

Flea Beetle and Stewart's Wilt Management in Sweet Corn Using Seed Treatments - 2001

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Sweet corn plots were established at the University of Delaware Research Farm in Newark, DE. Two Stewart's Wilt susceptible varieties, Lumina and Jubilee, were planted on April 25. Plots consisted of ten 17.5 ft long rows on 30-inch centers. Each treatment was replicated four times and arranged in a RCB design. Seed treatments were applied commercially by Gustafson Inc. and Syngenta Seeds. Stand counts and plants with flea beetle damage per 35 ft were recorded for six weeks after plant emergence. Stewart's wilt was rated as percent infected plants from May 30 through June 22. Data were analyzed using ANOVA and means were separated by Ryan's q-test (P=0.05).

Flea beetle pressure was extremely low. In the Lumina variety, all treatments provided a significantly lower percentage of Stewart's Wilt infected plants on June 4 and June 12 compared to the untreated check. In the Jubilee variety, all treatments provided a significantly lower percentage of Stewart's wilt infected plants on June 12 compared to the untreated check except for the GH2690 variety.

I. Lumina Variety: Flea Beetle Data

Trt	Rate	% Beetle Damaged Plants					
		May 9 1-2 leaf	May 16 4-6 leaf	May23 6-7 leaf	May 30 8 leaf	June 7 10 leaf	June 14 12 leaf
Untrt	-----	3.91a	2.50a	3.5a	0.00a	1.50a	0.00a
Adage	50g ai / 100 kg	1.44a	0.00b	0.00b	0.50a	0.50a	0.00a
Adage	100g ai / 100kg	0.00a	0.00b	1.00ab	0.00a	0.00a	0.00a
Adage	200g ai / 100 kg	0.00a	0.00b	0.50ab	0.00a	0.00a	0.00a
Gaicho 600FS	6.4 oz/ cwt	0.00a	0.00b	0.00b	0.00a	1.00a	0.00a
Gaicho 480	4 oz/ cwt	1.92a	0.00b	0.00b	0.50a	0.50a	0.00a
Gaicho 480	6 oz/cwt	0.00a	0.00b	1.00ab	0.00a	0.50a	0.00a
Gaicho 480	8 oz/cwt	0.00a	0.50b	0.00b	0.00a	0.00a	0.00a
Clothianidin	.25 mg ai/seed	0.00a	0.00b	0.00b	0.00a	0.00a	0.50a
Clothianidin	3.2 oz/cwt	1.56a	0.00b	0.50ab	0.00a	0.00a	0.00a
Clothianidin	4.8 oz/cwt	0.00a	0.00b	0.50ab	0.00a	0.00a	0.00a
GH 2690	Untreated	0.00a	0.50b	1.50ab	0.00a	1.00a	0.50a

II. Lumina Variety: Stewart's Wilt Data

Trt	Rate	% Stewart's Wilt Infected Plants			
		May 30	June 4	June 12	June 22
Untrt	-----	.69a	1.89a	7.93a	8.55a
Adage	50g ai / 100 kg	.28a	0.48b	0.58b	1.79b
Adage	100g ai / 100kg	.00a	0.28b	0.57b	1.77b
Adage	200g ai /100 kg	.09a	0.31b	0.90b	1.78b
Gaicho 600FS	6.4 oz/ cwt	.28a	0.47b	0.47b	1.82b
Gaicho 480	4 oz/ cwt	.19a	0.29b	0.60b	1.49b
Gaicho 480	6 oz/cwt	.11a	0.32b	0.63b	2.23b
Gaicho 480	8 oz/cwt	.09a	0.09b	0.29b	2.45b
Clothianidin	.25 mg ai/seed	.40a	0.50b	0.59b	1.69b
Clothianidin	3.2 oz/cwt	.09a	0.29b	0.68b	1.67b
Clothianidin	4.8 oz/cwt	.00a	0.00b	0.29b	2.07b
GH2690 variety	untreated	.29a	0.87b	2.31b	6.50ab

III. Jubilee Variety: Flea Beetle Data

Trt	Rate	% Beetle Damaged Plants					
		May 9 1-2 leaf	May 16 4-6 leaf	May 23 6-7 leaf	May 30 8 leaf	June 7 10 leaf	June 14 12 leaf
Untrt	-----	3.28a	2.50a	2.50a	.75a	1.00a	0.00b
Adage	50g ai / 100 kg	0.00a	0.00b	0.50ab	0.00a	0.00a	0.00b
Adage	100g ai / 100kg	1.83a	0.00b	0.50ab	0.50a	0.00a	1.00a
Adage	200g ai / 100 kg	0.00a	0.50ab	0.00b	0.00a	0.00a	0.00b
Gaucho 600FS	6.4 oz/ cwt	0.00a	0.50ab	0.00b	0.00a	0.00a	0.00b
Gaucho 480	4 oz/ cwt	0.49a	0.00b	0.00b	0.00a	0.00a	0.00b
Gaucho 480	6 oz/cwt	0.83a	0.50ab	0.50ab	0.00a	0.50a	0.00b
Gaucho 480	8 oz/cwt	2.14a	0.00b	0.00b	1.00a	0.00a	0.00b
Clothianidin	.25 mg ai/seed	2.63a	0.00b	0.00b	0.00a	0.50a	0.00b
Clothianidin	3.2 oz/cwt	0.00a	0.00b	0.50ab	0.50a	0.00a	0.00b
Clothianidin	4.8 oz/cwt	0.49a	0.00b	0.00b	0.00a	0.00a	0.00b
GH2690 variety	untreated	0.74a	0.00b	2.50a	0.50a	1.00a	0.00b

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

IV. Jubilee Variety: Stewart's Wilt Data

Trt	Rate	% Stewart's Wilt Infected Plants			
		May 30	June 4	June 12	June 22
Untrt	-----	.99ab	2.21a	7.01a	8.70a
Adage	50g ai / 100 kg	.60abc	1.16abc	2.61b	7.65ab
Adage	100g ai / 100kg	.20bc	0.49c	1.34b	2.59ab
Adage	200g ai /100 kg	.20bc	0.50c	1.28b	2.63ab
Gaucha 600FS	6.4 oz/ cwt	.49bc	0.88bc	1.29b	3.86ab
Gaucha 480	4 oz/ cwt	.00c	0.61c	1.01b	2.86ab
Gaucha 480	6 oz/cwt	.00c	0.42c	1.37b	3.54ab
Gaucha 480	8 oz/cwt	.29bc	0.39c	0.79b	3.89ab
Clothianidin	.25 mg ai/seed	.40bc	0.69c	1.09b	1.59b
Clothianidin	3.2 oz/cwt	.28bc	0.66c	1.04b	3.64ab
Clothianidin	4.8 oz/cwt	.39bc	1.08abc	1.17b	3.21ab
GH2690Variety	untreated	1.35a	2.05ab	5.30a	4.81ab

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