Soybean Response to Selected Plant Establishment Strategies, Wishek

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A field trial was conducted by the NDSU Carrington Research Extension Center at the Tri-county off-station trial site near Wishek to examine the performance of soybean with planting rates, inoculated (granular formulation) seed, fungicide-treated seed, and in-furrow applied fertilizer. Experimental design was a randomized complete block with four replications. Fall 2011 soil test indicated 14 ppm P (Olsen), 10 lbs/A sulfur (0-24" depth) and 3.9 percent organic matter. Seed treatment was ApronMaxx RTA at 5 fl oz/cwt. Fertilizer sources included ammonium sulfate and MES15 at 10 lbs sulfur/A. Dairyland Seed 'DSR0401' Roundup Ready soybean was planted in wheat stubble in 7-inch rows on May 16. Seed was harvested with a plot combine on September 20.

At 175,000 pls/A, plant stand was reduced with in-furrow fertilizer compared to unfertilized and tended to increase with fungicide seed treatment (Table). Seed yield was similar among treatments including with the low seeding rate and with inoculant.

Table 1. Soybean response to selected plant establishment strategies, Wishek.

Plant Establishment Factor			Plant			Seed				
Planting Rate	Inoculant	Other[1]	Stand (June 13)	Height (Sept 20)	Pod Height	Yield	Test Weight	Number/lb	Oil	Protein
pls/A			plt/A	cm		lb/A	lb/bu		%	%
175	no	none	103,206	35	7	28.8	56.5	3716	18.5	33.1
130	no	none	73,312	37	7	28.6	56.6	3717	18.9	32.9
175	yes	none	106,053	36	7	27.6	56.1	3690	18.6	33.3
130	yes	none	70,465	36	8	25.9	56.0	3698	18.9	32.9
175	yes	AMS	78,294	37	8	26.3	57.2	3760	18.8	33.0
175	yes	MES15	75,447	35	6	28.7	56.7	3769	18.7	33.1
175	yes	ApronMaxx	113,171	36	7	25.9	57.1	3728	18.3	33.8
Mean			88,565	36	7	27.4	56.6	3725	18.7	33.1
C.V. (%)			10.7	8.5	12.1	13.4	1.4	2.6	1.3	1.1
LSD (0.05)			14,015	NS	NS	NS	NS	NS	0.4	0.5

[1]AMS = ammonium sulfate and MES15 (Mosaic) at 10 lb sulfur/A. ApronMaxx RTA at 5 fl oz/A.