

**Dectes Stem Borer Management in Soybeans –2009:** Research plots were established in two locations. At the University of Delaware’s Research and Education Center near Georgetown, DE, ‘SS4451N’ soybeans were planted on May 19. Plots were 30 ft wide by 200 foot long planted on 15-inch centers. Foliar treatments were applied on July 14 with a high clearance spider sprayer delivering 20 gpa at 40 psi. Each treatment was replicated three times and arranged in a RCB design. At the on-farm Bridgeville location, ‘Asgrow 4404’ soybeans were planted on June 3. Plots were 20 ft wide by 50 foot long planted on 15 inch centers. Treatments were applied on July 14 with a CO<sub>2</sub> pressurized wheelbarrow sprayer delivering 26 gpa at 40 psi. Each treatment was replicated four times and arranged in a RCB design.

Dectes adult beetle population levels were evaluated on a weekly basis from June 1 through Aug 5 by taking 20 sweeps per plot at the Bridgeville location and 200 sweeps per plot at the Georgetown location. Before physiological maturity, 20 stems were collected from each plot at the Bridgeville location and 50 stems per plot at the Georgetown location to determine the percentage of stems infested with Dectes larvae. At physiological maturity, soybeans were harvested on Nov 9 at the Bridgeville location. At the Georgetown location, one half of the plot was harvested on Nov 4 at physiological maturity. The second half of the plot was harvested on Nov 30 to simulate a late harvest. Data were analyzed using Proc GLM and means were separated by Tukey’s mean separation test (P=0.05).

The Hero and Tombstone Helios treatments at both locations resulted in a significant reduction in the number of adult beetles at 6 DAT compared to the untreated control. At the Bridgeville location, there was also a significant reduction in the percent infested stems for both insecticide treatments compared to the untreated control. However, there were no differences in yield or lodging loss for both locations.

Table 1. Bridgeville Location

Treatment	Rate/A	Number Dectes Adults per 20 sweeps				% Infested Stems Aug 25	# Larvae per 20 stems Aug 25	Yield (BU/A) Nov 9	Lodging Loss (BU/A)
		July 13 Pre-Count	July 20 6 DAT	July 27 13 DAT	Aug 5 22 DAT				
Hero	10.3 oz/A	4.50a	0.00b	0.25a	2.25a	41.25b	7.00b	18.31a	0.24a
Tombstone Helios	2.8 oz/A	4.50a	0.00b	0.50a	0.25a	46.25b	8.00b	19.21a	0.27a
Untreated	---	4.50a	1.75a	1.75a	1.00a	77.5a	12.25a	18.00a	0.38a

Means within a column followed by the same letter are not significantly different (Tukey’s mean separation test; P=0.05).

Table 2. Georgetown Location

Treatment	Rate/A	Number Dectes Adults per 200 sweeps				% Infested Stems Aug 25	# Larvae per 30 stems Aug 25	Yield (BU/A) First Harvest Nov 4	Lodging Loss (BU/A) Nov 5	Yield (BU/A) Second Harvest Nov 30
		July 13 Pre-Count	July 20 6 DAT	July 27 13 DAT	Aug 4 21 DAT					
Hero	10.3 oz/A	9.00a	7.33b	8.33a	1.33a	23.33a	4.00a	56.15	0.47a	59.13a
Tombstone Helios	2.8 oz/A	11.33a	3.67b	8.67a	1.67a	23.33a	3.67a	55.45	0.39a	56.89a
Untreated	---	13.67a	13.33a	6.00a	0.67a	26.67a	6.33a	51.91	0.44a	53.54a

Means within a column followed by the same letter are not significantly different (Tukey's mean separation test; P=0.05).