

Aphid Management in Bell Peppers: ‘Aristotle’ bell peppers were transplanted on May 27 at the University of Delaware Research and Education center located near Georgetown, DE. One row plots 20 ft long on 6 ft centers were replicated 4 times in a RCB design. All foliar materials were applied beginning at first flower/small fruit on June 22 and then on a weekly basis on June 28; July 6, 13, 20, 27; and Aug 4. Aphid treatments started on June 20 in the Actara and Fulfill plots. Applications were made with a CO₂ backpack sprayer with a one-row boom, having 3 hollow-cone nozzles per row (one over the top and one drop nozzle on each side) delivering 39 gpa at 40 psi. Plots were sampled on a weekly basis from June 1 through August 9 for green peach aphid (GPA) aphids, European corn borer (ECB) egg masses, beet armyworm (BAW) egg masses, and corn earworm(CEW) and fall armyworm(FAW) damaged fruit. All commercial size peppers were harvested on July 19, Aug 3 and Aug 16 and evaluated for ECB, CEW and FAW damage. Data were analyzed using ANOVA and means were separated by Ryan’s q-test (P=0.05).

Aphid populations were moderate. No “worm” damage was found on fruit throughout the season. No differences were observed between treatments throughout the season. No phytotoxicity was observed.

1. Green Peach Aphid Counts

Treatment	Timing	Rate/A	GPA/10 plants		GPA per 50 leaves			
			Jun21	Jul 5	Jul 19	Jul 26	Aug 3	Aug 10
Warrior	Jun22,28; Jul6,13	3.84 oz						
Actara 25WDG	July20,27; Aug 4	4 oz	1.00a	50.5a	451.0a	1.75a	1.00a	0.00b
Warrior	Jun22,28; Jul 6, 13,	3.84 oz						
Fulfill 50WDG	July20,27 Aug 4	2.75 oz	0.00a	0.00a	52.00a	0.00a	3.50a	3.00b
Proclaim 5WDG	Jun22,28; Jul6,13, 20, 27, Aug 4	4.8 oz	0.00a	0.25a	48.00a	7.00a	0.00a	19.75a
Untreated		-----	0.00a	3.00a	48.80a	3.50a	5.00a	21.75a

Means within a column followed by the same letter are not significantly different (Ryan’s q-test; P=0.05)

2. Yield Data – Total Number Fruit

Treatment	Rate/A	Total Number of Fruit per 20 ft of row			Cumulative Fruit Harvest (3 Harvests) Total # Fruit
		July 19	Aug 3	Aug 16	
Warrior	Jun22,28; Jul 6,13				
Actara 25WDG	July 20, 27; Aug 4	30.25a	27.50a	39.00a	96.75a
Warrior	Jun22,28; Jul 6,13				
Fulfill 50WDG	July 20, 27; Aug 4	33.75a	29.00a	49.00a	111.75a
Proclaim 5WDG	Jun22,28; Jul 6,13, 20, 27; Aug 4	28.25a	24.75a	55.50a	108.50a
Untreated	-----	23.50a	30.25a	62.75a	116.50a

Means within a column followed by the same letter are not significantly different (Ryan's q-test; P=0.05)