



Agronomic Spotlight

Common Cutworm Species Identification

- Cutworms usually damage corn seedlings that are smaller than the 6-leaf growth stage by attacking stems at or below the soil surface.
- Early in the season, cutworm larvae typically hide under litter or soil and come out at night or on overcast days to feed on seedling stems near the soil surface.
- Managing cutworms requires identification, regular monitoring, scouting, eliminating vegetation before planting, and avoiding planting in a field with a history of cutworm problems.

Army Cutworm. The larvae are grayish-black with different patterns of gray and brown stripes running down the length of the abdomen (Figure 1).¹ This cutworm has been found in all states west of the Mississippi River, but highest densities are found in semi-arid areas. Outbreaks are most likely in the Great Plains and Rocky Mountain regions of the United States and in southern Canada. Host plants include wheat, barley, mustard, alfalfa, vegetables, and various weeds.



Figure 1. Army cutworm.
Joseph Berger, Bugwood.org.

Black Cutworm. The larvae are black to pale gray and can be distinguished from similar species by the convex granules on the abdominal segments (Figure 2). The pest can be found in southern Canada, the continental United States, Hawaii, and Central and South America. Larvae feed on many host plants including corn, vegetables, cotton, tobacco, and various weed species.



Figure 2. Black cutworm.

Black cutworm is the most important species in this article in terms of economic damage to corn. Damage can be particularly severe in weedy, late-planted corn following a soybean crop and in corn planted in flood plains. Corn seedlings that are cut at or below the soil surface and/or 6-8 leaf growth stage plants that are tunneled into usually do not recover. If water is adequate, seedlings that are cut above the soil surface may recover but yield potential can be reduced.

Bristly Cutworm. The larvae are dull gray-brown with stripes along the sides. They have stiff hairs that protrude from all parts of the body and dark diamond-shaped markings on the back. This cutworm can be found east of the Mississippi River and in the states of Louisiana, New Mexico, Colorado, Kansas, Nebraska, and Texas. The larvae feed near the soil surface and can survive on many plants; however, feeding mostly occurs on non-cultivated plants, hay, grasses, and legumes. Because injury is not very obvious on these plants, management is seldom necessary. This species is a minor pest for corn, although it occasionally can cause heavy damage.

Bronzed Cutworm. The larvae are dark shiny bronze with four brown and three yellow stripes, extending the length of the body. This species can be found in every state except the Gulf States, Utah, and Wyoming. Economic problems in corn occur

when it is planted into sod or pasture grasses. Feeding occurs at the soil surface on young corn plants and in the crowns of grasses.

Claybacked Cutworm. The larvae are pale gray and translucent with gray-brown head and bars on the front of the face. They have a broad yellow-brown stripe on the back. This cutworm, which is native to the North America, is most abundant in the North Central United States. Claybacked larvae are active at night and can be very destructive to seedling corn, especially corn following clover. Eating habits and appearances of black and claybacked cutworms are similar. Small larva can pull the leaf down into a burrow and eat the leaf from tip to the base, while larger larva can cut the leaves or plants just above the soil surface and drag them into a burrow to continue feeding.

Dingy Cutworm. The larvae are pale gray to brown with a faint, dark V-shaped marking on the back of each abdominal segment (Figure 3). This cutworm occurs in southern Canada, Virginia, Tennessee, Missouri, Kansas, Colorado, and Utah. Larvae feed on vegetables, clover, alfalfa, tobacco, wheat, corn, grasses, and broadleaf weeds. The cutworms infrequently feed on corn but when they do, they usually nip the ends of young corn leaves without drilling into the plant.



Figure 3. Dingy cutworm.
Frank Peairs, Colorado State University, Bugwood.org.

Glassy Cutworm. The larva has a green-white body that appears glassy or translucent. The head and pronotum are red-brown. This cutworm can be found throughout South America and North America, except for southern states. It is mostly a pest in crops planted after sod or pasture, especially in low ground. It can also be found in subterranean burrows, feeding on roots and basal stems of corn and grasses.

