

BROWN MARMORATED STINK BUG

Hemiptera, Pentatomidae: *Halyomorpha halys*

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Distribution and Hosts

The brown marmorated stink bug, (BMSB), is an invasive insect not native to North America. It was accidentally introduced near Allentown, PA in 1996 and has spread since that time. It was found in Virginia in 2004 and by 2010, it was found throughout most of the Commonwealth. The BMSB feeds on a wide range of tree fruits and seedpods as well as many vegetables including tomatoes, peppers, beans, cucurbits, and sweet corn. High densities of this pest species have also been seen in soybeans and corn. However, so far in Virginia, the most severely damaged crops have been tree fruit (apples and peaches). For homeowners, it is mainly a nuisance pest, as it invades houses in the winter looking for a place to over-winter. For businesses such as hotels and restaurants and other commercial settings with public interface, the presence of high numbers of these bugs in the fall can have economic consequences.



Adult brown marmorated stink bug (BMSB), note white bands on antennae and legs (Doug Pfeiffer)

Identification:

The BMSB is a grayish brown shield-backed bug about 3/4 inch long with white bands on the antennae and legs, alternating black and white spots on the abdomen, and no spines on the front of the thorax. Nymphs lack wings, and have reddish and white marking on the upper surface of the abdomen. There may be spines of the front of the thorax in nymphs.



Figure 2. Starting from left, external BMSB damage to nectarine, external injury to apple, and internal evidence of surface feeding. Note sunken areas on the surface. (Doug Pfeiffer)

Life History: The BMSB overwinters in the adult stage in protected places including houses. It does not lay eggs in the house nor does it multiply in structures. In the spring, adults leave the overwintering site seek potential host plants including peaches, redbud, Paulownia and other flowering trees. Nymphs feed on fruits and seedpods and develop throughout the summer and molt to adults in late summer. There are likely two generations throughout Virginia; 1-6 have been reported in its native Asian range.

Injury to tree fruits and fruiting vegetables appears as discolored and sunken areas. In the case of apples, conspicuous brown corky areas occur beneath the skin; in the case of stone fruits, there may be an internal breakdown of tissue.

Control

On plants: Spot spray when and where they are found causing damage. Late July and August are the most common times to see damage on plants. Check corn, peppers, tomatoes and fruit trees, although this bug can be a pest on a wide variety of plants. Check plants with developing seed heads and fruit. Treat with an insecticide appropriately labeled for that plant or situation. Pyrethroid insecticides are somewhat effective at killing BMSB and many different pyrethroid products are labeled on crops. However this class of insecticide is damaging to populations of beneficial arthropods, and secondary outbreaks of some pests are often seen. Please review the most recent VCE pest management guides for various commodities for recommended insecticide products on stink bugs.

Prevent stink bugs from getting inside: Any home or structure with a history of having stink bugs over-wintering inside needs to have preventative measures taken during the summer to prevent re-infestation in the fall. Exclude stink bugs from the house by sealing up cracks around windows, doors, utility access points, chimneys, siding, trim, and fascia. Caulk can be used to seal many cracks, but attic and foundation vents, and weep holes will require wire mesh or screening. Do not seal cracks if the insects are already inside because they will be trapped and die indoors. BMSB congregate mainly on the south- and westward-facing surfaces of buildings.

Control stink bugs before they get inside: Spot treatments using a microencapsulated or wettable powder insecticides can be applied in the early fall around windows, doors, attic vents and other locations on the south and west walls of the structure. Often the size of the building may prevent access points that are high off the ground from being treated, so screening and caulking from the interior will still be necessary. Note that all insecticide applications have to be carefully timed. Applying too early will allow the insecticide to degrade before the stink bugs begin to come in. Applying after the stink bugs have arrived will allow many stink bugs to still enter the interior of the buildings.

Control after they get inside: Caulk around baseboards and exhaust fans, light fixtures, and trim to prevent stink bugs from accessing interior rooms from basements, drop ceilings and attics. Vacuuming best controls individual insects. Spraying stink bugs with insecticide after they get inside still obligates you to vacuum up their dead bodies, so skip the insecticide and go straight to the vacuum. Avoid treating stink bugs you cannot reach with the vacuum with insecticide. If they die inside the wall-voids or attics dead stink bugs can lead to infestations of carpet beetles and other pests that feed on the stink bug carcasses. (Fact Sheet Revised February 24, 2011)



Fig 1. Adult BMSB on house brick (Tim McCoy)



From left: BMSB outside ear, kernal damage and tomato damage (David Wright: corn photos, Eric Day: tomato)