



ARMYWORM AS A PEST OF FIELD CORN

Pseudaletia unipuncta (Haworth)

True armyworm, *Pseudaletia unipuncta* (Haworth), is a native species widely distributed throughout the United States east of the Rocky Mountains. It has long been known to be an occasional serious pest of small grains and corn. However, with the increase of reduced-tillage culture and planting corn into sod and small grain cover crops (particularly rye), armyworm damage to corn has sharply increased during the past decade.

True armyworm primarily feeds on plants in the grass family but under hunger stress will also attack some legumes and other plants. Conventionally tilled corn is seldom damaged. Problems most frequently occur in reduced-tillage corn planted in old sod, grassy fields, or small-grain cover crops. First generation larvae active from mid-May to mid-June, can cause extensive defoliation to small corn plants. Stand losses are usually low to moderate but in some cases may be severe enough to warrant replanting.

DESCRIPTION

The moths are uniformly pale brown. There is a prominent white dot near the center of the front wings, and the wing-spread is about 1 1/2 inches. The moths hide in the grass and trash during the day. Strong flyers, they are active at night.

The eggs, white with a light greenish cast, are laid in clusters or rows on lower leaves of grass and corn plants. The grass leaf is frequently folded lengthwise, partially covering the eggs.

Newly hatched larvae are mostly pale green. During the day, they hide in the folded leaves in the whorl of the corn plant. Upon becoming about half grown (3/4 to 1 inch) their body color becomes basically brown with considerable color variation among individual worms. Full-grown worms are about 1 1/2 inches in length with a narrow broken white stripe down the



Figure 1. Photo by Marlin E. Rice

center of the back. There also are stripes along each side of the body. The larvae feed on the leaves at night.

The caterpillar stage lasts about 3 weeks, but the caterpillars are usually 10 to 14 days old before damage is noticed. By this time, many of the larvae will have small, white eggs stuck to their bodies just back of the head. These eggs hatch into parasite maggots which enter the body. Those larvae that reach maturity dig into the soil to pupate. Next generation moths emerge about 15 to 18 days later.

LIFE HISTORY

True armyworms tend to overwinter in states to the south of Pennsylvania as partially grown larvae under plant trash and in clumps of grass, and as pupae in the soil. Moths emerge from early May to early June and migrate northward. Flights of armyworm moths can be detected with pheromone traps available from a variety of suppliers.

Adult moths lay eggs on weeds and/or grasses along field margins, on leaves of corn, or on small grains. Larvae hatch about a week later and develop over a period of approximately 3 weeks, feeding mostly at night. When eggs are not laid on corn, caterpillars move to corn when weeds or grain cover crops are killed with herbicides. Fully grown larvae pupate in the soil and this stage lasts about 15 days with new moths emerging in July. There are two and possibly a partial third generation. Second generation larvae generally cause little damage.

DAMAGE

True armyworm damage is observed most frequently in no-till fields that were sod the previous year or had small-grain cover crops that were not burned down with herbicides early enough in spring. The first symptoms will be ragged feeding on the top leaves with wet, brown pellets (feces) in the area. The culprit usually can be found hiding well down in the whorl or at ground level under clumps of grass.

Conventionally planted corn occasionally may be damaged by caterpillars that originate in a nearby small grain field, but poorly managed small grain cover crops appear to be a frequent source of caterpillars; when the cover crop is killed, armyworms will move to the corn. When armyworms are numerous, small corn plants may be completely eaten down to the midribs.

On very rare occasions, larvae of the second generation may attack corn in late July and August. These caterpillars hide under stones and clods during the day, then feed on grasses and lower corn leaves at night. However, the type of damage is much different than that caused by the first generation. They seldom destroy any leaves above the ear.

MANAGEMENT

Corn fields likely to be attacked should be checked every few days during the first 2 weeks of June. It is also possible to monitor at-risk areas with pheromone traps to determine the size of the adult populations. When scouting fields, look for leaf feeding and presence of caterpillars in the whorl, where they hide during the day. Control efforts are usually not economical unless 10 percent or more of the plants are infested and control can be challenging if caterpillars are greater than one-inch long. A number of insecticide sprays and baits can be used as rescue treatments. Check the current issue of the Penn State Agronomy Guide for materials and dosage rates. You also may check with your county extension agent and local farm supply dealer for suggested controls.

WARNING

Pesticides are poisonous. Read and follow directions and safety precautions on labels. Handle carefully and store in original labeled containers out of the reach of children, pets, and livestock. Dispose of empty containers right away, in a safe manner and place. Do not contaminate forage, streams, or ponds.

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