2021 Canola Fertility Trial at Minot

TRT	Product	Days to Bloom	Duration of Bloom	Days to Mature	NDVI at Bolting	NDVI at Flowering	Plant Height	Test Weight	Oil	Yield
		DAP*	Days	DAP*	0-1**	0-1**	inches	lbs/bu	%	lbs/A
1	Untreated	43	23	76	0.23	0.46	27	52.3	43.1	290
2	118 lbs/A KSO in furrow at planting	42	25	77	0.21	0.50	29	52.4	41.5	385
3	146 lbs/A N applied in a mid-row band at planting	42	24	77	0.33	0.59	30	52.6	39.1	1293
4	86 lbs/A N applied in a mid-row band at planting + 42 lbs/A AMS in furrow at planting	42	25	78	0.28	0.59	28	53.0	39.0	937
5	86 lbs/A N applied in a mid-row band at planting + 84 lbs/A AMS in furrow at planting	43	26	79	0.19	0.61	31	52.9	36.5	747
6	116 lbs/A N applied in a mid-row band at planting + 42 lbs/A AMS in furrow at planting	43	24	79	0.24	0.60	31	52.7	39.5	1278
7	116 lbs/A N applied in a mid-row band at planting + 84 lbs/A AMS in furrow at planting	43	26	79	0.21	0.56	33	52.4	38.6	646
8	146 lbs/A N applied in a mid-row band at planting + 42 lbs/A AMS in furrow at planting	43	24	79	0.25	0.65	33	52.9	39.3	1298
9	146 lbs/A N applied in a mid-row band at planting + 84 lbs/A AMS in furrow at planting	43	25	80	0.22	0.59	32	52.4	38.7	881
10	116 lbs/A N applied in a mid-row band at planting + 42 lbs/A AMS surface broadcast at bolting	42	24	77	0.29	0.55	32	52.5	40.7	1182
11	116 lbs/A N applied in a mid-row band at planting + 84 lbs/A AMS surface broadcast at bolting	42	26	78	0.30	0.57	31	53.1	38.6	1237
12	146 lbs/A N applied in a mid-row band at planting + 42 lbs/A AMS surface broadcast at bolting	42	25	80	0.25	0.62	28	53.1	37.7	1183
13	146 lbs/A N applied in a mid-row band at planting + 84 lbs/A AMS surface broadcast at bolting	42	23	77	0.29	0.57	31	52.9	39.4	1182

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2021 Canola Fertility Trial at Minot Continued

TRT	Product	Days to Bloom	Duration of Bloom	Days to Mature	NDVI at Bolting	NDVI at Flowering	Plant Height	Test Weight	Oil	Yield
		DAP*	Days	DAP*	0-1**	0-1**	inches	lbs/bu	%	lbs/A
14	128 lbs/A N applied in a mid-row band at planting + 84 lbs/A AMS in furrow at planting + 40 lbs/A urea broadcast at bolting	43	24	80	0.26	0.65	32	52.7	39.3	1278
15	128 lbs/A N applied in a mid-row band at planting + 84 lbs/A AMS in furrow at planting + 40 lbs/A Agrotain treated urea broadcast at bolting	44	26	82	0.17	0.51	27	52.6	34.5	610
16	128 lbs/A N applied in a mid-row band at planting + 84 lbs/A AMS in furrow at planting + 40 lbs/A SuperU treated urea broadcast at bolting	43	24	79	0.23	0.61	28	52.9	37.3	904
Trial Mean		43	25	78	0.25	0.58	30	52.7	38.9	958
C.V. %		2.0	3.6	1.5	20.5	9.1	4.2	0.5	1.5	21.3
LSD 0.05		NS	1	2	0.08	0.09	2	0.5	1.0	341

**DAP = Days after Planting **NDVI: An expression of the greeness of a plant NS = no statistical difference between treatments*

Tillage = No-till. Previous crop = spring wheat. Soil type = Williams loam.

Summary: The trial was planted on May 11 with DKTFLL21SC canola and harvested on August 13. Residual soil nitrogen was 4 lbs per acre at 0-24". Urea (46-0-0) was the nitrogen source used. The trial sustained high temperatures during flowering and extreme moisture stress throughout the growing season. All nitrogen fertilizer treatments provided a significant yield response over the untreated check and KSO treatment. Treatments containing sulphur (AMS and KSO) had inconsistent yield responses and did not have a rate response or respond to application technique (in-furrow vs broadcast). Oil content was also inconsistent however, an interesting observation showed the highest oil concentrations coming from the two treatments that lacked nitrogen fertilizer. NDVI ratings taken at flowering had a tendancy to correlate with yield. Data should be viewed with caution due to abnormal growing conditions.