



Potato Leafhopper

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Introduction

Potato leafhopper, *Empoasca fabea*, belongs to the family Cicadellidae in the order Hemiptera.

Description

Adult potato leafhoppers are bright yellowish-green, wedge-shaped insects measuring up to 3 mm (0.125 inch) long (Fig. 1). The wings are clear and extend past the tip of the abdomen. There are small white markings behind the head, but these may not be visible to the naked eye. They jump and fly quickly when disturbed. Nymphs resemble the adults but are smaller and lack wings; they move sidewise like crabs (Fig. 2). Nymphs quickly scuttle to the underside of a leaf when disturbed. The hind legs of both adults and nymphs are noticeably spiny.



Figure 1. Adult potato leafhopper (xpda, CC BY-SA 4.0 via Wikimedia Commons)

Host Plants

Potato leafhoppers have a wide host range of wild and cultivated plants. They are particularly damaging to beans, lettuce, and potato. Potato leafhoppers are a major pest of alfalfa. It damages apples, grapes, and also shade trees such as maples.



Figure 2. A potato leafhopper nymph (Steve L. Brown, University of Georgia, Bugwood.org).

Damage

Both adults and nymphs have piercing-sucking mouthparts which they use to remove sap from leaves and can produce feeding damage. Bean leaves curl or cup, crinkle, and tend to become yellow or bronze. Some bean plants show shoot withering or become dwarfed and may die. Feeding damage by potato leafhopper on potatoes, peanuts, alfalfa, and other plants sometimes results in a condition known as “hopperburn” (Fig. 3), where the tips of leaves curl, fade to yellow and then turn brown, and become brittle. Feeding damage by potato leafhopper may be mistaken for nutritional deficiencies or herbicide injury. Damage is often worse in hot, dry weather.

Potato leafhopper populations are rarely noticed before feeding damage is seen, unless plants or fields are scouted regularly. Yield loss may occur before damage symptoms appear. Adult populations may migrate from fields during harvest onto other host plants.



Figure 3. Hopperburn on peanut (Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org).

Potato leafhoppers can be pests of shade trees, particularly maple species in both the nursery and the landscape. Damage to maples is seen as shoot proliferation and the development of multiple leaders sometimes called a “witch’s broom.” Although unsightly, this damage is minor to the trees’ overall health.

Life History

Potato leafhoppers have an incomplete life cycle consisting of egg, nymphal, and adult stages. Female potato leafhoppers lay eggs on the stems and veins of the host plant. Potato leafhoppers live for about one month.

Potato leafhoppers do not overwinter in Virginia due to the cold winter weather. They migrate north on warm winds from the Gulf states each year. There are multiple generations in Virginia each year, depending on when they arrive in Virginia and when frosts kill off populations in the fall.

Distribution

Potato leafhopper is found throughout the United States.

Cultural Control

Pick and destroy infested leaves to remove potato leafhopper eggs. Remove weedy hosts that serve as a reservoir for potato leafhoppers.

Biological Control

Lacewings, damsel bugs, lady beetles, minute pirate bugs, and spiders are included among the natural enemies of leafhoppers. Dusting affected plants lightly with diatomaceous earth may help control leafhoppers.

Chemical Control

Scout fields for leafhopper populations and follow treatment thresholds if established. For treatment recommendations for potato leafhopper, see the current Mid-Atlantic Commercial Vegetable Production Recommendations ([VCE Publication 456-420](#)) for commercial fields or the Home Grounds and Animals Pest Management Guide ([VCE Publication 456-018](#)) for home gardens and shade trees. See the Field Crops Pest Management Guide for alfalfa, soybeans, or peanuts ([VCE Publication 456-016](#)). As with all pesticides, follow the label instructions carefully with regards to rates and precautions.

Revision

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