

Evaluation of Pepper Cultivars for Brown Marmorated Stink Bug (BMSB) Susceptibility, 2011: The varieties 'Paladin' (bell pepper), 'Bounty' (Banana Pepper) and 'Sparky' (Jalapeno Pepper) were transplanted on June 2 at the University of Delaware's Research farm located in Newark, DE. Four row plots 15 ft. long on 6 foot center were replicated 3 times in a RCB design. Five plants from each of the middle two rows (10 total plants) were examined for BMSB adults, nymphs, and egg masses twice a week by direct count and beat samples from June 9 through Sept 14. The first adult BMSB adults were detected at low levels on July 5. Five leaves were pulled from each of these ten total plants looking for ECB Egg masses and aphids. We also searched for CEW and BAW larvae during this process. Marketable fruit were harvested on 5 dates. The number of harvested fruit varied at each harvest date: (a) July 18 – 50 to 90 fruit per plot; (b) Aug 3 and 11- 100 marketable fruit ; (c) Aug 16 – 200 marketable fruit; and on (d) Aug 23 - 200 marketable fruit from the Paladin plots and 500 marketable fruit from the Bounty and Sparky plots. The total number of damaged fruits was recorded and the number of feeding sites on each damaged fruit was also noted.

Table 1. BMSB Adults – Direct Visual Counts

Date	Average # BMSB Adults per 10 Plants		
	Paladin	Bounty	Sparky
July 7	1.0	4.7	2.0
July 11	0.0	1.5	0.3
July 14	3.0	1.0	7.0
July 18	2.3	3.3	3.7
July 22	0.3	2.3	0.3
July 25	0.0	0.0	0.0
Aug 1	5.0	3.3	2.7
Aug 8	0.8	1.7	2.3
Aug 15	1.7	2.7	1.3
Aug 19	4.7	3.7	7.7
Aug 22	2.7	5.7	8.7
Aug 25	2.7	0.3	1.3
Sept 1	0.0	0.0	0.3
Sept 8	0.3	0.3	0.0
Sept 14	0.0	0.7	0.7

Table 2. Harvest Data – BMSB Damage

Treatment	Percent BMSB Damaged Fruit ¹				
	July 18	Aug 3	Aug 11	Aug 16	Aug 23
Paladin	1.33a	1.00b	1.50a	19.33a	13.85a
Bounty	15.36a	17.00a	10.67a	9.17b	23.67a
Sparky	15.34a	11.33ab	10.00a	8.50b	8.40a

¹ Means followed by the same letter are not significantly different (Tukey's; P=0.05).

Comments: BMSB populations in each variety were generally low throughout the season. At the first evaluation date in Aug, damaged fruit was significantly higher in the 'Bounty' plots compared to the 'Paladin' plots. Two weeks later, damaged fruit was significantly higher in the 'Paladin' plots. In general, no overall difference was observed in varietal susceptibility in 2011. Although differences were observed in demonstrations in 2010, further research is needed in 2012 to determine if differences consistently occur.