

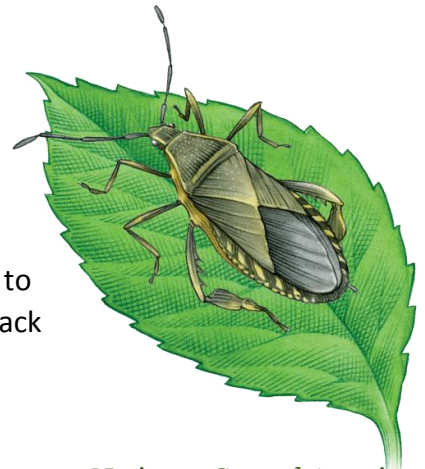
Organic Squash Bug Control

By Barbara Pleasant
April 16, 2013

One of the most common pests encountered when growing pumpkins or squash, squash bug (*Anasa tristis*) adults and larvae feed on the leaves, stems and fruits of squash and pumpkins; late in the season fruits may be swarmed by immature nymphs. Badly hit plants produce poorly because so many leaves are consumed and fruits are damaged. Organic controls for squash bugs include crop rotation, using row covers and dedicated handpicking. Trap cropping also can be used to manage squash bugs in the vegetable garden.

What Are Squash Bugs?

Native to Central America, squash bugs are now found wherever squashes are grown. Emerging in mid to late spring, just as pumpkin and squash begin growing vigorously, squash bug adults are gray, oval-shaped stink bugs capable of flying on warm days. Adults are often seen lurking in squash foliage, looking for mates. Much more visible are the dark brown egg clusters attached to either side of leaves, often between leaf veins. Small, gray nymphs with long black legs appear a few weeks later, along with many additional egg clusters.



Native to Central America, squash bugs are now found wherever squash is grown.
Illustration by Keith Ward

What Squash Bug Damage Looks Like

Squash bug larvae and adults feed by inserting their needle-like mouth parts into squash or pumpkin leaves, stems or fruit to suck plant juices. As they feed, they release a toxin that causes injured tissues to turn black or brown and die. When plants develop fruits, adults and nymphs often damage them by making numerous pinprick holes. In some areas, squash bugs vector a viral disease called Cucurbit Yellow Vine disease, which causes plants to turn yellow and stop growing.

Squash Bug Life Cycle

In fall, squash bugs fly to nearby wooded areas and overwinter beneath bark or other cover. In spring, they emerge and search for squash, pumpkins or other suitable host plants in the squash family. After a little light feeding, mated females lay clusters of glossy brown eggs on both sides of leaves. The eggs hatch about two weeks later, and the nymphs feed for a month or more before reaching adulthood. Meanwhile, the adult females continue laying eggs. A six week complete life cycle is typical. This means a second generation can emerge at the perfect time to sabotage fall pumpkins or winter squash.

Squash Bug Predators

Numerous natural predators can assist in the struggle to manage squash bugs, though most of them are most active late in the season. Natural enemies of the squash bug include Tachinid flies and tiny egg parasites that resemble flying ants.

Organic Squash Bug Control

Good organic control of squash bugs involves using several different methods. Yellow summer squash are generally very attractive to squash bugs, as are buttercup squash and large pumpkins. When grown as crop plants, these attractive strains should be protected with **floating row covers** until they start to bloom heavily. You also can use a **small planting of early yellow squash as a trap crop** for squash bugs. When a number of squash bugs have gathered on the plants, place a bag over them and pull them up. Pull only one plant at a time, which forces surviving squash bugs to move to neighboring plants.

Squash bugs love pumpkins and squash, and they will sabotage the leaves, stems and fruits of these autumn favorites. For a pest-free squash patch, follow these expert tips for organic squash bug control, including handpicking and installing row covers. You also can use the opposite approach by including butternuts and other *C. moschata* species in your garden, which are slightly less attractive to squash bugs compared to other squash. However, when they are the only squash grown, squash bugs will feed on them quite happily.

Squash bugs are naturally attracted to the shelter near the base of squash plants, and both organic and plastic film mulch can provide them with convenient hiding places. You can exploit this behavior by **placing boards or thick pieces of cardboard beneath plants. Early in the morning, squash bugs found hiding beneath the boards can be quickly scraped off into a bucket of soapy water.**

Handpicking adults and nymphs, and removing egg clusters from leaves, are required activities after row covers have been removed in midsummer. Spraying the plants with water causes adults to move toward high leaves, where they are easy to grab. In situations where squash bugs are out of control, many gardeners gather them using small shop vacs with an inch or two of water in the reservoir. As for squash bug eggs, you can scrape them off with a wet fingernail or table knife (the glue that attaches them to the leaf is water soluble), or by using small pieces of duct tape, wrapped around your finger with the sticky side out.

More Advice on Organic Squash Bug Control

Keep a close watch on your growing squashes and pumpkins in late spring, and pick and destroy any adults in search of host plants. Use floating row covers to protect plants until they start to bloom. Do all you can to provide food and habitat for wasps, tachinid flies and other beneficial insects. When adults are seen, immediately start scouting for eggs. Some gardeners combine handpicking with sprays made from natural soaps, which can desiccate young squash bugs.

If you keep chickens or other poultry, allow them to clean up beds where you plan to grow squash or pumpkins before the crops are planted, and again at the end of the season.

Squash Bug Control

- Plant **resistant varieties** when available.
- If only a few plants are affected, handpick all stages from the undersides of leaves.
- Place boards or shingles on the ground near host plants. Used as a nighttime shelter, they make excellent traps for morning collecting.
- **Floating row covers** are extremely effective when placed on seedlings and left in place until plants are old enough to tolerate damage.
- **Diatomaceous earth** contains no toxic poisons and works quickly on contact. Dust lightly and evenly over crops wherever pests are found.
- Make 2-3 applications of **BioNeem** at 7-10 day intervals. This neem oil insecticide works in multiple ways resulting in broad spectrum management of most insects that harm your vegetable garden. Best of all, it's non-toxic to honey bees and many other beneficial insects.
- If pest levels become intolerable, spot treat with a fast-acting **organic**
- **insecticide**. For best results, apply to the undersides of leaves and deep into the plant canopy where insects hide.
- Roto-till or dispose of infested crop remnants shortly after harvest to reduce overwintering adults.

Note on insecticides: Squash bugs are difficult to kill using insecticides because egg masses, nymphs, and bugs are often hidden near the crown of the plant and difficult to reach with sprays. Several insecticides are available that are less toxic to the environment including products containing soaps and oils such as neem oil, horticultural oil, and canola oil. These soaps and oils are most effective on the smallest nymphs, but good penetration throughout the canopy is essential so that nymphs under the leaves and deep within plants will be covered. Other more toxic pesticides are also registered for use on squash bugs; however, these materials should be used with caution because of negative impacts on bees and beneficial insects such as predators and parasites that help to keep other pest insects and mites in check. In addition, they are not likely to give better control than handpicking combined with softer chemicals.

<http://ipm.ucanr.edu/PMG/PESTNOTES/pn74144.htm>



UC Statewide IPM Program
© 2008 Regents, University of California



UC Statewide IPM Program
© 2008 Regents, University of California



UC Statewide IPM Program
© 2008 Regents, University of California

Squash bug adult and nymphs, nymphs, egg masses.