Stink Bug Boom of 2012
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Our native green and brown sting bugs experienced a population explosion last summer that I had not seen in my previous 30 years on vegetable and fruit farms. Growers called in complaining about these bugs damaging beans, squash, cucumbers, peppers, tomatoes, and sweet corn, among other crops. They were even plentiful in my pumpkin and sweet corn experiments at the research farm. At first, I thought we were experiencing the first outbreak of the dreaded brown marmorated stink bug (BMSB); the invasive species that has been causing so much damage to fruit and vegetable crops in the mid-Atlantic states the last few years. However, as these nymphs (Fig. 1) were identified it became apparent that these were our native species that occur throughout most of North America just experiencing a huge population boom for some unknown reason.

In addition to the crops mentioned, the literature also lists asparagus, cabbage, okra, pea, eggplant, mustard, soybeans and turnips as possible hosts, along with most fruit crops. The only time we usually see any crop damage on vegetables from these two species is when we have a very dry year and the adults move into tomato or pepper plantings in search of moisture to feed on the fruit. This is rather a rare occurrence in New England. Normally, the populations of stink bugs are held in check by parasites and predators, but populations were even high on organic farms in 2012. I don't know if the stink bugs will be back in high numbers this summer, but I thought you may want to keep a lookout for them just in case.

The brown stink bug, *Euschistus servus*, is shield-shaped like the spined soldier bug shown in Fig 2, except that the shoulders are rounded instead of pointed. There are five nymphal instars or growth stages. The young nymphs have a yellowish-brown thorax and a white or yellow abdomen. They may lay up to 120 eggs in batches of 15 to 30. The eggs are yellowish-white, barrel-shaped and have a fringe of small spines on the upper edge. They overwinter as adults hiding in the weeds and leaf litter along field margins and have two generations each year. The nymphs from the first generation occur in May and June, while the nymphs of the second generation occur in August and September. They feed and damage tender shoots, buds and fruit.

The green stink bug, *Acrosternum hilare*, adults have the same shield-like shape, but are slightly larger than the brown stink bugs. They have only a single generation per year in the North and two in the South and West. They lay up to 150 green eggs in batches of about 30. The eggs lighten to yellow and then change to pink before they hatch in July. The nymphs have mostly black thoraxes with a yellow spot in the center and along the margins (Fig. 1), while the abdomen is light green with black spots in the center and along the margins. Adults can be found in August and September and damage tends to be more severe as populations
build late in the summer and along field margins, where they migrate in from weed hosts.

![Figure 2, Spined soldier bug attacking Colorado potato beetle larva](image)

Stink bugs have a hypodermic-needle style of mouthparts that they use to inject digestive enzymes into tissue and fruit, which initially leaves a slight discoloration on the surface but dissolves the tissue underneath. The damage caused by feeding can accumulate if the insects are plentiful and the surface tissue may collapse into a deeper, dark, surface scar. They can also spread a yeast-spot disease to legumes.

Stink bugs can be very difficult to kill because they tend to drop from plants and hide when disturbed or even when they detect motion, and are prone to resistance problems. Field border treatments are usually recommended to stop infestations that begin in surrounding weeds. Good weed control in the field border areas and clean cultivation to eliminate hiding places are also recommended. Soybeans may work as a perimeter trap crop, but the bugs will redistribute themselves throughout the field if not killed in the perimeter. Insecticides with extended residual periods of actively usually work best because these bugs continue to migrate into the field from the margins. On tomatoes and peppers synthetic pyrethroids and a few neonicotinoid products are registered and may be effective (see New England Vegetable management Guide).

One final thought while we are talking about stink bugs. At a workshop on January 24th I handed out a BMSB that a grower had brought to me at the Vegetable & Small Fruit Conference the week before. This stink bug, like the similar-looking but more elongated leaf footed bug, likes to come into houses to spend the winter. To my surprise, most of the growers in the room said that they have BMSB in their houses this winter and some have found up to a dozen. Several other growers not present that day have reported the same thing. While this isn’t the tens of thousands that are in my sister’s house in Charlottesville, VA, it still represents a substantial increase from the one or two that had been found in each CT county in 2011. I don’t know what caused our native brown and green stink bugs to have such a good year in 2012, and nobody yet understands why the BMSB increased to such phenomenal levels in the mid-Atlantic states in 2010 (up to 150 per soybean plant), but it is clear that one way or another stink bugs will play a bigger role in your life in the near future. Forewarned is forearmed!