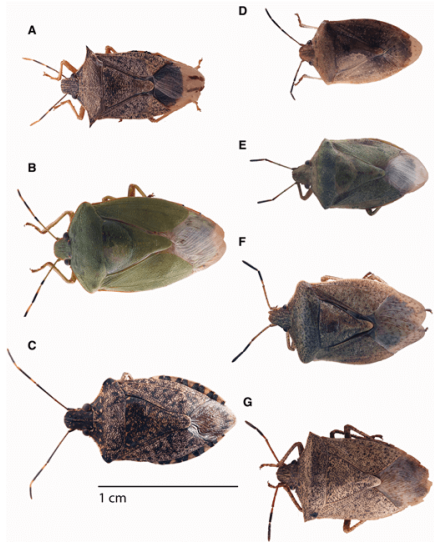


STINK BUGS



Soybean Pests



Overview

In southern states, stink bugs collectively are the costliest insect pest followed by corn

earworm. While traditionally considered a southern pest, the range of stink bugs is moving north, and westward as average yearly temperatures continue to increase.

Stink bugs get their name from the foul odor they produce as part of their defense mechanism. Stink bugs are attracted to soybean plants in the bloom to early pod-fill stages. They primarily attack soybean pods and seeds, using their piercing-sucking mouthparts that act like hypodermic needles to remove the plant's fluids. Stink bugs can decrease yield and quality significantly without proper management.

Identification

Stink bugs are relatively large insects, ranging in size from slightly less than ½ to 1-inch in length as adults. All stink bugs have a characteristic “shield” shape.

The two most common stink bugs in northern soybean states are the green stink bug and the brown stink bug. Several other species of stink bugs are found in southern states and may be moving north. These include the red-shouldered stink bug, the red-banded stink bug, and most recently, the brown marmorated stink bug, an invasive species making its way across the continent. Other stink bugs that may be found in soybeans but are less important include dusky stink bug, one-spotted stink bug, rice stink bug, twice-stabbed stink bug, and Say's stink bug.

Two beneficial stink bugs may also be encountered in soybean fields: the spined-shouldered stink bug and the two-spotted stink bug. These stink bugs are predators of crop pests and should not be included in calculations for monitoring and treatment.

Green Stink Bug (*Chinavia hilaris*)



Photo Credit: Daren Mueller, Iowa State University, Bugwood.org

- Adults are typically bright green, with narrow yellow, orange, or reddish edges.
- Generally ½ to ¾-inches in length

Brown Stink Bug (*Euschistus servus*)



Photo Credit: John C. French Sr., Retired, Universities: Auburn, GA, Clemson and U of MO, Bugwood.org

- Adults are grayish-yellow with dark punctures on their back
- The underside of the insect has a pinkish tinge
- It is slightly smaller than the green stink bug

Red-shouldered Stink Bug (*Thyanta custator*)



Photo Credit: Russ Ottens, University of Georgia, Bugwood.org

- Pale to light green, usually with a distinctive red stripe on the "shoulders" behind the head
- Smaller than other species, usually 3/8 inches in length

Red Banded Stink Bug (*Piezodorus guildinii*)



Photo Credit: Russ Ottens, University of Georgia, Bugwood.org

- Typically about half the size of the green stink bug
- Characterized by a fixed spine on the abdomen of adults
- There is a distinctive red band that runs width-wise across the body behind the head

Brown Marmorated Stink Bug (*Halyomorpha halys*)



Photo Credit: Eric R. Day, Virginia Polytechnic Institute and State University, Bugwood.org

- An invasive pest first identified in Pennsylvania in 2001, it has gradually been moving west and south and can now be found to some extent in nearly all soybean producing states
- It is also a homeowner nuisance as it uses dwelling structures as overwintering sites
- The size ranges from approximately ½ to 2/3-inches in length
- The base color is a mixture of brown, dark red, and black with a beige or cream-colored abdomen
- Other diagnostic features include white bands on antennae and legs and alternating dark and light bands on the edges of the lower abdomen

Spine Shouldered Stink Bug (*Podisus maculiventris*)



Photo Credit: Phil Sloderbeck, Kansas State University, Bugwood.org

- This is a beneficial predatory stink bug
- It has a distinctive spine on each “shoulder”
- Adults are slightly less than ½ inch in length and are mottled brown in color

Two-Spotted Stink Bug (*Perillus bioculatus*)



Photo Credit: Louis Tedders, USDA Agricultural Research Service, Bugwood.org

- This is a beneficial predatory stink bug
- It is generally black in color with two distinctive black spots on a red, orange, or tan background on the shoulders
- There is also a distinctive “keyhole” shape surrounded by a red, orange, or tan border on its back

For detailed information on these and other stink bugs that may occur in soybean fields refer to [Stink Bugs on Soybean in the North Central Region](#).

Scouting

Stink bugs typically appear from mid-July through harvest. Scout soybeans for stink bugs in growth stages R1 through R5. Adults tend to aggregate, so rigorous sampling over several areas of the field may be needed for an accurate assessment. Stink bugs typically colonize field edges first, so counting should include edge and interior areas.

A beat cloth may be useful to scout 30-inch rows, whereas a sweep net may be more convenient in narrow rows. A generally accepted threshold for stink bugs in soybeans is 1.0

per linear foot of row for commercial soybeans, or 0.5 per foot of row in seed production. The threshold for the sweep net method is 8 per 20 sweeps in production soybeans and 4 per 20 sweeps in seed beans. The thresholds should be considered dynamic and may be adjusted to reflect the presence of other late-season insects and market economics.



Management

Most insecticides labeled for use on soybeans will provide effective stink bug control. Insecticide applications are generally made from pod set (R3) to full seed set (R6). Applications prior to or after this time are not necessary. After an insecticide treatment has been made, be sure to scout the field to ensure stink bug populations remain under threshold level. Be cognizant of pre-harvest intervals (PHI) when applying insecticides later in the growing season. Always read and follow label directions.

Resources

Identification, Biology, Impacts, and Management of Stink Bugs of Soybean and Corn in the Midwestern United States

Journal of Integrated Pest Management, 2017

<https://academic.oup.com/jipm/article/8/1/11/3745633>

Brown Marmorated Stink Bug Guide

United Soybean Board

<https://unitedsoybean.org/brown-marmorated-stink-bugs/>

Pythium, Phytophthora, and Phytophthium spp. Associated with Soybean in Minnesota, Their Relative Aggressiveness on Soybean and Corn, and Their Sensitivity to Seed Treatment Fungicides

Plant Disease, January 2017

<https://apsjournals.apsnet.org/doi/10.1094/PDIS-02-16-0196-RE>

Stink bugs

Kansas State University Agricultural Experiment Station & Cooperative Extension Service, 2009

<https://soybeanresearchinfo.com/wp-content/uploads/2019/03/MF2891.pdf>

Stink bugs on soybeans and other field crops

Ohio State University

<https://ohioline.osu.edu/factsheet/ENT-48>

Stink Bugs on Soybean in the North Central Region

North Central Soybean Research Program, USDA, and land-grant universities in the north-central region

https://soybeanresearchinfo.com/wp-content/uploads/2019/03/Stinkbugs_of_the_Northcentral_Region_2017.pdf

Stop BSMB (Brown Marmorated Stink Bug)

USDA

<http://www.stopbmsb.org/>



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