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Managing Black Cutworms in Corn

Michigan State University

Cooperative Extension Service

IPM Facts

Doug Landis and Bruce Glebink, Department of Entomology and Pesticide Research Center

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## Managing Black Cutworms In Corn

**Doug Landis and Bruce Giebink**  
**Department of Entomology**  
**and Pesticide Research Center**  
**Michigan State University**

Of the many cutworm species present in Michigan, the black cutworm<sup>1</sup> is the most damaging to field crops. Corn and many other seedling field crops can be damaged by black cutworm feeding.

### Description of life stages:

Larvae (or caterpillars) are light gray to nearly black with four black, raised bumps on the top of each segment, and have a faint, narrow stripe down their back. They have three pairs of legs just behind the head, and a series of fleshy rear legs (prolegs). Larvae curl when disturbed. Full grown larvae are about 1 1/2 to 2 inches long. Adult cutworm moths are active at night and attracted to lights. Moths are brown to black and have a 1 3/4-inch wingspan. Front wings are longer, darker, and narrower than the pale white hind-wings.

### Life cycle:

Adult moths begin flying during the first warm spring evenings. Adults migrate to Michigan from southern states, with the first flight generally peaking in late May. Female moths lay about 1300 eggs in clusters, primarily on low, densely growing plants like chickweed, curly dock, and mustard. Until they are about 1/2 inch long, young larvae feed above-ground on weed or corn leaves. After that, they feed at or just below the soil surface, cutting off plants at the base. Most feeding occurs at night, with larvae hiding beneath plant debris or in loose soil during the day. Cutworms typically remain near the surface in moist soil, but may go as deep as 2 to 3 inches during dry conditions.

### Damage:

Cutworm damage occurs as soon as seedlings emerge and continues until the corn is approximately knee high. Plants severed below ground will appear wilted, while those cut above ground can be found lying on the soil surface. Cutworm larvae will occasionally pull a leaf partially into their soil burrow. Many move from plant to plant on successive nights. Cutworms will often kill or stunt larger plants by burrowing into the stem.

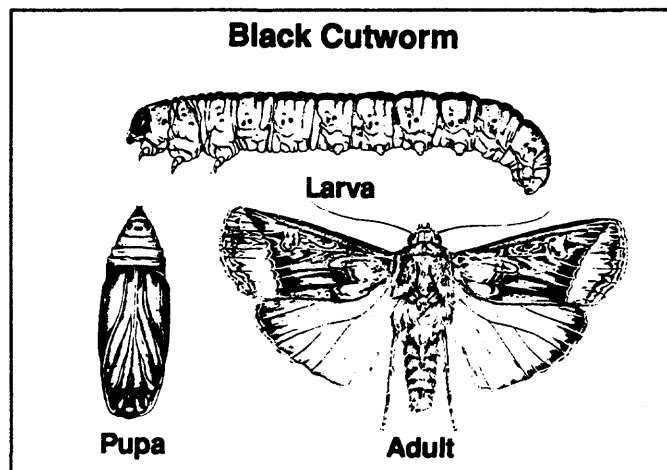
### Management:

**Biological Control** - A number of ground-dwelling predators, particularly ground beetles, feed on black cutworm larvae and help keep populations in check. These beetles also hide beneath plant debris and feed at night.

**Cultural Control** - Cutworm damage can often be reduced by not planting corn on newly broken sod or in fields where weed cover was heavy in the spring.

**Chemical control** - See table for recommended insecticide applications.

At-threshold treatments are generally the most effective option for cutworm control. If cutworms are historically a problem in a particular field, you may want to apply a granular corn rootworm insecticide that also controls cutworms. However, these may not provide acceptable control of heavy infestations, and a rescue treatment may be necessary in some cases.



### Scouting & Economic Thresholds:

Early detection and treatment is extremely important. Cutworms can completely destroy stands and

<sup>1</sup> Black cutworm: *Agrotis ipsilon* (Hufnagel)

are hard to control when fully grown. Start checking corn fields after the first seedlings have germinated. Check five groups of 20 plants (100 total), particularly in low, wet areas within fields. Look closely for freshly cut and wilted plants and leaves with small, irregular holes chewed in them, and for cutworms on the plants or hiding in the soil near damaged plants. Count and record the number of damaged plants (leaf feeding, cut, or wilting) and the size of cutworms. A threshold has been reached if the corn is in the whorl stage or smaller and 5 percent show cutworm feeding, and if small larvae are still present.

#### Additional considerations:

Although it is difficult to predict a cutworm infestation, several field conditions increase the probability for a problem. These include an early spring weed cover before planting, corn following soybeans, and fields located close to heavy permanent vegetation, such as woods, ditches and fencerows.

Reduced tillage fields are somewhat more prone to cutworm infestations due to early spring weed growth. The potential for cutworm damage in reduced tillage is lowered by destroying weeds a week or more before planting in order to starve cutworms.

**Table 1. Recommended insecticides for controlling black cutworm larvae in field corn<sup>1</sup>**

<u>Chemical</u>	<u>Formulation<sup>2</sup></u>	<u>Rate<sup>3</sup></u>	<u>RUP<sup>4</sup></u>	<u>Precautions &amp; Restrictions<sup>5</sup></u>
Lorsban	4 EC	2-3 pt	N	Maximum 15 pt per acre per season. PHI 14 days silage, 35 days grain.
carbaryl (Sevin)	4 F	6 fl oz/ 1000 row ft	N	PHI 0 days.
	80 S	4 oz/ 1000 row ft	N	
carbaryl bait (Sevin)	20% B	5 - 10 lb	N	Baits are more reliable than sprays when soil surface is dry. PHI 0 days.
Asana XL	0.66 EC	5.8 - 9.6 fl oz	Y	PHI 21 days.
permethrin (Ambush, Pounce)	2 EC	6.4 - 12.8 fl oz	Y	None.
	3.2 EC	4 - 8 fl oz	Y	None.
trichlorfon (Dylox)	80 WP	1 1/4 lb	N	Apply trichlorfon in a band on each side of the bases of plants less than 1 ft tall.

<sup>1</sup> Treat when five percent of plants or more show cutworm damage. Apply in a band over the plants. Apply in the evening, when practical. Note: Counter, Dyfonate, Lorsban, Furadan, Aastar, and Mocap as used for corn rootworm control will also aid in controlling cutworms.

<sup>2</sup> Other formulations may be available.

<sup>3</sup> Rate per acre unless otherwise indicated. Be sure your equipment is properly calibrated. Refer to Extension Bulletin E-1582 **Chemical Control of Insects and Nematodes in Field and Forage Crops**, available at your county Extension Office.

<sup>4</sup> Restricted Use Pesticide.

<sup>5</sup> PHI = Pre Harvest Interval.

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To protect yourself and others and the environment, always read the label before applying any pesticide.

This publication contains pesticide recommendations based on research and pesticide regulations. However, changes in pesticide regulations occur constantly. Some pesticides mentioned may no longer be available, and some uses may no longer be legal. If you have questions about the legality and/or registration status for using pesticides, contact your county Cooperative Extension Service office.

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