

Squash Bug

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The squash bug, *Anasa tristis* (De Geer) (Hemiptera: Coreidae), is a common cucurbit pest in the United States. It uses piercing-sucking mouthparts to feed primarily on stems, but also attacks leaves and fruit. Heavy infestations can reduce yields and spread disease. Populations typically increase throughout summer.

Life Cycle

Eggs

Females lay clusters of about 20 eggs, usually on the underside of leaves. Eggs are oval, approximately 1.5 mm long and 1.2 mm wide (Bonjour et al. 1990). They are a light gray when first laid, but quickly change to a coppery-orange color (Doughty et al. 2016; Fig. 1). They usually hatch in 7–10 days.



Fig. 1. Squash bug egg masses (Whitney Cranshaw, Colorado State University, Bugwood.org)

Nymphs

The squash bug has five nymphal instars. Newly hatched nymphs are about 3 mm long, light green, and have reddish heads, thoraxes, and legs (Fig. 2). Later instars become gray with black heads and legs. Nymphs increase in size with each molt, with wing pads developing during the fourth and fifth instars (Fig. 3). Development takes approximately 4–6 weeks, after which nymphs molt into adults.



Fig. 2. Squash bug nymphs (Jennifer Carr, University of Florida, Bugwood.org)



Fig. 3. Squash bug nymphs (Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org)

Adults

Adults are grayish-brown, about 1.5 cm long and 0.8 cm wide (Fig. 4). They emerge in spring, typically around May, after overwintering under plant debris, boards, or rocks. Egg laying begins by mid-June. Squash bugs typically have one generation per year, although a partial second generation may occur under favorable conditions.



Fig. 4. Squash bug adult (Whitney Cranshaw, Colorado State University, Bugwood.org)

Host Plants

Squash bugs feed on most cucurbits but prefer summer squash and pumpkin for feeding and egg laying (Bonjour et al. 1990; Doughty et al. 2016). Egg laying and nymph survival are higher on yellow straightneck, crookneck squash, and pumpkin than on cucumber or muskmelon (Bonjour & Fargo 1989). Hubbard squash is also a host but generally supports lower nymph survival.

Infestation Symptoms

Squash bugs feed on plant xylem, causing wilting, leaf necrosis, and, in some cases, plant death (Doughty et al. 2016; Fig. 5). Feeding can reduce yield and weaken plants' resistance to secondary stressors.

Squash bugs can transmit *Serratia ureilytica*, a bacterium

associated with cucurbit yellow vine decline, while feeding. Early symptoms include yellowing between leaf veins and discoloration of the vascular tissue. Affected vines may develop a light-brown discoloration above the soil line, remaining firm rather than soft or mushy. Cucurbit yellow vine decline typically appears in mid- to late summer as squash bug populations increase (Jibrin et al. 2025).

Management

Squash bugs are notoriously difficult to control. Using multiple management strategies is most effective.



Fig. 5. Squash bug feeding damage (Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org)

Cultural Control

Employing different cultural control techniques can help reduce population levels. For example:

- **Host preference:** Choose less attractive *Cucurbita pepo* and *C. maxima* varieties when available, as squash bug preference can vary among varieties and local populations (Novero et al. 1962; Doughty et al. 2016).
- **Crop rotation:** Avoid planting cucurbits in the same location each year.
- **Sanitation:** Remove crop residue and volunteer cucurbits after harvest to eliminate overwintering sites.
- **Row covers:** Protect young plants from initial infestation.
- **Adjust planting date:** Early planting can allow crops to mature before pest pressure peaks.
- **Trap boards:** Place wooden boards in the field during the fall and destroy the adults that shelter underneath.

Biological Control

Natural enemies can help reduce squash bug populations. For example:

- **Predators:** Spiders, big-eyed bugs, and ground beetles feed on squash bug eggs and nymphs.
- **Parasitoids:**

- Tachinid flies, such as *Trichopoda pennipes* Fab., lay eggs on nymphs or adults. The fly larvae develop inside the squash bug, eventually emerging to pupate in the soil (Worthley 1924).
- At least five species of egg parasitoids are known to attack squash bug eggs (Nechols et al. 1989; Doughty et al. 2016).

Chemical Control

When squash bug populations reach about one bug per plant, insecticide treatment may be needed. Insecticides are most effective against young nymphs.

In organic systems, OMRI-listed insecticidal soaps and azadirachtin-based products may provide suppression when applied early. Conventional systems have several pyrethroid and neonicotinoid options. Because insecticides can also harm beneficial insects, use them only when needed and according to label directions.

For current insecticide recommendations, refer to the University of Kentucky Production Guide for Commercial Growers. Found at:

<https://publications.mgcafe.uky.edu/files/ID36.pdf>

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