COMMON FORAGE LEGUME INSECTS

For safe and effective use of insecticides, always identify the problem correctly.

1. Alfalfa weevil adult, and larvae and damage
2. Clover leaf weevil larva
3. Sweetclover weevil and typical damage
4. Variegated cutworm
5. Grasshopper
6. Green cloverworm
7. Potato leafhopper (greatly enlarged) and leafhopper damage to alfalfa
8. Meadow spittlebug and nymphs
9. Spotted alfalfa aphid
10. Pea aphid

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Common Forage Legume Insects

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1. Adult alfalfa weevil—Overwinters in alfalfa. Females lay eggs in alfalfa stems from September through June. New adults leave alfalfa fields in June to estivate in field margins, woods, and other sheltered areas until fall when they return to alfalfa. Adults feed primarily on alfalfa, but will infest clovers and several other plants if alfalfa is not available. Adults are 3/4 inch long, brown colored with a darker stripe down the back.

Alfalfa weevil larvae—The larvae shown are fully developed and ready to pupate for the change to adults. The larvae normally hatch in April, May, and June. Newly hatched larvae are yellowish with black heads. They imbed themselves in the growing tips of alfalfa stems. After several days feeding, the larvae turn green and have a white stripe down the back. When fully developed, the larvae are about 3/8-inch long. Chemical control of the larval stage is the best method of control available at this time.

Alfalfa weevil damage—Close inspection of infested fields in the spring is necessary to detect the beginning of leaf skeletonization caused by larval feeding. As more and more leaf tissue is removed, the field assumes a silvery appearance. Feeding may continue until stems are also eaten which may kill young alfalfa plants. Hay quality will be very poor if feeding damage reaches the degree shown.

2. Clover leaf weevil—A close relative of the alfalfa weevil occasionally injures alfalfa and red clover. These insects usually pass the winter as partially grown larvae and may be found at the base of plants during the day. The larvae are green with a pale white stripe edged with pink down the back. Full grown larvae are about ½ inch long. Adult weevils are twice as large as the alfalfa weevil and lay their eggs in September and October. Disease and a parasitic wasp keep this species in check most of the time.

3. Sweet clover weevil—Adult weevils commonly feed on all clovers, alfalfa and soybeans. The brownish beetles, about 1/8 inch in length, have a short snout, eat out rounded areas in plant leaves, and may cause severe damage. The larvae are small grubs that feed on clover roots and crowns. Their damage usually goes unnoticed. When severe populations occur, rotation to grasses or cultivated crops will eliminate the infestation.

4. Variegated cutworm—Larvae of this pest are frequently found in alfalfa and other crops. The cutworm overwinters as a pupa. When fully developed the larvae measure 1-1 ½ inches long. They have pale yellow dots along the middle of the back, and often have a white on the eighth abdominal segment. The skin is smooth, generally ashen in color, or a light dirty-brown, lightly mottled with dark brown. Three to four generations occur.

5. Grasshopper—Several species of grasshoppers are commonly found in forages. Outbreaks severe enough to cause economic damage are usually associated with prolonged periods of drought. Undisturbed areas, such as fence rows, roadsides and pastures are the preferred habitats for early development.

6. Green cloverworm—Nearly always present in alfalfa and clover, the green cloverworm occasionally attains economically important numbers. It overwinters both in the pupal and adult stage. The adults are dark brown, black spotted or motiled moths with a wing spread of about 1 ¾ inches. The larvae are about the color of alfalfa leaves with two narrow white stripes down each side of the body. When fully grown, they are 1-1 ¾ inches long. Two to three generations probably occur in Missouri.

7. Potato leafhopper—This pest is known to feed on 100 cultivated and wild plants. The ¾-inch-long, yellowish-green wedge shaped adults migrate into the state each spring. The females live a month or more and deposit 2-3 eggs a day in plant stems and leaf petioles. The eggs hatch in 10 days, and the yellowish green nymphs become full grown in about two weeks. The nymphs are similar in shape to the adults, but lack wings: They feed on the underside of the leaves, usually where they hatched. The leafhoppers pierce the leaf vein and suck the sap from the plant, causing the leaves to turn yellow. In dry seasons, the added stress of drought to "hopperburn" can cause serious damage to alfalfa plants, as well as loss of the current cutting. Two to four generations may occur in Missouri each year.

8. Meadow spittlebug—Nymphs are found inside the spittle masses in April, May, and June. They are pink when very young, but turn yellowish-green as they develop. Soon after hatching, the nymphs secrete a liquid (mostly plant sap) and force air through it to produce the spittle masses. The grey or mottled-brown winged adults, about ¼ inch long, emerge in June. Almost all damage is caused by the nymphs sucking sap from the plant.

9. Spotted alfalfa aphids—These plant lice are usually pale yellowish-green with six or more rows of black spots on their backs. The spotted alfalfa aphids seen on alfalfa are nymphs or winged and wingless females. Males are rare. Both adults and nymphs suck sap from the plants. Resistant alfalfa varieties, including Cody, offer adequate protection against this pest.

10. Pea aphid—These plant lice are usually dark green, darker than the spotted alfalfa aphid, and do not have spots on their bodies. Infestations may build up in April, May, and June. Predators usually hold the populations in check.

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