

Soybean response to planting rate and row spacing, Carrington, 2007

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The field trial was established on a Heimdahl-Emrick soil on previous spring wheat ground using conventional tillage at the NDSU Carrington Research Extension Center. Experimental design was a randomized complete block design with four replicates. Inoculated NuTech 'NT0090 RR' soybean was planted at 125,000 or 175,000 PLS/A with 7-, 14-, or paired 7-inch row spacing on May 28. The trial was harvested with a plot combine on October 3.

Soybean stand with the low planting rate averaged 148,000 plants/A and 172,800 plants/A at the high planting rate (Table). Plant emergence, canopy closure and first flower were delayed 1 to 2 days with the low compared to the high planting rate. Seed yield improved 4.4 bushels/A (7%) with the high planting rate. Soybean stand was less with 14-inch rows compared to the narrow rows. Plant emergence was delayed with the narrow rows while canopy closure was generally earlier compared to 14-inch rows. Seed yield was similar between 7- and 14-inch rows while both row spacings had higher yield compared to the paired 7-inch rows.

Table. Soybean response to planting rate and row spacing, Carrington, 2007

Treatment	Plant emergence (Jday)	Plant lodge (0-9)	Plant density (plants/A)	Canopy closure (Jday)	First flower (Jday)	Plant maturity (Jday)	Plant height (inch)	Pod height (cm)	Seed yield (bu/A)	Test weight (lb/bu)	Seeds/lb	Oil (%)	Protein (%)
Planting rate (pls/A)													
125,000	164	0	147981	201	189	263	32	3	56.5	57.8	3633	18.0	33.8
175,000	163	0	172802	199	188	262	30	3	60.9	57.7	3653	18.4	33.0
LSD 0.05	1	NS	19237	1	1	NS	NS	NS	3.4	NS	NS	0.2	0.5
Row spacing (inches)													
7	164	0	166479	199	189	263	32	3	59.3	57.7	3648	33.5	18.2
14	162	0	137310	201	189	262	31	3	62.6	57.7	3702	33.3	18.2
pair 7	164	0	177386	200	189	263	31	3	54.2	57.8	3580	33.5	18.3
LSD 0.05	1	NS	23560	2	NS	NS	NS	NS	4.2	NS	NS	NS	NS