

(E19)

BELL PEPPER: *Capsicum annuum* L., ‘Aristotle’**EVALUATION OF FOLIAR INSECTICIDES FOR THE CONTROL OF FOLIAR INSECTS IN BELL PEPPERS IN VIRGINIA, 2013****Thomas P. Kuhar**

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Brown marmorated stink bug (BMSB): *Halyomorpha halys* (Stål)
European corn borer (ECB): *Ostrinia nubilalis* (Hübner)

The invasive BMSB has become a major pest of vegetables in the mid-Atlantic U.S. The objective of this experiment was to assess the efficacy of foliar insecticides for the control of BMSB in bell peppers. The experiment consisted of 12 treatments arranged in a RCB design with four replicates. ‘Aristotle’ bell peppers were transplanted on 10 Jun 2013 on raised beds covered with black polyethylene mulch at the Virginia Tech Kentland Research Farm in Blacksburg, VA. Plots were 1 row wide and 20 ft (6.1 m) long with no guard rows. Rows were planted on a 6 ft row center (1.8 m) in a 4 tier field design, 6 ft (1.8 m) alleys between tiers. Foliar treatments were applied on 23, 30 Jul, 6, 14, 26 Aug at 38 gpa using a 3-nozzle boom equipped with D3 spray tips and 45 cores, powered by a CO₂ backpack sprayer set at 40 psi. On 20 Aug and 4 Sep, a sample of 20 market-sized fruit per plot were harvested and examined for insect damage. All data were analyzed using ANOVA. Proportion data were arcsine square root transformed prior to analysis. Means were separated using Fisher’s LSD at the 0.05 level of significance.

BMSB pest pressure was moderate with a mean of 27.5% and 23.8% damaged fruit on 20 Aug and 4 Sep, respectively. There was no significant treatment effect on 20 Aug. On 4 Sep, all insecticide treatments had significantly less stink bug damage than the untreated check except the Vydate L and the Lannate LV + Asana XL treatments. ECB pest pressure was low and there was no significant effect of treatment on damage. No signs of phytotoxicity were observed. This research was supported in part by USDA-NIFA SCRI award #2011-51181-30937 and by grant-in-aid from FMC Corporation and Dupont Crop Protection.

Table 1.

Treatment/ formulation	Rate – amt product / acre	% stink bug damage		% lepidopteran damage	
		20-Aug	4-Sep	20-Aug	4-Sep
Untreated Check		27.5	23.8a	0.0	2.5
Hero	7.10 fl oz	3.8	3.8bc	1.3	0.0
Athena	16 fl oz	7.5	2.5c	0.0	2.5
Gladiator	19 fl oz	0.0	3.8bc	1.3	2.5
Mustang Max	4 fl oz	12.5	7.5bc	6.3	0.0
Triple Crown	7.9 fl oz	5.0	5.0bc	0.0	0.0
Bifenture 2EC	6.4 fl oz	1.3	2.5c	2.5	0.0
Beleaf 50SG	2.8 oz	7.5	3.8bc	2.5	2.5
Mustang Max + Lannate LV	4 fl oz + 16 fl oz	10.0	6.3bc	0.0	1.3
Vydate L	32 fl oz	3.8	10.0abc	0.0	1.3
Lannate LV	24 fl oz	1.3	3.8bc	7.5	0.0
Lannate LV + Asana XL	24 fl oz + 6 fl oz	16.3	12.5ab	3.8	0.0

All data were analyzed using ANOVA. Means were separated using Fisher's LSD at the 0.05 level of significance. Means followed by the same letter within a column are not significantly different ($P > 0.05$).