



Insect and Mite Pests of Grapevines on Long Island

Bud feeders

Climbing cutworms is a general term applied to a large number of moth larvae that feed on grape buds. These night feeding larvae attack developing buds, young leaves, and shoots, devouring all of the tissue. Damage is usually spotty, although it can be serious.

Flea beetle adults (first generation) attack swelling buds usually at the very beginning of bud swell, earlier than cutworms. These beetles bore into buds, hollowing out the inside. Vines near wooded areas are more susceptible. Larvae and summer adults feed on young foliage, avoiding the leaf veins, leaving behind a kind of skeleton. Unless bud feeders are a perennial problem (cause major crop loss), control measures are usually not warranted.

Foliage feeders

Japanese beetles, in addition to flea beetle larvae and summer adults, also feed on grapevine foliage. Most people are familiar with the shiny, metallic green beetle. Generally, infestations are spotty and do not hurt the vines. Heavy infestations, however, can literally defoliate young grapevines. In this case, control measures would be necessary. Damage appears to be more frequent in areas bordered by turf or pasture, since these are also feeding grounds for the beetle grubs.

Leafhoppers damage leaves by sucking out the liquid contents of cells. The potato leafhopper usually shows up in June on Long Island. It is yellowish in color, wedge-shaped, very mobile, and about 1/8" long. It can be found on leaf undersides and moves sideways when disturbed. Damage appears as a marginal yellowing of the leaf. The grape leafhopper is similar in appearance, but has 3 black spots and does not move sideways. During the summer, grape leafhopper "skins" can be found on leaf undersides. Damage appears as a yellow speckling, especially along veins. Growers do not usually treat for leafhoppers.

Aphids, another group of sucking insects, are a common pest on many plants. Most are less than 1/16" long and can be distinguished by the presence of 2 "tailpipes" or projections on the back rear of the aphid. In some years, the dark brown grapevine aphid has literally blanketed shoot tips of vines. Usually, grapes are sufficiently vigorous to tolerate attack and treatment is not necessary.

European red mite has become a concern for Long Island grape growers. Tiny red mites can be found mostly on leaf undersides, from mid-May through September. The mites also ingest the contents of cells, leading to a bronzing of infested foliage. Severe bronzing, especially early in the season, can result in a reduction in photosynthesis. This has implications for vine health and for fruit quality. When scouting in June, if you find more than 2-3 mites per leaf, treatment may be necessary. Vines can tolerate higher mite populations later in the season.

Fruit feeders

The grape berry moth is by far, the worst insect pest of Long Island grapes. This tiny (1/4") moth lays its eggs primarily on newly formed berries. Eggs hatch in 4-8 days, yielding larvae that feed on young berries, often inside a protective webbing. Generally, 3-10 berries will be webbed together. Soon after fruit set, the larvae will bore into the berry and feed internally. One larva may attack up to 7 or so berries. Look for a purplish discoloration on berries, usually accompanied by a small entrance hole. This entrance hole has been shown to be a starting point for the **Botrytis** fungus. This pest will have several generations, so they are a concern from

fruit set (June) to harvest. Vines near wooded areas are more at risk. If more than just a few clusters have berry moth damage, control measures may be warranted, starting around the post-bloom stage.

Pests that damage leaves and shoots

A number of pests can attack grape leaves and shoots. Usually, damage is spotty and does not seriously hurt the vine. A heavy infestation of any pest, however, can damage the health of the vine.

Grape cane gallmaker. In May or June, the female of this snout-nosed beetle hollows out cavities in a green shoot, then lays her egg. The resulting gall is apparent in 6-8 weeks and is found just above a node. It is twice as thick as the node, has a deep longitudinal scar, and is reddish. The yellowish larvae with a light brown head may be found within the gall until August. Damage is usually not serious enough to warrant treatment.

Grape cane girdler. In late May-June, this shiny black beetle lays its eggs in a green shoot. The female then proceeds to girdle the cane just above the egg and just below the egg. This section of shoot either dies back or breaks off. A shoot which all of a sudden snaps, perhaps hanging by a thread, has been attacked by the cane girdler. Damage is usually minor.

Grape tumid gallmaker. A small fly by this name lays its egg within an unfolding bud or shoot tip. Maggot-like larvae hatch and feed on vine tissue. A small (1/8-1/4") reddish gall forms around the larvae as it feeds. Galls can be found on leaf undersides, clusters, and petioles. Although vineyards in New England have reported serious infestations of this pest, it has not been a problem on Long Island. Treatment is not recommended, except in extreme situations.

Insect and Mite Control

Many types of insects cause damage to grapevines. Often, the damage is cosmetic and does not hurt the vine. A central theme to insect and mite control is the concept of scouting. Scouting is the systematic evaluation of foliage and fruit on a timely basis. This allows identification of the pest, an assessment of the damage, and will help in deciding whether treatment is warranted. Recognizing insect or mite damage is relatively easy with a basic understanding of each potential pest.

For the smaller grower, scouting simply means checking the vines weekly or biweekly for any signs of damage. With only a few vines, this is easy. With 30 or more vines, it is too time consuming to check every vine; representative samples must be taken. Use the following guidelines when scouting:

1. If you have 10 or less vines, scout each vine.
2. For larger plantings, scout throughout the planting. A rule of thumb is to scout at least 1% of your vines, with a minimum of 10 vines.
3. Scout at least a few vines of each variety planted.
4. Check the upper and lower leaf surface of 10 leaves per vine, randomly chosen. Look over several shoots as well.
5. Check 5 clusters per vine, randomly chosen.

Use these results in conjunction with the information above. An additional benefit of scouting is the ability to assess the disease situation.

For specific control recommendations, home gardeners should refer to a current copy of [Pest Management Around the Home, Part I -- Cultural Methods](#) and [Pest Management Around the Home, Part II -- Pesticide Recommendations](#).

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Slight revisions 5/96

TK 11/2008 AW 4/2012