A Rose Smells Nice, But Do Stink Bugs Really Stink?

DR. DOUGLAS B. JONES

MT. VERNON, ILL.

Agricultural producers have known for years that stink bugs (Hemiptera: Pentatomidae) are a common sight in their fields. However, few have ever taken the time to look closely at this insect complex and its impact on their crops.

The term "stink bugs" is an all encompassing name for a number of species that are distinguished by their broad, almost five-sided, shield-shaped bodies and large "scutellums." The scutellum is a triangular-shaped part of the thorax. Although it is present on all members of Hemiptera, the stink bug scutellum extends from its shoulders to more than halfway down the back.

Stink bugs also have scent glands located just above the origin of their legs that can exude a fluid that is both foul tasting and smelling. The primary purpose of the stink is to offer protection from the multitude of other animals that prey upon them for nourishment. The amount of scent that each species exudes depends on the species and whether they feel threatened. All members of this insect family have specialized piercing-sucking mouthparts that can be inserted such that the bug can suck liquefied nourishment out like soda through a straw.

Stink bugs will feed on many plant species. While they can cause damage, their presence often goes unnoticed. Damage can be indirect, especially when they are feeding on leaves and other parts of the plant that are not harvested. In this case, they reduce the vigor of the plant and indirectly affect yield. Direct damage occurs when stink bugs feed on the harvestable part of the plant such as the fruit or seeds. When they feed on fruits, they can cause a characteristic distortion called "cat facing" that causes the fruit to be unsellable on the fresh market. In soybeans, pod feeding can cause pods to abort or result in "flat pods" that are without the desirable soybean seeds.

Some of the more common pest species in Illinois, Missouri and Kentucky are the common green (Acrosternum hilare), brown (Euschistus servus) and red-shouldered (Thyanta spp.) stink bugs. As their names suggest, these plant-eating stink bugs are primarily identified by their color and markings. The common green stink bug is lime green, while the brown is brownish, and the red-shouldered has a reddish-brown stripe that stretches from shoulder to shoulder across its back.

A relative newcomer to states north of the Deep South is the red-banded (Piezodorus guildinii) stink bug. It has been reported to have been found recently in Illinois and has been present in southern Missouri for a couple of years. This stink bug is similar to the red-shouldered stink bug. However, there is one defining characteristic. The red-banded stink bug has a prominent spine found between its third pair of legs that points towards its head. This stink bug has been a significant pest of soybeans in the south for a number of years now. Control is more difficult than other species since it has developed resistance to many insecticides.

If you find red-banded stink bugs in your soybean fields, be prepared to treat if you are able to catch more than six to ten adults in 25 sweeps with an insect net. Thresholds for the more common green, brown and red-shouldered stink bugs are much higher, ranging from one to three stink bugs per 3 feet of crop row.

Thanks to advances in genetics, many crops now require fewer pesticide applications due to manipulations to the plant genome that results in better control of perennial pests such as corn ear worm, corn root worm and others. An unintended result of these advances is that because of the reduced number of pesticide applications, herbivores such as the stink bug are not being controlled inadvertently as they were in the past. Thus, stink bugs are now a type of secondary pest that are becoming all too common these days.

A common belief is that all stink bugs are crop pests. This is true of many species; however, there are beneficial species as well. The spined soldier bug, Podisus maculiventris, is a voracious predator of other insects. Spined soldier bugs can be identified by the spine or spike that extends outward from their shoulders; otherwise, it looks much like a brown stink bug. Δ

DR. DOUGLAS B. JONES: Extension Specialist, Integrated Pest Management, University of Illinois