

Tobacco budworm

(Order: Lepidoptera, Family: Noctuidae, *Heliothis virescens* (Fabricius))

Description:

Adult: Adults are medium-sized moths with wingspans of 28-35 mm. Adults are variable in color, but the front wings are usually yellowish-brown and are crossed transversely by three dark bands. The hind wings are creamy white with a broad dark band near the wing margins, but the margin of the hind wing is creamy white.

Immature stages: Eggs are pale green when first deposited, turn yellowish, and then darken with age. Eggs are shaped like a somewhat flattened sphere with ridges (18-25) radiating from the top-center.

Larvae range in size from 1.5 mm at hatching to 25-36 mm at maturity.

The head tends to be yellowish-brown, and the body color may be brown, green, pink, or sometimes yellow or maroon. The larvae closely resemble corn earworm larvae. A key characteristic that will separate corn earworm and tobacco budworm larvae from most other species encountered in vegetables is the presence of black microscopic spines on the cuticle. The pupal stage occurs in the soil. Pupae are 18 mm in length and mahogany-brown.



Tobacco budworm adult.

Biology:

Life cycle: Eggs are deposited individually on leaf tissue and hatch in 3-4 days. Females can lay about 300-500 eggs with as many as 1500 over their lifetime. Larvae can feed and develop on foliage, but preferentially feed on buds.

Larvae usually develop through 5-7 instars in 17-18 days at 25° C. Larvae fall to the ground and burrow into the soil to pupate. The pupal stage lasts about 13 days in the summer and serves as the overwintering stage in the late fall.

Seasonal distribution: Tobacco budworm can attack vegetable crops throughout most of the production season, but it has rarely been a problem in tomato and pepper.



Tobacco budworm larva.

Damage to Crop: Tobacco budworm damage is caused only by the larvae. Larvae have chewing mouthparts and remove plant tissue. Although larvae can feed and develop on leaf tissue, the preferred feeding site in most crops is the buds or fruiting structures.

Management: Although this pest is significant in tobacco and cotton, it is rarely a problem in pepper and tomato. Adults can be monitored with pheromone or blacklight traps to estimate when moths invade or emerge, and relative densities or peak activity. In fruiting vegetables, larvae generally remain partially exposed or move from bud to bud providing exposure and better control can be obtained with insecticides. This pest is usually controlled when other Lepidoptera pests are being treated, but can be resistant to pyrethroid insecticides.



Tobacco budworm damage.