Pale Western Cutworm. The larvae are yellow-brown with three pairs of green-gray stripes along the back and sides. Because the cuticle is semi-transparent, internal organs can be visible. The head is amber to black with a black marking on the front of the head of mature larvae resembling an inverted "V". It is native to the Great Plains and also occurs in the Texas Panhandle and westward through the Rocky Mountains. The pest feeds on weeds and crops of wheat, oat, corn, barley, alfalfa, and sunflower that are grown under dry conditions. The cutworm burrows through the soil, feeding on the stem below the soil surface, which can result in

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plants that wilt and die. The greatest amount of injury usually occurs from April to June in dryland crops, while irrigated crops are not susceptible to this species.

Redbacked Cutworm. The larvae are light brown to gray with two red bands bordering a light, medium strip on the back. Late-instar larva can cause most of the economic damage by severing plant stems at the soil surface. This cutworm occurs throughout Canada from coast-to-coast and south to Colorado.

Sandhill Cutworm. The larva is white to pale gray with chalky white stripes on the back and sides and the head is dull red-brown in color. This cutworm prefers areas of very sandy soil and will only be found in fields with a high percentage of sand. This pest is not a problem in corn in the Midwest except in sandy soils. The larvae are seldom seen above the soil surface because they stay below the soil surface and feed on the underground parts of the plant.

Spotted Cutworm. The larvae are dull gray-brown with a darker stripe along each side of the lower part of the body. A series of black, wedgelike markings begin partway along the back and are larger toward the rear. This pest is found throughout North America but causes minor economic damage in the Midwest. The larva can climb and feed on leaves, stems, buds, or fruits of the host plants.

Variiegated Cutworm. The larva varies in color and has a narrow line of pale yellow dots along the middle of the back (Figure 4). It is found in every state and can attack forest trees, vegetables, and field crops including corn, alfalfa, clover, cotton, sunflower, tobacco, and wheat. In corn, larva can feed on leaves and may eat the center of the stem down to two to three inches below the soil surface. Larvae are active at night and often cut plants near the soil surface and drag unfinished plants into soil cracks and other protected sites. Severe damage may result in reduced yield potential of alfalfa, corn, clover, sunflower, and wheat.



Figure 4. Variiegated cutworm. Frank Peairs, Colorado State University, Bugwood.org.

Cutworm Management Options

Because of the irregular distribution in geography and time, cutworms continue to be a challenging pest to control. Cultural practices, monitoring of adult moth flights, and scouting can be used for cutworm management. Cultural practices that apply to all cutworm species include removal of winter annual weeds at least one to two weeks prior to planting to help starve small cutworm larvae before crop emergence, and not planting a susceptible crop into a field with a history of cutworm problems or after long-standing pastures, meadows, alfalfa, or red clover.²

Trapping Adults

Trapping of cutworm adult moths can be an important tool to determine the potential threat posed by some species. Several corn growing states have cooperated on a black cutworm trapping program. A significant flight is indicated when eight adult males are captured in a two night period. The date of this capture is used to predict larval development and the date when feeding may begin. Scouting for damaged seedlings should begin when 300 growing degree units (GDUs) have accumulated after a significant moth trap capture.³

Insecticide Treatments

Acceleron[®] Seed Applied Solutions for Corn and Acceleron[®] Seed Applied Solutions for Corn Poncho[®]/VOTiVO[®], provide control of black cutworm and an additional site of action against this pest when coupled with corn products with Genuity[®] SmartStax[®] technology. Soil applied insecticides may not be economical due to the sporadic nature of cutworms. As soon as crop plants emerge, scouting for cutworm damage should start. Symptoms of cutworm clipping include leaning plants and/or plants that are cutoff. Application of postemergence insecticides is warranted when 6 to 8% of seedlings are cut above the ground or when 2 to 4% of seedlings are cut below the ground.²

Sources

¹ Hein, G.L., Campbell, J.B., Danielson, S.D., and Kalisch, J. 1993. Management of the army cutworm and pale western cutworm. G1145. University of Nebraska Extension. <http://digitalcommons.unl.edu/>. ² Boyd, M.L. and Bailey, W.C. 2002. Black cutworm in Missouri. University of Missouri. g7112. ³ Bailey, W. Black cutworm monitoring and forecasting program. University of Missouri-Columbia. Peairs, F.B. 2010. Caterpillars in small grains. Colorado State University Extension. <http://www.ext.colostate.edu/> Steffy, K.L., Rice, M.E., Andow, D.A., Gray, M.E., and Van Duyn, J.W. 1999. Handbook of corn insects. Entomology Society of America. Web sources verified 3/19/16. 140529060409

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