

The Ohio Monitoring Network Report on Brown Marmorated Stink Bug - 2016

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Since 2011, the OSU IPM Program and Dept. of Entomology have worked together with the help of county based Extension Educators to create and maintain a statewide Brown Marmorated Stink Bug (BMSB) network to help inform growers of the distribution and risk this pest posed to their crops. In 2016, we had 38 sites spread across 23 counties, looking for this insect in sweet corn, peppers, raspberries, grapes, apples, peaches, tomatoes, elderberries, and blackberries (Figure 1).

There were three different types of traps used in monitoring BMSB; yellow PVC, black PVC, and black pyramid (Figure 2). All traps were baited with an Alpha Scents pheromone lure and used a DDVP kill strip in the collection vessel to kill any insects that entered.

The first traps were put out in May in Franklin County but most traps were deployed the first week of June; all traps were removed by the last week of September. Traps were monitored for BMSB adult and nymphs weekly, and every four weeks the lure and DDVP kill strip were changed.

At 19 sites, both a yellow PVC and black PVC or pyramid trap were placed approximately 50 feet apart along the field edge. At 17 of those paired locations, the yellow PVC trap captured 1-130 more BMSB than either of the black traps over the course of the season. This is the second year where anecdotally the yellow traps appear to be more attractive than the black traps. At the remaining two paired locations, the black trap

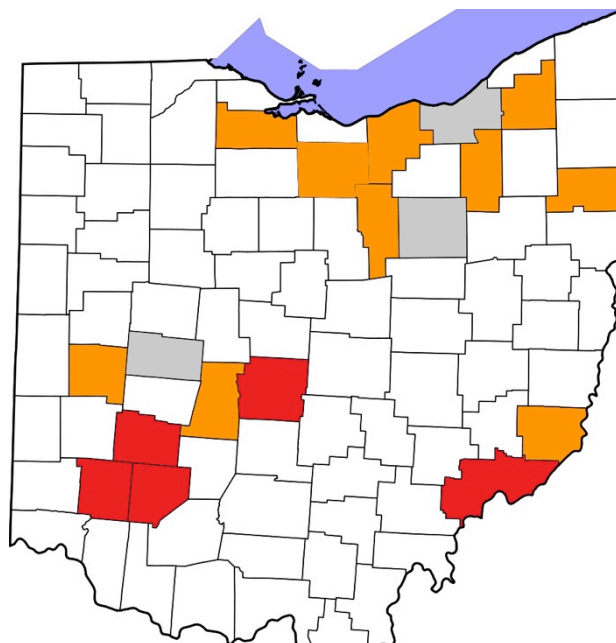


Figure 1. Distribution of BMSB as detected by pheromone traps. Red counties (5) have highest counts, orange counties (10) have low to moderate activity, grey counties (3) trapped no stink bugs in 2016, and white counties did not trap for this pest.

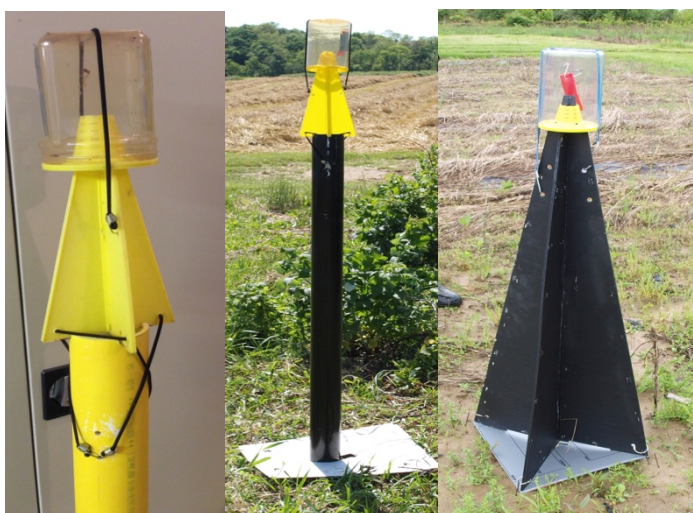


Figure 2. Yellow PVC, Black PVC, and Black Pyramid traps used to trap BMSB. Note pheromone lure and kill strip in collection jar.

captured more BMSB than the yellow, by 4 and 23 bugs. At 10 different locations, despite having set one or two traps out, no BMSB were captured. At two locations, a single yellow PVC trap was placed in two different fields, and at seven locations, no data was reported by the cooperator.

The earliest trap catch was detected during the week of May 22nd in Franklin County, and there were detections in 11 traps during the last week of collection, September 25th. Based on seasonal trap catch totals, Clinton, Warren, Franklin, Greene, and Washington counties caught the highest number of BMSB per site respectively. All other sites in the network trapped fewer than 29 bugs over the entire season.

Peak activity of BMSB as measured by trap catch appears to have been during the week of Aug. 28th, with the second most active period during the weeks of Aug. 21 and Sept. 25 (Figure 3). The trap counts do not distinguish between adults and nymphs, they are combined into one number. A summary of all trap catch data sites for the season is presented in two tables; the highest catching sites are listed in Table 1, and those sites with low to moderate BMSB activity can be found in Table 2.

