

2017 Chickpea Seed Singulation and Row Spacing Trial at Minot—Continued

Combined Means-Seeding Rate

Seeding Rate	Harvest Stand	Foliar Disease*	1000 KWT	Seed Size				Seed Yield
				<10mm	10-9mm	9-8mm	>8mm	
Seeds/A	plants/A	%	g	%	%	%	%	lbs/A
130k	38,397	8	313	3	25	35	36	978
175k	38,397	6	311	6	26	29	39	1282
220k	45,819	3	313	5	26	32	37	1239
LSD 5%	NS	4	NS	NS	NS	4	NS	280

*Foliar Disease: Visual estimation of foliage infected with *ascochyta*.

NS = No statistical difference between treatments.

Planting Date: May 18

Harvest Date: September 29

Soil Type: Williams Loam

Tillage System: Transitional No-till (2nd year)

Note: The trial sustained severe drought (3.6" of precip Jan 1 - July 30)

Summary: The objective of this trial was to utilize seed singulation technologies to optimize plant spacing and potentially reduce the planting rate and seed cost of this crop while maintaining or improving seed quality and yield. The trial was planted with Great Plains no-till openers using Monosem seed singulation meters. The month of May was extremely dry, hindering germination and seedling growth. The trial also sustained severe drought throughout the growing season which limited growth, disease infection and yield. As would be expected, statistical differences between varieties was observed, with Frontier producing larger seeds and a higher yield than the B-90's. The only statistical difference between row spacing was for yield with the 10 inch spacing producing a higher yield than the 15 inch row spacing. Seeding rates produced similar plant stands and also showed the level of seed / seedling mortality caused by this year's unfavorable growing conditions. These similar plant stands produced somewhat similar seed yields although the 170k rate produced a statistically higher yield than the 130k rate. The 130k, 175k and 220k seeding rates correspond to 3, 4 and 5 seeds per square foot respectively, with 4 seeds per square foot being the current recommended seeding rate. This trial will need to be repeated in order to validate conclusions and to provide any additional meaningful recommendations based on seed singulation technologies for this crop.