



Grasshoppers

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Introduction

Grasshoppers belong to several families in the order Orthoptera. They are relatives of crickets and katydids.

Description

There are many different species of grasshoppers found in Virginia. Grasshoppers are generally colored brown, gray, or green, and frequently have black, yellow, or red markings (Fig. 1). They range from slender to stout bodied. Mature adults measure up to 5 cm (2 inches) long, but most are probably around 2.5 cm (1 inch).

Most adult grasshoppers are strong flyers, but some species have adults with short, ineffective wings. Banded-wing grasshoppers have strikingly colored hind wings to startle would-be predators as the adults fly away. Some grasshoppers make a crackling or buzzing sound with their hind wings as they fly. Both adults and nymphs have strong hind legs that allow them to jump distances.



Figure 1. A typical adult grasshopper (Russ Ottens, University of Georgia, Bugwood.org).

Grasshopper nymphs look very much like the adults, but have wing pads instead of developed wings (Fig. 2).



Figure 2. Typical grasshopper nymph with undeveloped wing pads (Joseph Berger, Bugwood.org).

Life History

Grasshoppers have an incomplete life cycle of egg, nymphal, and adult stages. Female grasshoppers lay pods of eggs in the soil near the end of summer. These eggs are the overwintering stage and nymphs emerge as temperatures warm the following year. Young nymphs feed on tender plants and, as they mature, migrate to other areas and feed on a large variety of plants. Nymphs reach the adult stage in about 1.5 to 2 months. Adult males attract female mates by singing, which is done by rubbing a leg over a special ridge on the forewing. Adults continue feeding and laying eggs until they are killed by cold temperatures. There is usually one generation per year.

Common Host Plants

Grasshoppers feed on a wide range of grasses, vegetables, field crops, and nursery crops. In particular, lettuce, potato, beans, and corn are often eaten by grasshoppers in Virginia.

Distribution

Grasshoppers can be found in many habitats throughout the United States. They are especially troublesome in the central and northwestern states.

Damage

Grasshoppers have chewing mouthparts and they feed on any available vegetation (Fig. 3). When abundant, they may destroy entire plantings of crops such as lettuce and potato. Damage may be more severe in irrigated crops during dry periods as the grasshoppers are attracted to the moisture found in fresh food.



Figure 3. Typical chewing damage to a leaf by grasshopper feeding (R.J. Reynolds Tobacco Company, Bugwood.org).

Cultural Control

Grasshoppers have a wide host range, including many weedy species that may serve as a reservoir host before they move into more valued host plants. Avoid placing gardens next to hay fields, pastures, and ditch banks with high grasshopper populations. Reducing or mowing weedy hosts around plantings may lower grasshopper populations in the immediate area. Cover young seedlings and plants with netting or cheesecloth to protect them from grasshoppers. After harvest, remove crop debris and turn the soil to expose the eggs to predators and the weather.

Organic/Biological Control

Birds such as crows, bluebirds, and sparrows are natural predators of grasshoppers. Spiders, praying mantises, snakes, lizards, and toads will eat them, too. Mammals such as skunks, foxes, raccoons, and opossums also prey on grasshoppers.

Chemical Control

Treat grasshoppers using a registered insecticide. Consult the Virginia Pest Management Guides for Home Grounds and Animals ([VCE 456-018](#)) for home gardens; Horticultural and Forest Crops ([VCE 456-017](#)) for commercial nursery crops; Field Crops ([VCE 456-016](#)) for corn, hay, soybeans, and other field crops; and Mid-Atlantic Commercial Vegetable Recommendations ([VCE 456-420](#)) for row crops. As with all pesticides, follow the label instructions carefully with regards to rates and precautions.

Grasshoppers are very active insects. They can disperse from an area about to be sprayed and then return after the treatment dissipates and is no longer effective.

Revised

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