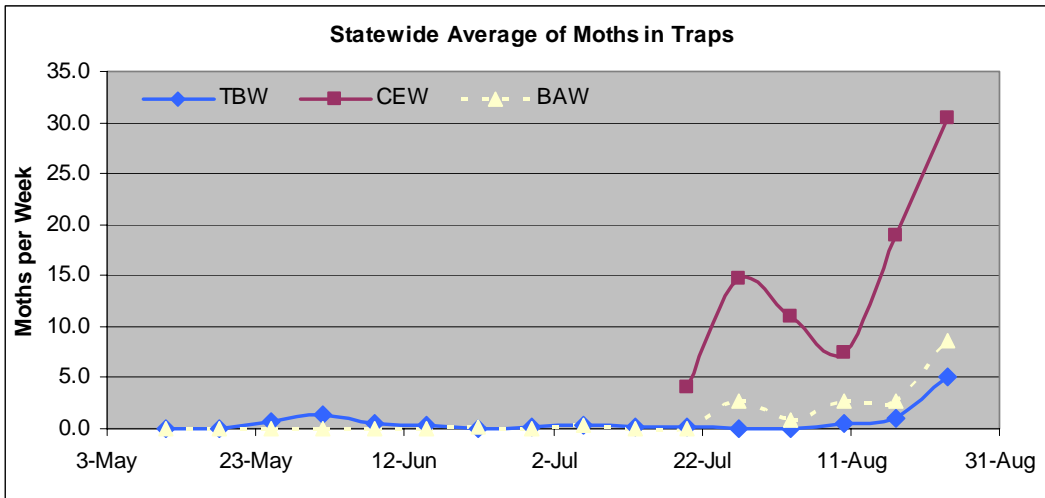


Fig. 1. Average number of tobacco budworm (TBW), corn earworm (CEW), and beet armyworm (BAW) moths caught per trap in pheromone traps across West Tennessee during 2005.

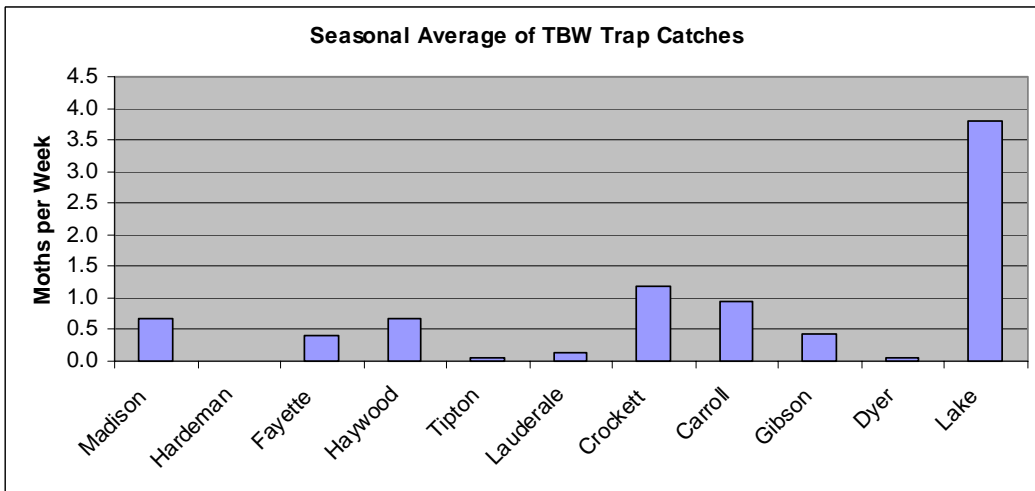


Fig. 2. Seasonal, county average number of tobacco budworm moths caught per week during 2005 in West Tennessee.

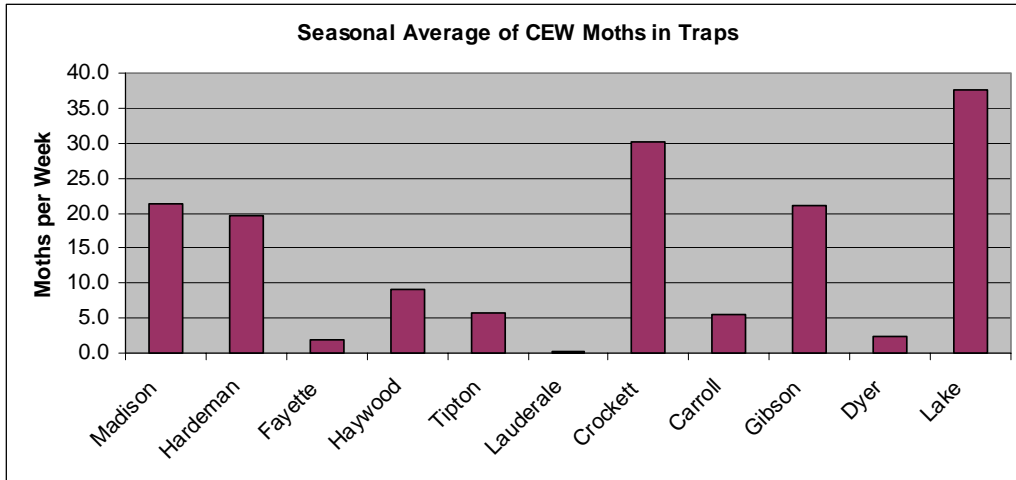


Fig. 3. Seasonal, county average number of corn earworm moths caught per week during 2005 in West Tennessee.