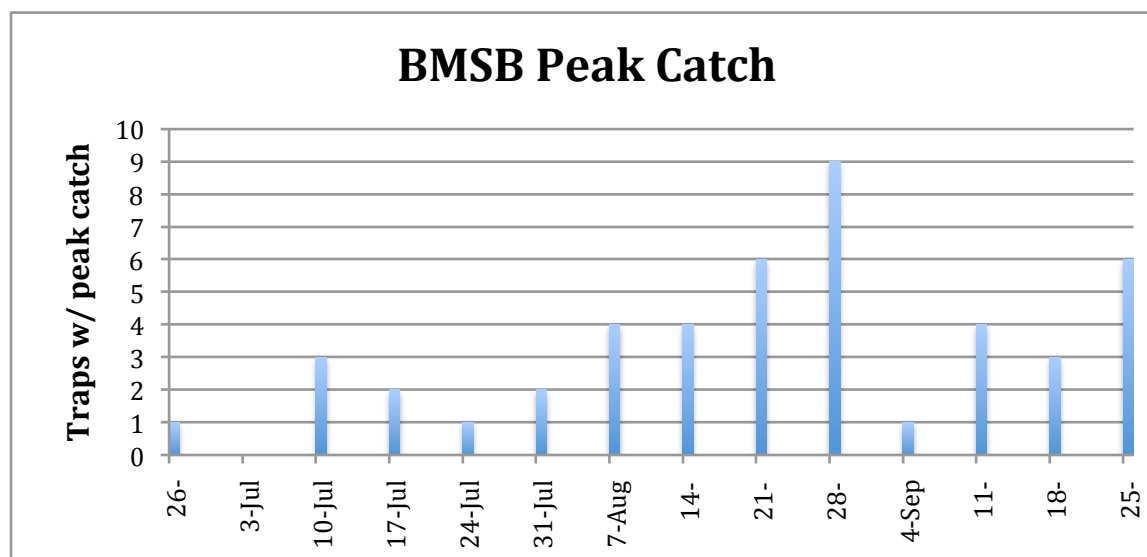


Figure 3. The week that each site detected peak activity of BMSB.

Table 1. Locations and seasonal trap catches for both adult and nymph BMSB in counties with relatively high activity of BMSB.

County:	Crop:	Trap type:	Seasonal sum:
Clinton	Red raspberries-house	Black pipe	4
Clinton	Red raspberries-pond	Black pipe	10
Clinton	Red raspberries-pond	Yellow pipe	12
Clinton	Red raspberries-house	Yellow pipe	24
Franklin	Sweet corn	Black pyramid	41
Franklin	Raspberry	Yellow pipe	49
Franklin	Raspberry	Black pyramid	72
Franklin	Sweet corn	Yellow pipe	79

Franklin	Apples	Black pyramid	101
Franklin	Apples	Yellow pipe	231
Greene	Blackberry	Black pipe	32
Greene	Blackberry	Yellow pipe	129
Warren	Grapes	Black pipe	134
Warren	Grapes	Yellow pipe	245
Washington	Raspberries	Black pyramid	5
Washington	Raspberries	Yellow pipe	8
Washington	Sweet Corn (late)	Black pyramid	43
Washington	Sweet Corn (late)	Yellow pipe	53

Table 2. Locations and seasonal trap catches for both adult and nymph BMSB in counties with no to low to moderate activity of BMSB.

County:	Crop:	Trap type:	Seasonal sum:
Ashland	Elderberries	Black pyramid	2
Ashland	Elderberries	Yellow pipe	9
Champaign	Apples, peaches	Yellow pipe	0
Champaign	Apples, peaches	Black pyramid	0
Cuyahoga	Raspberries	Black pyramid	0
Cuyahoga	Raspberries	Yellow Pipe	0
Geauga	Blueberry & bramble	Black pyramid	1
Geauga	Raspberry & apple	Black pyramid	2
Geauga	Blueberry & bramble	Yellow pipe	4
Geauga	Raspberry & apple	Yellow pipe	6
Huron	Sweet corn	Black pyramid	14
Huron	Sweet corn	Yellow pipe	15
Lorain	Brambles	Black pyramid	5
Lorain	Brambles	Yellow pipe	6
Madison	Sweet corn	Black pyramid	0
Madison	Sweet corn	Yellow pipe	3
Mahoning	Peppers – MO	Yellow pipe	0
Mahoning	Peppers - WH	Black pyramid	0
Mahoning	Sweet corn - WH	Yellow pipe	0
Mahoning	Peppers – AN	Black pyramid	4
Miami	Grapes	Black pyramid	3
Miami	Grapes	Yellow pipe	11
Monroe	Sweet Corn #2	Yellow pipe	1
Monroe	Sweet Corn #1	Yellow pipe	8
Morgan	Sweet Corn	Black pyramid	0
Sandusky	Raspberries	Yellow pipe	0
Sandusky	Raspberries	Black pyramid	0
Sandusky	Sweet Corn	Black pyramid	4
Sandusky	Sweet Corn	Yellow pipe	11
Summit	Sweet Corn	Black pyramid	0
Summit	Sweet Corn	Yellow pipe	7
Wayne	Fruit-FH	Yellow pipe	0
Wayne	Sweet Corn-MG	Yellow pipe	0
Wayne	Tomato-MG	Black pyramid	0
Wayne	Fruit/tomatoes-MO	Yellow pipe	0
Wayne	Raspberry/tomatoes-MO	Black pyramid	0