



Diagnosing Stink Bug Injury to Vegetables

Authored by Lorena Lopez, Postdoctoral Associate; and Tom Kuhar, Professor, Department of Entomology, Virginia Tech

Introduction

In the mid-Atlantic U.S. vegetable crops are attacked by several different stink bug species. The primary pest species include the invasive brown marmorated stink bug (BMSB), *Halyomorpha halys* (Stal), which has become the dominant species in most landscapes, brown stink bug, *Euschistus servus* (Say), which is the most common species attacking tomatoes; green stink bug, *Chinavia hilaris* (Say); and harlequin bug, *Murgantia histrionica* (Hahn), which is primarily a pest of brassica vegetables only. All stink bugs are piercing-sucking feeders that insert their stylets into the fruit, pods, buds, leaves, and stems of plants. While feeding, stink bug adults and nymphs inject saliva into the plant tissue to facilitate its break down and consume the liquid contents, resulting in injuries that can manifest themselves in different ways depending on the crop.

Tomatoes and Peppers

Feeding on the fruit of tomatoes (Fig. 1) and peppers (Fig. 2) will produce characteristic white or yellow scars on the skin where the feeding stylets were inserted into the fruit, or sunken in areas from the internal fruit tissue collapsing below (Fig. 3). These injuries reduce the economic value of tomatoes and peppers significantly. Additionally, colored peppers can be more attractive and injured by stink bugs.



Figure 1. Brown stink bug feeding injury on tomato. (Photo by A. Morehead)



Figure 2. BMSB nymph feeding injury on bell pepper. (Photo by A. Morehead)



Figure 3. Damaged white spongy tissue below where BMSB stylets were inserted. (Photo by G. Dively)

Brassica Vegetables

The primary pest of brassica crops such as collards, broccoli, and cabbage is the harlequin bug. Adults and nymphs of this species feed on aboveground plant tissues. Their injury causes characteristic white blotches on the leaves, which turn necrotic over

time. Harlequin bugs feeding on young plants cause more damage, resulting in larger areas of necrotic tissue, extensive wilting, or plant death under heavy pest pressure (Fig. 4).



Figure 4. Mild (top) and severe (bottom) harlequin bug feeding injury in collards. (Photo by T. Dimeglio)

Corn and Beans

In corn, the feeding stylets of BMSB nymphs and adults are inserted through the husk and pierce the tender kernels, which may cause them to become aborted, collapsed, or discolored (Fig. 5). The brown stink bug feeds mostly on leaves causing discolored spots, plant stunting, and misshapen ear production.

Stink bugs can feed on all aboveground parts of bean plants, but most species prefer developing or mature pods. Feeding injury to beans may result in scarred, faded-out sunken areas, as well as deformed pods and browned seeds (Fig. 6).

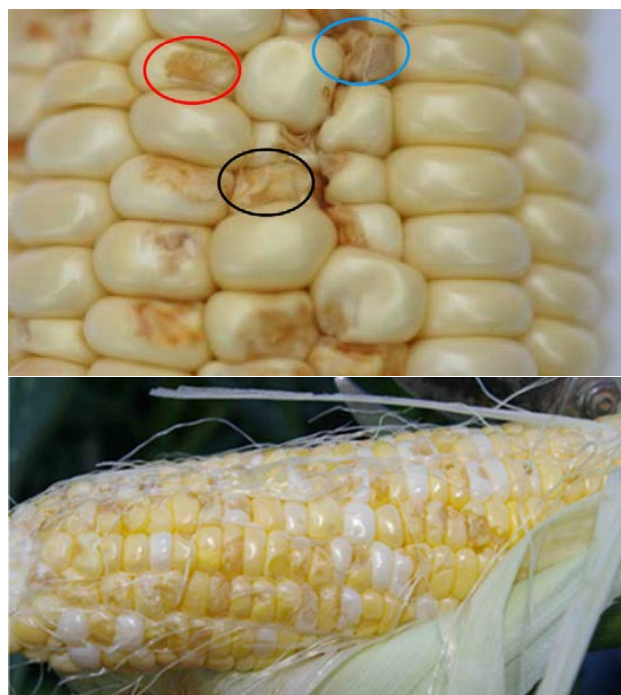


Figure 5. BMSB feeding injury on corn kernels. (Photo by W. Cissel and T. Kuhar)



Figure 6. Severe injury (top) and deformity (bottom) caused by BMSB feeding on snap bean pods. (Photo by A. Morehead and H. Doughty)

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