

## **BEST MANAGEMENT PRACTICES**

### **Brown Marmorated Stink Bugs (BMSB)**

The brown marmorated stink bug (BMSB), *Halyomorpha halys* is an invasive plant feeding pest from Japan, Korea, and China. It was first reported in 2001 from Allentown, Pennsylvania. It has since spread into the mid-Atlantic region, parts of the mid west, and into parts of the north east. It has also established into California and Oregon due to commerce. The brown marmorated stink bug is primarily a pest of crops. However, it has become a nuisance pest whereby elevating its urban pest status. Many county extension offices are requesting that people report the bugs if seen.

This species is a plant feeding bug that feeds on fruits, some ornamental plants, and agricultural crops. It is also an occasional invader of buildings, where it is a nuisance pest. They do not bite or sting humans or animals. Adults are approximately an inch long and colored various shades of grey and brown. Their underside can be whitish as well. They can be distinguished from other stink bugs by the alternating color bands on the last two antennal segments and coppery or bluish-metallic colored punctures (small rounded depressions) on the head and pronotum. This species exhibits incomplete metamorphosis. There are five nymphal instars. They range in size from the first instar at 2.4 mm to the fifth instar that is 12 mm in length. The eyes are a deep red. The abdomen is a yellowish red in the first instar and progresses to off-white with reddish spots in the fifth instar.

The BMSB is likely to invade homes in the fall more so than others in the same insect family. It survives the winter as an adult by entering houses and structures when fall evenings start to turn cold. Adults look for buildings to overwinter in order to shield them from the elements. They will work their way under siding, into soffits, around window and door frames, under roof shingles and into any crawl space or attic vent which has openings big enough to fit through. Once inside the house they will go into a state of hibernation (diapause) where they wait for winter to pass. However, often the warmth inside the house causes them to become active, especially in winter months, and they will fly clumsily around light fixtures. Those in diapause will come out of that state in springtime (usually late May, but as early as March in warmer climates) and again become a nuisance pest indoors as they look to go outside and find mates.

Mechanical exclusion is the best method to keep stink bugs from entering homes and buildings. Typically, stink bugs will emerge from cracks under or behind baseboards, around window and door trim, and around exhaust fans or lights in ceilings. Seal these openings with caulk or other suitable materials. Torn window screens should be repaired. If removing stink bugs with a vacuum cleaner, be sure to discard bag or remove and empty the canister promptly.

For interior and exterior treatments, Borid® dust and synthetic pyrethroids such as Talstar® Professional insecticide, Transport® Mikron insecticide, Cynoff® WP insecticide, and Cynoff Dust are good for treatment of vertical walls and other harborage sites. For each 1000 square feet to be treated, either mix Talstar Professional at 0.5 oz-1 oz per gallon of water, Transport Mikron at 1.25oz per gallon of water, or Cynoff WP, at 0.33 oz per gallon of water. Either Borid dust or Cynoff dust can be used in cracks and crevices where liquid insecticides can't reach. For Cynoff dust, apply 0.32 -0.5 lbs per square feet. For Borid dust, apply 1 lb for every 1000 square feet. If stink bugs are on plants then apply either Talstar Professional or Cynoff® dust on the upper and lower surface of leaves. For structures where there is a known history of stink bug infestation, insecticides may be applied to the exterior of the home just prior to fall aggregations. As a general rule, use non-repellent products, such as Transport Mikron and Borid Dust, in the Spring to reduce populations as they emerge and repellent products, such as Cynoff, in the Fall to inhibit overwintering site selection.

*Always read and follow label directions for any product chosen for treatment.*

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