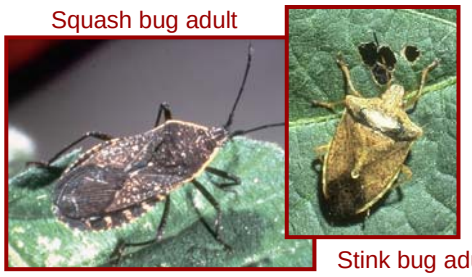
Squash Bug (*Anasta nistis* DeGeer)

Found throughout the United States, the squash bug will feed on all members of the cucurbit family, though it prefers squash and pumpkins over other hosts. The squash bug is one of the most consistent pests of both squash and pumpkins and is also one of the most difficult to control. With its piercing/sucking mouthparts, the squash bug removes plant juices from plant foliage. However, late in the season it may also feed on the fruit of the plant.

Description

Adult squash bugs are flattened in appearance and approximately ½ to ¾ inch long. Gray to black in color, adults are winged with orange and brown stripes visible on the edges of the abdomen. Eggs are 1/16 inch long, yellowish-brown to brick red in color. Upon hatching, nymphs are wingless, pale green to white with red legs, heads, and antennae. As nymphs mature, they become more gray in color with black legs. Squash bugs are sometimes confused with the stink bug. Both insects are true bugs, have piercing/sucking mouthparts, and even give off a distinct odor when crushed. However, the stink bug is not a pest of cucurbits; it is more commonly associated with legume crops such as soybeans and tomatoes.

Squash bug adult



Stink bug adult

Squash bug nymphs

Squash bug eggs

Life Cycle

Unmated adults overwinter in plant debris around fields or wooded areas. Young nymphs present in late fall when temperatures begin to decrease will freeze and die off. In the spring, adults emerge as temperatures warm. At this time they fly in search of fields and begin mating. Females lay eggs individually in clusters of 7 to 20 on the undersides of leaves; each cluster is laid in a “V-shaped” pattern formed by two leaf veins. Eggs are laying usually begins in mid-June and continues into summer. Eggs hatch in 1 to 2 weeks in late June and early July. Young nymphs feed in groups on the undersides of leaves. Squash bugs have five nymphal instars in the Midwest and reach maturity in 5 to 6 weeks. Adults emerge in late summer and continue feeding until the first frost. In the fall, adults begin moving to overwintering locations where they enter diapause (a resting state).

Injury

Damage to host plants is caused by both adults and nymphs. Young nymphs feed in groups near where they hatched, while older nymphs feed on the entire plant. Squash bugs suck nutrients from the leaves, disrupting the flow of water and nutrients. As they feed small, yellow specks develop on the leaves and later turn brown. Severe feeding may cause entire leaves to turn brown and die. Feeding by the squash bug also causes plants to wilt. Vines wilt from the point of feeding to the end of the vine. Leaves turn brown, then black, and eventually die. Wilt symptoms resemble symptoms of Bacterial wilt, a disease of cucurbits. However, if squash bug populations are controlled soon enough, wilted plants should recover. Plants infected with Bacterial wilt would continue to wilt and die. Both nymphs and adults also feed on the fruit. Severe damage may cause the fruit to be unmarketable.

Squash bug injury

Scouting Procedure

Early detection of the squash bug is important. Seedling plants, new transplants, and flowering plants are the most critical to monitor. It is during these growth stages when the most damage can occur and action should be taken. Early in the season, populations are generally not at high levels, however, seedlings and transplants should be watched for signs of wilting. During flowering, an average of more than 1 egg mass per plant should be used as an action threshold.

Management

The key to managing this insect is early detection; timing is crucial. Adult squash bugs are difficult to kill; smaller nymphs are easier to control. Insecticides are most effective if applied when eggs are hatching. The effectiveness of insecticides is affected by the dense plant canopy under which the squash bug feeds.

Cultural practices also aid in the management of the squash bug. Destruction of crop residue and the removal of fruit and vines after harvest reduces the overwintering populations. This removes necessary food sources that the insect requires to build up food reserves to see itself through the winter. Growers should also consider using resistant varieties as well as rotating crops with non-susceptible hosts. Proper fertilization allows plants to grow more vigorously and withstand more insect pressure.

Tips for home gardeners include picking egg masses off plants a couple times a week as well as placing a board or shingle in the garden. During the night, both adults and nymphs will congregate underneath the board and then can be disposed of in the morning.

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