

## Flower Pest of Echinacea and Sunflower

**By: Stanton Gill, Extension Specialist,, University of Maryland Cooperative Extension, Central Maryland Research and Education Center and Professor,, Montgomery College, Landscape Technology**

In the fall of 2005 an herbaceous perennial grower asked our lab to identify a caterpillar that was tearing up their *Echinacea* plants in the nursery. The caterpillar was the larval stage of the sunflower moth. The sunflower moth, *Homoeosoma electellum*, is one the most damaging pests of sunflowers and Echinacea. The caterpillar is rather attractive in coloration but it can be devastating to a flower head.



Adult moths fly at night and are gray to tan in color, 5/8 to 3/4 inch long (19 mm) and rest with the wings clasped tightly to the body, giving the moth a cigar shape. The forewings of the adult moth have a small, dark dot located at the center of the wing. Flowers in the early stages of bloom are favored for oviposition, and females lay their eggs at the base of the florets. Females can lay 30 eggs per day. Eggs hatch within 43 to 72 hours and the newly emerged larvae feed on pollen and florets. The larvae begin tunneling into seeds upon reaching the third instar (larval growth stage). This tunneling continues throughout the remainder of larval development. Larval development from hatching to full maturity takes about 15 to 19 days.

Newly hatched larvae are pale yellow, but darken to shades of brown or purple with longitudinal white stripes. Early instars feed on pollen and florets. Later instars bore into the head and consume receptacle tissue and seeds.

Tangled mats of webbing on the face of flowers are signs of larval feeding. The injury caused by larval feeding provides infection sites for *Rhizopus* head rot that can lead to complete yield loss. Although a portion of larvae pupate in the heads, the majority of maturing larvae descend to the ground on silken threads to pupate in crevices or under leaf litter.



Diapausing larvae descend to find an overwintering site 2 to 3 inches underground. Under warm conditions, a generation can be completed in 30 days. Many overlapping generations occur throughout the summer, with the last generation occurring in September in Maryland.

