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First-cutting alfalfa insects

Marlin E. Rice

Iowa State University, merice@iastate.edu

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First-cutting alfalfa insects

Abstract

Last week I was scouting for alfalfa weevil larvae in a field near Ames and was reminded of the fact that alfalfa harbors a tremendous number of insects, some of which are pests but most are not. The first cutting of alfalfa is occurring in many fields across the state this week, but other fields are still standing. As these fields are scouted, you may be curious about the identification of the insects in the sweep net. This article briefly discusses the identification and pest status of first-cutting alfalfa insects I found; however, this list is not exhaustive and other insect species may occur in your alfalfa.

Keywords

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Insects and Mites

First-cutting alfalfa insects

by Marlin E. Rice, Department of Entomology

Last week I was scouting for alfalfa weevil larvae in a field near Ames and was reminded of the fact that alfalfa harbors a tremendous number of insects, some of which are pests but most are not. The first cutting of alfalfa is occurring in many fields across the state this week, but other fields are still standing. As these fields are scouted, you may be curious about the identification of the insects in the sweep net. This article briefly discusses the identification and pest status of first-cutting alfalfa insects I found; however, this list is not exhaustive and other insect species may occur in your alfalfa.

Pea aphid—pest

This large green aphid is common on alfalfa stems. Hundreds may be collected in several sweeps with a net. They cause damage by sucking plant sap from the terminal leaves and stem, causing the plants to wilt. They are pear-shaped with long legs and antennae. The antennae have dark bands on the antennal segments. They walk very slowly and do not jump.



Pea aphid giving birth to nymph. (Marlin E. Rice)



Hundreds of insects can be collected from alfalfa in a sweep net. (Marlin E. Rice)

Alfalfa weevil—pest

Larvae feed on terminal leaves, removing the tender leaf tissue while leaving a “skeleton” of tougher leaf veins. Their feeding reduces forage quality. Adults also feed on plants and are more likely to damage the regrowth of the second cutting by eating the new buds. Larvae have a black head and white stripe down the back. Newly hatched larvae are yellow or light green; older larvae are dark green. Adults are ¼ inch long, with a long “snout,” and a dark brown stripe down the back.



Alfalfa weevil larva. (Marlin E. Rice)



Alfalfa weevil adult. (Marlin E. Rice)

Clover root curculio—pest

This weevil is $\frac{3}{16}$ inch long and slightly smaller than the adult alfalfa weevil. It has a short, broad “snout,” there is no broad stripe on the back, and the body is sparsely covered with upright hairs. Feeding by adults is usually insignificant, but larvae feed underground and can deeply scar the taproot. This feeding can contribute to alfalfa stand decline.



Clover root curculio. (Marlin E. Rice)

Bean leaf beetle—pest

Alfalfa serves as a refuge for this common pest of soybeans before soybeans emerge from the ground. When the hay is cut, the beetles fly to nearby soybean fields where they lay eggs and continue to feed. Beetles may be colored dark yellow or red and are best recognized by the black triangle behind the pronotum (“neck” region). Additionally, most beetles have four rectangular spots on the wing covers, but some may be spotless. Their feeding in alfalfa is considered to be insignificant.



Bean leaf beetle—typical color and pattern. (Marlin E. Rice)



Bean leaf beetle without spots on wing covers. (Marlin E. Rice)

Tarnished plant bug or Lygus bug—pest

This insect is $\frac{1}{4}$ inch long and brown with wings that are bent downward near the tip. Adults run and fly rapidly. Feeding injury occurs when the bugs suck sap resulting in crinkled or puckered leaves and stunted alfalfa growth. Significant damage from this insect rarely occurs in Iowa.



Lygus bug. (Marlin E. Rice)

Lady beetles—beneficial

Adults of four species of lady beetles were found. Most likely they were feeding on pea aphids. The convergent lady beetle (with converging lines immediately behind the head on the pronotum) and 12-spotted lady beetle (pink with 12 black spots) are native to North America. The 7-spotted lady beetle (7 black spots on the wing covers and two small white patches behind the eyes) and multi-colored Asian lady beetle (0 to 19 spots with large white patches on the pronotum) are native to Eurasia. No larvae were found of any species, but adults were laying eggs. Eggs are bright yellow, stacked side-by-side on their ends and are laid in clusters.



