

## **Seeding Rate Effect on Yield and other Agronomic Traits of Soybean-2014**

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Seeding rate trials were embedded in soybean variety trials at two off-station locations in 2014. Populations ranged from 125,000 to 225,000 pure live seed per acre (pls/a). Seeding rates were adjusted for seed size and germination (90%). The variety Asgrow AG00632 (maturity group 00.6) was seeded at Park River (Walsh County) and Pekin (Nelson County). Seeding dates were May 27 and 28 for Park River and Pekin, respectively. Row spacing was six inches.

The LSD 10% and CV% were determined using data from the entire variety trial at each location. Means are calculated from the five seeding rates. Seeding rate appeared to have little effect on maturity dates, with a slight delay in Park River. Plant height, protein and oil differences among seeding rates were small and mostly non-significant at the various locations. Seeding rate effects on yield at Park River were non-significant while the 175,000 pls/a seeding rate at Pekin was significantly higher than the two lower seeding rates. In both trials, the 175,000 pls/a seeding rate had the numerically highest yield. Combined results from studies conducted in 2011, 2012 and 2014 would seem to indicate that a seeding rate between 175 and 200,000 pls/a would result in optimum yields.

### **Nelson County - Pekin 2014**

<b>Seeding Rate pls/a</b>	<b>Maturity Date</b>	<b>Height (in)</b>	<b>Protein %</b>	<b>Oil %</b>	<b>Plant Stand Plts/ft<sup>2</sup></b>	<b>Yield bu/a</b>
125,000	17-Sep	28	33.9	15.0	3.2	42.6
150,000	16-Sep	26	33.3	15.2	3.1	43.1
175,000	17-Sep	27	33.3	15.4	4.3	48.8
200,000	15-Sep	29	33.9	14.9	3.8	46.6
225,000	16-Sep	28	33.9	14.6	5.6	48.1
Mean	16-Sep	28	33.7	15.0	4.0	45.8
CV %	1.8	9.3	2.0	2.0	23.1	7.8
LSD 10%	2.3	3.2	1.1	0.5	1.2	5.1

### **Walsh County - Park River 2014**

<b>Seeding Rate pls/a</b>	<b>Maturity Date</b>	<b>Height (in)</b>	<b>Protein %</b>	<b>Oil %</b>	<b>Plant Stand Plts/ft<sup>2</sup></b>	<b>Yield bu/a</b>
125,000	6-Sep	29	32.6	16.5	3.2	47.5
150,000	6-Sep	29	33.0	16.6	3.0	48.9
175,000	4-Sep	30	32.3	16.5	4.4	50.7
200,000	5-Sep	28	33.0	16.3	4.8	51.1
225,000	5-Sep	29	32.3	16.7	4.5	50.7
Mean	5-Sep	29	32.6	16.5	4.0	49.8
CV %	1.5	8.1	1.6	1.7	19.7	7.1
LSD 10%	1.8	2.7	0.8	0.5	1.0	4.8

Combined soybean yield data from various locations in 2011, 2012 and 2014.

Seeding Rate pls/a	Yield (bu/a)										
	Vesley-ville 2012	Lakota 2012	Langdon 2012	Park River 2014	Pekin 2014	Voss 2011	Langdon 2011	7-site Avg	6-site Avg	4-site Avg	2-site Avg
125,000		56.0	38.5	47.5	42.6	46.2	59.4		48.4	48.9	52.8
150,000	49.1	60.8	44.3	48.9	43.1	46.4	61.0	50.5	50.7	49.8	53.7
175,000	47.7	62.7	42.1	50.7	48.8	48.9	63.6	52.1	52.8	53.0	56.3
200,000	52.5	64.0	42.5	51.1	46.6	50.6	64.7	53.1	53.2	53.2	57.7
225,000				50.7	48.1	50.5	65.2			53.6	57.9
250,000						50.5	65.7				58.1