

Soybean Response to Special Foliar Inputs, Carrington

Greg Endres, Blaine Schatz and Mike Ostlie

A field experiment was conducted at the NDSU Carrington Research Extension Center to examine the impact of foliar inputs on soybean seed yield and quality. Experimental design was a randomized complete block with four replications. The irrigated, conventional-till trial was conducted with wheat as the previous crop on a Heimdal Emrick loam soil with 167 lbs/A (0-24") nitrate-N, 29 ppm P, 265 ppm K, 4 lbs/A (0-24") Cl, 64 lbs/A (0-24") S, 0.9 ppm B, 1.03 ppm Zn, 12.6 ppm Fe, 2.9 ppm Mn, 0.59 ppm Cu, 444 ppm Mg, 2580 ppm Ca, 34 ppm Na, 0.2 percent carbonate, 0.30 mmho/cm (0-6") and 0.27 mmho/cm (6-24") soluble salts, 17.4 meq CEC, 3.6 percent organic matter and 7.7 pH. Inoculated Dairyland Seeds 'DSR-0401/RR' was planted at 175,000 pls/A in 14-inch rows on May 15. POST foliar treatments were applied with a CO₂-pressurized hand-boom sprayer delivering 17 gal/A at 35 psi with 8001 flat-fan nozzles. Treatment application dates: V2 = June 20, R1 = July 6, and R3 = July 28. The trial was harvested with a plot combine on September 25.

Foliar disease including fungal and bacterial was present in the trial on August 9 but notes were not taken due to low disease incidence. Days from planting to physiological maturity were similar among treatments (Table). Except for seed count, other factors including seed yield, test weight, and seed oil and protein were similar among treatments compared to the untreated checks.



Soybean special input evaluation, June, 2012.

Table 1. Soybean response to special foliar inputs.

No.	Company	Treatment					Plant Maturity (R8) Jday	Seed				
		Name ¹	Rate	Unit	Timing	Test		Seeds/lb	Oil %	Protein %		
						Yield					Weight	
							bu/A	lb/bu				
1	x	untreated check	x	x	x	264	60.2	56.4	2846.9	19.1	31.0	
2	BASF	Headline Preference	6 0.25	fl oz/a % v/v	R3	263	64.4	56.4	2828.5	19.2	31.0	
3	BASF	Priaxor Preference	4 0.25	fl oz/a % v/v	R3	262	60.9	56.5	2841.4	19.2	30.8	
4	Bayer	Stratego YLD Preference	4 0.25	fl oz/a % v/v	R3	263	61.1	56.4	2906.3	19.2	30.6	
5	Arysta	Evito Preference	2 0.25	fl oz/a % v/v	R3	262	54.4	56.6	2896.6	19.2	30.8	
6	BASF	Headline Fastac Preference	6 4 0.25	fl oz/a fl oz/a % v/v	R3	263	63.2	56.6	2794.2	19.1	31.4	
7	BASF	Priaxor Fastac Preference	4 4 0.25	fl oz/a fl oz/a % v/v	R3	264	58.8	56.6	2823.2	19.0	31.2	
8	Bayer Syngenta	Stratego YLD Leverage Preference	4 3.8 0.25	fl oz/a fl oz/a % v/v	R3	263	63.1	56.6	2835.3	19.1	30.9	
9	Arysta Syngenta	Evito Leverage Preference	2 3.8 0.25	fl oz/a fl oz/a % v/v	R3	263	58.0	56.8	2798.9	19.1	31.3	
10	x	untreated check	x	x	x	263	62.6	56.8	2890.4	19.2	30.7	
11	Valent	Cobra Destiny Preference	6 8 0.25	fl oz/a fl oz/a % v/v	V2	262	63.1	56.7	2902.7	19.1	31.0	
12	Valent	Cobra Destiny Preference	6 8 0.25	fl oz/a fl oz/a % v/v	R1	263	60.5	56.6	3041.6	19.1	31.2	
13	Loveland	Makaze Yield Pro Weather Gard Complete	32 0.50	fl oz/a % v/v	V2	263	61.5	56.3	2974.8	19.2	30.7	
14	Kugler	Bin Buster XP	8	fl oz/a	V2	263	57.6	56.8	2855.2	19.1	30.7	
15	Kugler	Bin Buster XP KQ-XRN	8 128	fl oz/a fl oz/a	V2 R1	263	59.5	56.3	2902.4	19.0	31.2	
16	Helena	CoRon	10	gal/a	R3	263	60.8	56.3	2837.7	19.2	31.0	
17	Ebmix	West Central	64	fl oz/a	R3	263	56.2	56.6	2902.4	19.2	30.9	
18	Agri-Gro	Foliar Blend Micro Mix Foliar Blend Micro Mix	32 6.4 32 6.4	fl oz/a fl oz/a fl oz/a fl oz/a	V2 R3	263	57.4	56.4	2882.9	19.3	30.9	
19	AgriGuardian	Moly	4 4	fl oz/a fl oz/a	V2 R1	262	57.2	56.2	2868.6	19.2	30.9	
20	Kugler BASF BASF	Bin Buster XP Headline Fastac Preference	8 6 4 0.25	fl oz/a fl oz/a fl oz/a % v/v	V2 R3	263	60.6	56.5	2874.1	19.3	30.6	
Mean						263	60.1	56.5	2875	19.2	30.9	
C.V. (%)						0.3	8.1	0.5	3.1	1.2	1.1	
LSD (0.05)						NS	NS	NS	124	NS	NS	

¹Preference = NIS; Destiny = MSO (WinField Solutions).