

Insect Management in Non- Bell Peppers, 2008: “Cherry Bomb” hot cherry peppers were transplanted on June 18 at the University of Delaware Research and Education center located near Georgetown, DE. Two row plots 20 ft long on 8 ft centers were replicated 4 times in a RCB design. All foliar treatments receiving a weekly application of Warrior or Spintor/Intrepid were applied beginning at first flower/small fruit on July 15 and then on a weekly basis on Jul 18, 25 and 31; AUG 7, 14 AND 21. 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 62.5 gpa at 37 psi. Plots were sampled on a weekly basis from June 25 through Aug 18 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 Aug 12 and Aug 25 and evaluated for ECB, BAW, CEW and FAW damage. Data were analyzed using Proc GLM and means were separated by LSD mean separation test (P=0.05).

Foliar insect populations were low throughout the season. Although aphid populations were generally low, we did see a significant increase late in the season in the plots receiving weekly Warrior applications. ECB Moths catches did not reach 5 per night before the first fruit evaluation. However, from the end of July until the first harvest corn borer trap catches averaged 2 per night. On Aug 12, corn borer damaged was overall significantly higher in the untreated plots suggesting that a threshold of 2 moths per night might be a better threshold for non bell threshold. Between the first and second harvest, traps catches increased to an average of 5 per night. Once again, there was significantly higher corn borer damage in the untreated plots. These results suggest that corn borers can cause economic loss in non-bell peppers at a level of 2-5 corn borer moths catches per night. No phytotoxicity was observed.

Treatment	Timing	Treatment Dates	Rate/A	Aphid per 50 leaves Aug 18	% ECB Damaged Fruit	
					Aug 12	Aug 25
Warrior	Weekly starting at ¼ inch fruit		3.2 oz	20.25a	0.00b	0.00b
Warrior	Threshold 5 ECB moths/night in BLT	No Sprays	---	3.25b	5.25a	2.00ab
Spintor then switch to Intrepid	2 app – start at ¼ inch fruit 2 appl	July 26; Aug 2	6 oz 8 oz	 3.25b	 0.00b	 0.01b
Spintor then switch to Intrepid	Threshold – 2 appl max Threshold 5 ECB moths/night in BLT	No Sprays	---	 0.75b	 1.25b	 4.50a
Untreated	---		---	2.50b	3.50ab	4.75a

Means within a column followed by the same letter are not significantly different (LSD; P=0.05).