Seeding Rate Interactions with Row Spacing in Soybean at Minot

Interactions

Spacing	Seeding Rate	Plant Stand	Maturity Date	Plant Height	Lodging	Test Weight	Protein	Oil	Yield
	pls/A	plants/A	Sept.	inches	0-9*	lbs/bu	%	%	bu/A
10"	75,000	72,600	17	29	1	59.1	33.2	15.1	37.7
	100,000	103,092	17	29	0	59.0	31.7	15.6	43.3
	125,000	113,256	16	28	0	59.0	31.4	15.8	49.0
	150,000	132,132	17	31	0	59.2	33.1	15.1	52.7
20"	75,000	60,258	17	29	0	58.7	32.9	15.3	32.0
	100,000	65,340	16	29	0	59.1	32.4	15.5	33.5
	125,000	72,600	15	30	0	59.0	32.0	15.6	33.5
	150,000	95,106	16	31	0	58.5	31.5	15.8	35.8
30"	75,000	55,902	17	33	1	58.7	31.8	15.7	41.8
Twin Row	100,000	63,888	16	34	1	58.0	31.1	15.7	39.6
	125,000	78,408	15	34	0	58.4	30.1	16.0	35.1
	150,000	98,736	16	36	1	58.9	30.9	15.8	39.9
C.V. %		12.1	10.7	8.4	153	0.7	3.4	3.1	15.5
LSD 5%		14,621	NS	4	NS	0.6	1.7	NS	8.8

Row Spacing Comparisons

Row Spacing	Plant Stand	Maturity Date	Plant Height	Test Weight	Protein	Oil	Yield
	plants/A	Sept.	inches	lbs/bu	%	%	bu/A
10"	105,270	17	29	59.1	32.3	15.4	45.7
20"	73,326	16	30	58.8	32.2	15.5	33.7
30" Twin	74,233	16	34	58.5	31.0	15.8	39.1
LSD 5%	14,738	NS	2	0.3	0.9	0.3	4.8

Seeding Rate Comparisons

Seeding Rate	Plant Stand	Maturity Date	Plant Height	Test Weight	Protein	Oil	Yield
pls/A	plants/A	Sept.	inches	lbs/bu	%	%	bu/A
75,000	62,920	17	30	58.8	32.6	15.4	37.2
100,000	77,440	16	31	58.7	31.7	15.6	38.8
125,000	88,088	15	31	58.8	31.2	15.8	39.2
150,000	108,658	16	32	58.9	31.9	15.6	42.8
LSD 5%	15,855	NS	NS	NS	NS	NS	NS

**Lodging: 0 = none, 9 = lying flat on the ground.* *NS= no statistical difference.*

Planting Date: June 6 *Harvest Date: October 12*
Variety = Asgrow 0231 *Soil Type: Williams Loam*
Previous Crop: spring wheat *Tillage: Minimum Till*

Summary: Planting soybeans into 20 and 30 inch rows is a common practice in Eastern and Southern areas of the State, while solid seeding into 10 inch or narrower rows is common in the North Central and Western "no-till" areas of the State. This trial showed a strong correlation between row spacing and yields. Solid seeding produced more surviving plants which tended to be shorter in height and provided for higher yields than the wider rows. There was a significant yield response to seeding rates of 125,000 and 150,000 with 10 inch rows but no statistical difference between seeding rates for the 20 inch and twin row spacing. Row spacing also had a slight impact on test weight, protein and oil content. Agronomic and seed quality factors were not impacted by seeding rates.