



CORN DISEASE CONTROL SYSTEMS TRIAL

As a trial to accompany our Acceleron® Seed Applied Solutions ELITE broad acre comparisons, a side study was undertaken to determine if individual product responses may be different and if Acceleron® Seed Applied Solutions ELITE Fungicide treatment could enhance foliar fungicide programs.

MATERIALS AND METHODS

A factorial study containing 2 products (S600 Brand and S660 Brand) and 3 levels of fungicide treatment (Acceleron® Seed Applied Solutions ELITE + V9 + R1.5, V9 + R1.5, and an Untreated Control (UTC)) created 6 treatments per replication. The two corn products were chosen because of their Anthracnose Stalk Rot Resistance (S660 Brand = 2 or Resistant, while S600 Brand = 6 or moderately susceptible) and Gray Leaf Spot Resistance (S660 Brand = “good” 5 or moderately resistant, while S600 Brand = “rough” 6 or moderately susceptible). Delaro® Fungicide was sprayed at corn growth stages V9 (9 collared leaves) and at Silk Detachment (R1.5) in treatments receiving foliar fungicide. The study was planted May 10th and replicated 4 times and carried out in a uniform area on a predominately Crosby-Celina silt loam with 2-4% slopes and somewhere around 2% Organic Matter. Planting maps, as-applied spray maps, and yield data were collected with Climate Fieldview™ and analyzed with Ag Leader® SMS™ Advanced. Harvest was completed October 9th. Analysis of Variance was performed and protected Least Significant Difference (LSD) was used to perform means separation.



Figure 1. Picture of lower canopy on August 24th. Note that Acceleron® Seed Applied Solutions ELITE with Enhanced Disease Control improved lower canopy health. Both photos received V9 and R1.5 foliar application of Delaro®.

PRODUCT	FUNGICIDE TREATMENT	# OF REPS (N)	YIELD (BU/A)		MOISTURE (%)	
			LSD	5.95	LSD	0.64
S600	Acceleron® Seed Applied Solutions ELITE + V9 + R1.5	4	238.0	ab	16.60	b
S600	V9 + R1.5	4	233.0	bc	16.80	b
S600	UTC	4	227.3	c	16.30	b
S660	Acceleron® Seed Applied Solutions ELITE + V9 + R1.5	4	235.0	ab	17.70	a
S660	V9 + R1.5	4	240.2	a	18.10	a
S660	UTC	4	235.0	ab	17.80	a

Comparisons are significant @ $p = 0.05$, numbers within the same column followed by the same letter are not significantly different.

RESULTS AND DISCUSSION

Acceleron® Seed Applied Solutions ELITE seed treatment contains increased fungicide rates to address key disease organisms such as Fusarium, Rhizoctonia and Colletotrichum (which causes Anthracnose Stalk Rot). Significant differences in response to Acceleron® Seed Applied Solutions ELITE Seed Treatment + V9 + R1.5 foliar Delaro® Fungicide were observed (Table 1). While no statistically significant yield gains were measured for S660 Brand regardless of the fungicide combination, S600 Brand benefit 10.7 bu/A from the combination of Acceleron® Seed Applied Solutions ELITE Seed Treatment and foliar fungicide and showed visual response to the addition of Acceleron® Seed Applied Solutions ELITE seed treatment vs. the untreated control (Figure 1). Moistures were similar regardless of fungicide treatment, but S600 Brand was significantly drier than S660 Brand at harvest. These results has shown to indicate there may be product difference in propensity for yield response to Acceleron® Seed Applied Solutions ELITE and foliar fungicide. While the broadest acre benefit for Acceleron® Seed Applied Solutions ELITE seed treatment will be on more susceptible products, it is always advisable to partner Acceleron® Seed Applied Solutions ELITE with more resistant germplasm for fields with a history of disease or standability issues.

