



ENTFACT-111

ARMYWORMS IN SMALL GRAINS

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The armyworm, also known as true armyworm, is a common early season pest that occasionally causes catastrophic losses in small grains. Infestations, which occur in the spring, usually develop first in very thick, lodged stands. The name armyworm derives its name from its behavior of migrating in large numbers into fields similar to invading armies. Cool, wet, spring weather usually favors armyworm development.

Distribution

The full-grown (1-1/2") armyworm has a greenish brown body with a thin stripe down the center of the back and two orange stripes along each side. The head is brown with dark honeycombed markings. The small, globular, greenish-white, eggs are laid in clusters of 25 or more on the leaves of grasses.

Armyworms overwinter as partially grown larvae in grasses or small grain fields. When spring returns, they resume feeding. Mature larvae pupate just below the surface of the soil. The adult moth is tan with a 1 3/4" wing span. There is a tiny white spot in the center of each forewing. Typically, moth flight begins in early to mid April. Adults of the first generation emerge in April and May and feed on nectar for 7 to 10 days before beginning to lay eggs. Larvae will appear from late April to early May. There are three to four generations per year in Kentucky, but serious damage is usually only associated with the first.

Armyworms usually feed at night, and damage small grains by chewing leaves. They prefer the succulent leaves near the top of the plant. Feeding is usually confined to leaf margins, but occasionally they may strip the entire plant. Occasionally, armyworms will clip the heads from maturing plants. When it happens, the resulting loss in yield can be substantial. During the day, armyworms hide in the soil cracks or under ground cover. Small grains can usually recover from light to moderate feeding. However, severe damage, can cause significant loss in yield.

Treatment recommendations are based on scouting. Scouting is used to determine if armyworms are present (identify hot spots) and to evaluate the need for control. Begin to sample if characteristic armyworm

damage is observed while moving through the field. Look on the ground for armyworms or their black pepper-like droppings. Examine a 4 square foot area in at least 5 random locations in the field. Count the number of larvae between 1/2 and 3/4 inches long. Also, do not count larvae that are obviously parasitized or diseased. Remember, during the day, armyworms hide in soil cracks or under clods and crop residues. Occasionally, especially during a heavy overcast, they may be found on the plant during the day, however, they usually feed at night.

When scouting, check the backs of armyworms, for eggs. These small, oval, yellowish eggs, laid by a parasitic fly, are usually located just behind the head of the larva. Maggots will hatch from these eggs and kill the armyworm larvae. These parasites and other beneficial organisms usually keep armyworms from reaching damaging levels. Avoid treating with insecticides when large numbers of parasitized larvae are present.

There are several things to consider before deciding whether or not to treat for armyworms. Size of the armyworms is very important. If longer than about 1-1/4" they have completed most of their feeding. Control of large larvae is not profitable because the damage is already done. Control actions in small grains are recommended when an average 16 or more armyworms, between 1/2 and 3/4 inches in length, are found per 4 square feet. If treatment is warranted consider the waiting days to harvest. Various insecticides will have different requirements. Also, you may wish to consider if there are other pests present. If more than one pest is present choose a compound which will provide control for both.

Pheromone traps are available to monitor adult armyworm activity. See ENT-54, Vendors of Microbial and Botanical Insecticides and Insect Monitoring Devices, for a list of vendors of the armyworm lures. Although armyworms can be captured in the small, cardboard, wing traps, the Texas wire cone trap (ENTFACT-010) is recommended. Armyworm moths are common throughout the season and are frequently captured in pheromone traps baited for other moth

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species. You should set your traps by March 1st (ENTFACT-112) to make sure you are ahead of the first armyworm flight.

Preventive treatments for armyworms are not justified. Although it may appear as if the preventive treatments are very effective, in fact the likelihood that a particular field will have an outbreak of armyworms is very small. Additionally, most "preventive treatments" are made because of the convenience of applying the insecticide while doing some entirely unrelated practice, (for example, applying herbicide or fertilizer). The long-lasting insecticides of the past are gone. Today, pest control requires as much accuracy in the timing of the application as it does in selecting the product or equipment.

Keep in mind that a majority of fields will have some armyworms in most years, but the chance of encountering an infestation that economically justifies the cost of treatment is quite small. Only rescue treatments are recommended for armyworms in small grains. Additionally, spot treatments can usually provide effective control of localized infestations like field-margins.

References

- Johnson, D. Using Pheromone Traps in Field Crops. ENTFACT-112.
- Johnson, D. Vendors of Microbial and Botanical Insecticides and Insect Monitoring Devices. ENT-54.
- Johnson, D. and S. McNeill. Plans and Parts List for the "Texas" cone trap for Monitoring Certain Insect Pests. ENTFACT-010.