

43. Cutworms

Michael E. Ostry and Jennifer Juzwik

Hosts and Pest Description

Cutworms (family Noctuidae) feed on the foliage of a wide variety of weeds and agricultural crops. In bareroot tree nurseries, cutworms feed on young conifer and hardwood seedlings. A number of different cutworm species occur in forest nurseries, and the species may differ by geographical region. The adult is a moth (order Lepidoptera) whose head has an “owl-like” appearance. Larvae coloration and size varies among species.

Distribution

Several cutworm species are found throughout the United States.

Damage

Large cutworm populations, such as the dingy cutworm (*Feltia ducens*) (fig. 43.1), can quickly destroy conifer seedlings by feeding on recently emerged seedling cotyledons and needles (fig. 43.2) in tree nurseries. Cutworms can also feed on older seedling foliage, but damage is usually insignificant. Young hardwood seedlings can be cut at or slightly above or below the groundline. Climbing cutworm species can feed on young leaves. Populations fluctuate widely from year to year and since high populations build up only during favorable environmental conditions, cutworms are generally only of periodic importance.



Figure 43.1—Dingy cutworm larva (left) and pupa. Photo from USDA Forest Service Archives.



Figure 43.2—Cutworm damage on young conifer seedling. Note clipped needles. Photo from USDA Forest Service Archives.

Diagnosis

Frequently, cutworm damage is noted before observing the insect itself because they feed at night and remain underground during the day. On conifer seedlings look for cut or chewed primary needles. Old chewing damage may become sunken or depressed (fig. 43.3). This damage type may be confused with damping-off disease. Occasionally, both conifer and hardwood seedlings are clipped at the groundline, and tops are left lying on the soil surface. Cutworm larvae are stout, hairless, and dull gray in color, ranging from 2 to 5 cm (0.8 to 2.0 in) at maturity. When disturbed, cutworms drop to the ground and characteristically assume a curled position. The adult moths are hairy, with markings on their forewings

but with rather nondescript hind-wings. It is often difficult to identify the many different cutworm species.

Biology

Most cutworm species have similar life cycles. Depending on the geographic location and cutworm species, there may be multiple generations per year. All cutworm species become active in early spring, during the larval stage. They feed on the newly emerging seedlings and rapidly progress through as many as seven instars. Moths emerge in late summer and early fall. Females deposit eggs on plant foliage such as weeds in and around the nursery or in the soil, where eggs or larvae overwinter.

Control

Cultural

Good weed control in and around nursery beds will eliminate breeding sites for cutworms. Emerging seedlings in nursery beds should be examined weekly for feeding evidence.

Chemical

Areas of nursery beds diagnosed with cutworm feeding can be treated with approved insecticides at the first sign of damage. Cutworm species identification may be necessary to determine the appropriate insecticides available for use. Biological insecticides are available for some species.

Selected References

Palmer, M.A.; Hoffard, W.H. 1989. Cutworms. In: Cordell, C.E.; Anderson, R.L.; Hoffard, W.H.; Landis, T.D.; Smith, Jr., R.S.; Toko, H.V., tech. coords. Forest nursery pests. Agriculture Handbook 680. Washington, DC: USDA Forest Service: 136–137.

Palmer, M.A.; Nicholls, T.H. 1981. How to identify and control cutworm damage on conifer seedlings. HT-51. St. Paul, MN: USDA Forest Service, North Central Forest Experiment Station. 6 p.

USDA Forest Service. 1985. Insects of eastern forests. Misc. Pub. No. 1426. Washington, DC: USDA Forest Service. 608 p.



Figure 43.3—Cutworm damage. Note depressed area on stem. Photo from USDA Forest Service Archives.