Convergent lady beetle. (Marlin E. Rice)



12-spotted lady beetle. (Marlin E. Rice)



7-spotted lady beetle. (Marlin E. Rice)



Multi-colored Asian lady beetle. (Marlin E. Rice)



Lady beetle eggs. (Marlin E. Rice)

Soldier beetle—beneficial

There are many species of soldier beetles and this one is black and tinged with red on the pronotum and legs. Soldier beetles feed on nectar, pollen, and some species feed exclusively on aphids. This species may have been feeding on pea aphids.



Soldier beetle. (Marlin E. Rice)

Damsel bug or Nabid bug—beneficial

This slender, mottled brown bug is a predator of pea aphids, alfalfa weevil larvae, and anything else it can stab. Adults are $\frac{3}{16}$ inch long and can run quickly, but unlike the tarnished plant bug, their wings are not bent downward and they are less prone to fly.



Nabis, or damsel, bug. (Marlin E. Rice)

Green lacewing—beneficial

Green and delicate with lace-like wings, this beautiful insect also has a foul-smelling odor. Adults fly with a fluttering motion. Adults and larva are great predators of pea aphids, but only adults have been found so far.



Green lacewing adult. (Marlin E. Rice)

Spiders—beneficial

This long-jawed orb web spider represents the many species of spiders that occur in alfalfa. All spiders are predators and they eat of variety of insects—some of which are pests and some of which are beneficial insects.



Long-jawed orb weaver spider. (Marlin E. Rice)

Parasitic wasp—beneficial

Several species of parasitic wasps, also called parasitoids, attack alfalfa weevils (larvae and adults) and aphids. Adults are small (always smaller than the insect they attack) with long antennae and clear wings, and the females have long ovipositors for jabbing an egg into their target host.



Parasitic wasp. (Marlin E. Rice)

Many species of insects may briefly feed in alfalfa as they fly from field to field in search of a mate, a suitable host, or they may feed on weeds, grasses, or leaf litter in the field. These insects are incidental as they are neither pests or beneficial in helping to reduce pest populations. They are shown here because they should not be confused with the pest species.

Striped cucumber beetle—incidental

This beetle resembles a western corn rootworm, but it has dark, black “knees” and the three stripes on the wing covers are distinctive—they never touch or blend together. This insect is a pest of garden vegetables.



Striped cucumber beetle. (Marlin E. Rice)

Leafhopper—incidental

Many species of leafhoppers occur in alfalfa, especially if there is a mixture of grasses, and they can easily be confused with the potato leafhopper. Only the potato leafhopper damages alfalfa, and it is a solid, light green color. Most leafhoppers have the same general shape—long and slender with a head slightly wider than the rest of the body. This brown-colored leafhopper is not a pest of alfalfa.



Leafhopper (not the potato leafhopper). (Marlin E. Rice)

Fly—incidental

Many species of flies can be found in alfalfa. The habits of this small (<2 mm) fly are unknown, but it is not a pest. The only fly pest in Iowa is the alfalfa blotch leafminer and it occurs in northeastern Iowa.



Numerous species of flies occur in alfalfa; this species is not a pest. (Marlin E. Rice)

Sawfly—incidental

Sawflies are larvae of wasps. The larvae resemble the larvae of moths and butterflies, but they have more than five pairs of prolegs. They feed on a wide range of plants, and this particular species is suspected of feeding on grass.



Sawfly larva. (Marlin E. Rice)

Marlin E. Rice is a professor of entomology with extension and research responsibilities in field and forage crops.



Insects and Mites

Warrior PHI reduced to 30 days

by Marlin E. Rice, Department of Entomology

Syngenta Crop Protection, the manufacturers of Warrior® (lambda-cyhalothrin) insecticide, recently announced a label change approved for Iowa and all neighboring states. The preharvest interval has been reduced from 45 days to 30 days in soybeans; therefore, do not apply this product within 30 days of harvest. No new insect pests were added to the label. Warrior is one

of several insecticides commonly used for control of soybean aphids. Read and follow all label directions before using this product.

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