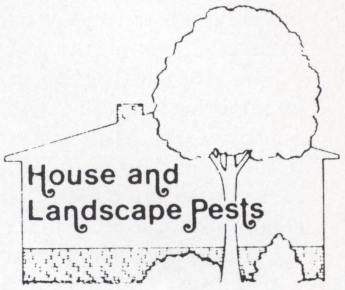
3-27-86
L-1504
20M Rev.

Texas Agricultural Extension Service
People Helping People

# CUTWORMS IN THE HOME GARDEN AND LANDSCAPE




**J. W. Stewart***

Cutworm moths are found in a variety of colors with an equal variation in wing markings. Moths have a wingspread of 1 to 2 inches and normally exhibit a grayish-brown to black body and wing color. The dark gray forewings are usually marked with light and dark spots or narrow bands. Cutworm larvae usually appear as dingy, grayish-black, smooth "worms" that curl into a ball or tight "C-shape" when disturbed.

*Cutworm Larva.*

## General Life History

Several species of cutworms exist in Texas. Their life histories vary considerably but all must pass through the egg, larva and pupa stage before reaching adulthood. The moth deposits eggs which hatch into small larvae (caterpillars). The larvae have chewing mouthparts and damage plants by their feeding activity. As the larvae grow they shed their skin periodically until reaching a length of 1 to 1½ inches at maturity when they enter a non-feeding pupal stage (cocoon) from which they emerge as moths. The adult moths have siphoning mouthparts and feed only on nectar; their feeding causes no apparent damage to plants.

Rainfall and other weather conditions affect the abundance of cutworms. Heavy rains may impair the moths' egg laying activities or force the larvae to the surface because of flooding. When this occurs, parasites and predators attack and destroy many of them.

## Damage

Cutworms attack almost every garden vegetable, fruit tree, lawn grass and ornamental plant in the home garden and landscape. Seedling plants are particularly vulnerable to cutworms since the main stem is tender and can be severed easily.

There are four distinct groups of cutworms based on habitat and feeding behavior. Each group attacks and damages plants differently. One or more examples for each category are discussed in the following paragraphs.

*Subterranean cutworms.* Members of this group feed almost entirely below the soil's surface on roots and underground stems. The pale western cutworm, *Agrotis orthogonia* (Morr.), is an important member of this group. The moth lays its eggs on the soil. The tiny larva spends the winter inside the egg until early spring when it emerges to feed. Initially the young larva feeds on leaves of the host plant but quickly assumes the subterranean feeding habit. Although there is only one generation annually, this species does considerable damage to vegetables and other agricultural crops throughout the western half of the United States and Canada.

*Tunnel dwellers.* Several cutworm species form and live in tunnels. One important member of this group is the black cutworm, *Agrotis ipsilon* (Hufnagel). This particular cutworm cuts a tender plant at the soil surface, pulls it into the tunnel and devours the plant. Several generations of this species are produced annually. The greatest damage usually occurs during April, May and June when the first generation is feeding. Outbreaks of this insect frequently occur on land subject to overflow. The black cutworm overwinters as either a larva or pupa.

*Surface feeders.* The army cutworm, *Euxoa auxiliaris* (Grote), is classified as a surface feeder, and is a serious pest of ornamental plants. The worms are ac-

*Extension entomologist, The Texas A&M University System.

tive during the night when they cut off small plants at or near the soil surface and feed on the plant. During the day the worms either hide in the soil or under mulch or surface trash. Because of their ability to tolerate cold temperatures, cutworms often are present in early spring when temperatures are slightly above freezing. There is one generation annually and the insect spends the winter months as a larva in the soil or in plant debris on the soil.

The granulate cutworm, *Feltia subterranea* (F.), is an important pest of garden vegetables in Central and South Texas. This surface-feeding cutworm can do tremendous damage in little time. The winter is passed in the pupal stage in the soil. There can be three to five generations annually in Texas, depending on weather conditions and temperature.

*Climbing cutworms.* Several species of climbing cutworms feed on the foliage, stems, leaves and fruits of many plants. Like other cutworms they feed primarily at night and hide in leaf litter or under boards or rocks during the day. However, some feeding may occur on cool, cloudy days.

The variegated cutworm, *Peridroma saucia* (Hubn.), is an important climbing cutworm. In most areas of Texas, this cutworm spends the winter as a larva. The number of generations per year varies somewhat, but the generation occurring during April to July accounts for most of the damage.

## Cultural Control

Cultural control techniques are very important in reducing cutworms. These controls make the habitat unfavorable for cutworm survival. A few control methods are listed below.

- Keeping gardens plowed and weed-free when not planted with desired crops is helpful since cutworm moths are attracted to grassy areas to deposit eggs.
- Cutworms seek hiding places to pass the daylight hours. One may take advantage of this behavioral trait by placing small boards in the garden for cover. Cutworms congregate beneath the boards and can be destroyed easily by hand.
- Climbing cutworms can be controlled, at least to some degree, by encircling the stems or trunks of trees and vines with a specially prepared, very thick and sticky substance.
- Mechanical barriers, such as tin cans with both ends removed, placed around transplants offer some protection against cutworms.

## Controlling Cutworms with Insecticides

Treat soils infested with cutworms before any seeds or transplants are placed in the garden. Table 1 lists suggested insecticides for preplant soil treatment.

Table 1. Preplant soil treatment for cutworm control in the home garden.

| Insecticide | Formulation | Dosage for 1,000 sq. ft.[1] | Vegetables |
|---|---|---|---|
| Diazinon (Spectracide®) | 79.4% E.C.[2] | 6 fl. oz in 3 gal. water | Cabbage, carrots, corn, lettuce, peas, pole beans, radishes, red beets, snap beans, tomatoes, turnips |

[1]Apply to soil surface and incorporate to a depth of 4 to 6 inches.
[2]E.C. emulsifiable concentrate (mix with water before applying).

Cutworm control in established vegetable and flower gardens and in lawns is another matter entirely. Application rates vary according to type of plants and species of cutworm. Table 2 lists certain insecticides that control cutworms when properly applied. For more information on pest control and pesticide products see Extension Publication B-1373 *House and Landscape Pests.*

Table 2. Insecticides for cutworm control in vegetable gardens, flower gardens and lawn areas.

| Insecticide | Formulations | Restrictions |
|---|---|---|
| Carbaryl (Sevin®) | spray<br>bait<br>dust | Read and follow manufacturer's instructions on the insecticide container. The identity of the specific pest or pests to be controlled or vegetables on which the products are to be used and other conditions of proper use are a part of the product label. |
| Diazinon (Spectracide®) | spray<br>granules (lawn only) | |
| Trichlorfon (Dylox®) | spray<br>bait | |
| Chlorpyrifos (Dursban®) | spray<br>granules | |
| synergized pyrethrins | spray | |
| resmethrin | spray | |

## Handling and Mixing Insecticides

Insecticide label clearances are subject to change and changes may have occurred since this publication was printed. The pesticide USER is always responsible for the effects of pesticide residues on plants, as well as problems that could arise from contamination of neighboring properties or plants. *Always read and follow carefully the instructions on the container label.*



Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Zerle L. Carpenter, Director, Texas Agricultural Extension Service. the Texas A&M University System.
20M — 8-85 Revision ENT