

Early Growth Stage Damage from Stink Bugs in Corn

- Stink bugs feed on plant tissue with their piercing-sucking mouthparts and may cause damage to young corn plants.
- The potential for stink bug damage is increased in no-till fields, and when planting is delayed.
- Regular field scouting before and after planting is essential for stink bug management.

Stink Bugs

The Brown marmorated stink bug (BMSB) and the One-spotted stink bug are the most common stink bugs that attack corn. These insects are shield-shaped with piercing-sucking mouthparts, and are about 1/2-inch long. Their body color ranges from light to very dark brown on the upper side, and light yellow to green on the underside. The BMSB have dark red eyes and their legs are brown with faint white banding. Broad light and dark bands on the last two antennal segments distinguish BMSB from other stink bugs (Figure 1). Stink bugs lay yellow-red elliptical shaped eggs on the undersides of leaves, in masses of 20 to 30 eggs. There are 5 immature stages (nymphal instars), ranging in size from 2.4 mm to 12 mm long. Stink bugs feed on a wide variety of plants, and may cause yield loss in corn as a result of early season feeding.

Symptoms and Damage

Damage occurs as stink bugs insert their piercing-sucking mouthparts into plant tissue and suck the plant juices. An enzyme is injected by the stink bug into the plant which aids in digestion. Stink bug feeding damage may result in dead

seedlings, stunted corn plants, or tillering. In some cases, a progression of these symptoms may be observed in a row, giving a stair-step appearance (dead seedlings, stunted plants, tillering).¹ Tillering is the most dramatic symptom of stink bug damage, and appears about 10 days after feeding has occurred. When this happens, multiple shoots grow from the base of the plant, and may become as large as the original corn plant. These plants may develop small and irregular shaped ears in place of the tassel.¹

Damage to the plant is most evident around plant stage V5. As rapidly expanding leaves unfold, a line of holes may be observed in the plant tissue. Close examination of this damage will reveal that the holes were caused by a piercing of the leaf while it was still in the whorl, and not by a chewing insect. The holes are typically round to elongated and can vary in size. Yellow plant tissue often borders the perimeter of these holes (Figure 2).²



Figure 1. Brown marmorated stink bug. Photo source: Susan Ellis, bugwood.org

Risk Factors

No-till fields and late-planted corn are most susceptible to stink bug damage. Damage is typically most severe in no-till fields, in which case damage can be found throughout the field. In conventionally tilled fields, damage is more likely to occur along border rows and near wooded areas.¹ Stink bugs overwinter as adults, and may pose a greater threat to corn fields following a cover crop or wheat.

Management

Early corn planting may help reduce potential damage from stink bugs. Regular field scouting before planting or crop emergence is recommended. If stink bugs are observed prior to planting, adding an insecticide to a burndown herbicide application may be advisable. Corn that is spiking is most vulnerable to stink bug damage; therefore, fields should also be scouted during the two weeks following corn emergence. Feeding typically occurs at the base of corn plants, about one inch above the soil surface.^{1,2} If control is necessary, contact your local Extension agent or seed representative for more information.



Figure 2. Stink bug damage in corn. Photo courtesy of Agnus Catchot, Mississippi State University

Sources

¹ Townsend, L., and Bessin, R. 2003. Stink bug damage to corn. ENTFACT - 305. University of Kentucky.

² Brown stink bug. Purdue University. <https://extension.entm.purdue.edu>

For additional agronomic information, please contact your local seed representative. Individual results may vary, and performance may vary from location to location and from year to year.

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