
SUNNYSIDE THYMES

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Guess Who's Coming to Dinner?

SMG Education Committee - Shawn Clements

Stink bugs! Yech! Bonnie Cummings gave a good overview of these critters in the August Guess Who's Coming to Dinner column, featuring the new “star” of the stink bug world, the brown marmorated stink bug (BMSB) *Halyomorpha halys*. Look to that article for ways to prevent the varmints from overwintering in your home, thus stopping their reproductive cycle. What about prior to that?

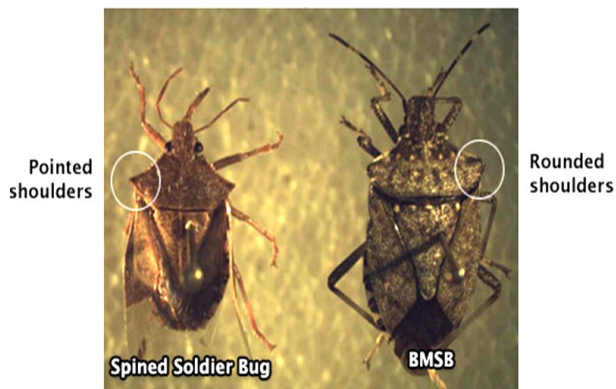
Begin of course at the beginning – healthy soil, healthy practices, spacing, sunlight, watering ... yeah, all that stuff. But what about actual control? Most all insects have natural enemies, and the BMSB is no exception. Unfortunately, it came to us from China/Korea by way of Japan and its natural enemies didn't tag along.

There are plenty of predators, including another stink bug – the spined soldier bug, *Podisus maculiventris*. The spined soldier bug kills by piercing its prey with its proboscis and injecting saliva, the enzymes of which essentially liquefy the inside of the target insect. Then the soldier bug lifts its victim – yes, like a bottle of soda – and drinks the resultant juices. The BMSB, like most stink bugs, develops over 5 instars, or development stages, getting progressively bigger. The soldier bug can usually lift the 4th instar but cannot lift (or usually even pierce) the BMSB at the 5th instar stage. There are other predators: pirate bugs, lacewings, spiders; ladybugs and crickets eat the eggs. The chief problem with all of these is they are about as picky as the BMSB, which is to say, not very. Hence there are insufficient numbers to provide control.

One hopeful predator is a parasitoid wasp. In this case *Trissolcus japonicas*. There are, of course, millions of insects and there are millions of parasitoid wasps as their enemies. When thinking of these wasps, one must remember how small they

are – some as small as the period at the end of this sentence. There are probably hundreds in our yards right now. There have been several findings of these wasps here in the United States, albeit all isolated. They are being studied in quarantine conditions by the USDA Agricultural Research Service (ARS) and will hopefully be ready for prime time soon.

- In the interim, there is something one can do for control while maintaining organic protocol. That is the use of a kaolin clay solution. Kaolin clay is non-toxic and has many uses – it's used in cosmetics, as a “mask” for the skin, in preparations for stomach ailments (think Kaopectate). The very fine powder is mixed with water and a small amount of liquid soap and applied as a spray. It keeps insect eggs from sticking to the plant and discourages insects from sucking juices from the plant as well. It shows as a fine white powder on the plant and fruit. Surprisingly this does not interfere with photosynthesis. In fact, its use on apples has been extensively documented and it appears to reflect infrared and ultraviolet light and actually increases the redness of the fruit. It does not seem to impact bees or other beneficial insects.



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It should be started prior to insect damage and must be reapplied with some frequency. Some studies suggest every 3 days, every 7 days, others every 2+ weeks. The fruit should be washed prior to use – who wants to chew on clay powder? It can though be applied up to the day before harvest. One commercial agricultural form is called SurroundWP. Its use is geared toward farming as it is sold in 25 lb. and up bags and the cost of shipping quickly doubles any price one finds.

There are several reports, however, of using cosmetic grade kaolin with good results, and it can be found as plain clay powder more cheaply; on line, I found no local source. It does need to be as fine as possible, and it must be continually agitated to hold in suspension.

One caution: avoid the use of traps that utilize various baits. As is the case with the Japanese beetle you may trap many but at the same time attract many more.

References:

- www.stopBSMB.org which is run by the USDA and has a wealth of information, including ongoing updates.
- www.gardeningknowhow.com - several articles on many different aspects of gardening, though some information is dated
- www.whyy.org : National Public Radio station, Mike McGrath radio show "You Bet Your Garden"