

Project Title: Statewide Canola Variety Trial – 2013

Project Leader: Brooke Bohannon

Project Personnel: Bob Stougaard

Objective: To evaluate canola varieties for agronomic performance in environments and cropping systems representative of northwestern Montana.

Results:

Twenty-one canola entries were evaluated this year in Creston: 18 true canola, two canola quality mustards (VT X121 CL and VT Oasis CL), and one high erucic acid industrial rapeseed (Gem). DKL 30-42, Cara, and Arriba were included as check varieties.

Plants per square foot averaged 15 and ranged from 7.8 to 20.8. Flea beetle damage was observed this year and the study was rated for damage at the 4-6 leaf stage on June 3. On a scale of 1 – 10, damage averaged 1.2, with 10 being severe. VT X121 CL and VT Oasis CL had flea beetle damage ratings of 6.3 and 5.5, respectively. Average days to flowering were 180.8 (June 30), ranging from 178 to 184 days. Average days to maturity were 225 (August 13), ranging from 222 to 228 days. Plant height averaged 59.9 inches and ranged from 53.3 inches for DKL 30-03 to 67.5 inches for VT X121 CL. Lodging averaged 48.9 % and ranged from 6.3 % for Nexera 2012 CL to 93.8 % for Arriba. The average yield was 2,108.7 lb/A, ranging from 1,016.1 lb/A for Arriba to 3,165.5 lb/A for Invigor 5440. Invigor L130 yielded statistically equivalent to Invigor 5440. Oil content averaged 46.4 %, ranging from 43.6 % to 48.8 %. Test weights averaged 48.3 lb/bu, ranging from 46.4 lb/bu to 49.7 lb/bu. No significant difference was observed in percent shatter.

Table 1. Materials and Methods - Canola variety trial - 2013

Seeding Date:	5/2/13	Soil Type:	Creston Sil
Julian Date:	122	Soil Test:	202-6-162-38
Seeding Rate:	10 plants/sqft	Fertilizer:	0-40-40-20
Previous Crop:	Spring Wheat	Pesticide:	NA
Tillage:	Conventional	Harvest Date:	8/26/13
Irrigation:	None	Julian Date:	238

Table 2. Agronomic data from the statewide canola variety trial, Kalispell, MT - 2013

Cultivar	PLNT sqft	FB 0–10	FLWR Julian	HT in	LOD %	SHTTR %	PM Julian	YLD lb/A	YLD bu/A	OIL %	TWT lb/bu
Invigor 5440	17.5	0.5	184	65.8	22.5	5.0	226	3165.5	63.3	45.9	48.9
Invigor L130	15.8	1.3	183	64.0	7.5	2.5	225	2803.4	56.1	46.1	48.8
HyClass 930	14.8	0.8	179	53.5	60.0	0.5	224	2641.5	52.8	48.1	47.7
Pioneer 45H29	13.5	0.6	183	66.5	31.3	1.3	227	2574.6	51.5	46.2	48.4
HyClass 955	14.5	0.5	178	60.0	78.0	0.0	223	2470.0	49.4	47.8	48.3
DKL 70-07	17.0	0.4	182	56.5	63.8	0.0	225	2431.8	48.6	46.4	48.3
Invigor L156H	13.8	0.6	184	62.8	22.5	2.5	228	2414.7	48.3	47.3	46.4
DKL 55-55	17.3	0.5	179	59.3	42.5	0.8	224	2388.4	47.8	48.5	47.9
InVigor L120	12.3	0.8	183	62.8	28.8	3.3	225	2335.1	46.7	45.9	47.5
DKL 30-42	11.5	0.5	178	53.5	65.0	2.5	222	2295.6	45.9	47.1	48.5
DKL 30-03	15.3	0.5	178	53.3	66.3	1.3	223	2115.3	42.3	48.3	48.3
HyClass 969	18.3	1.0	182	57.5	58.8	0.0	225	2099.9	42.0	47.3	47.8
6070 RR	17.0	0.9	183	62.5	60.0	0.0	227	2048.3	41.0	46.4	48.9
DKL 38-48	18.3	0.8	182	55.0	60.0	0.0	224	2024.9	40.5	45.7	48.4
Nexera 2012CL	10.8	0.6	183	61.8	6.3	5.0	226	1935.1	38.7	47.1	48.4
VT X121 CL	15.5	6.3	180	67.5	18.8	3.3	226	1825.9	36.5	44.6	49.7
VT Oasis CL	20.8	5.5	178	61.5	33.8	1.3	226	1500.7	30.0	43.7	49.2
Cara	7.8	0.9	183	62.0	41.3	5.0	226	1462.4	29.2	45.3	48.5
Idaho Zephyr	14.3	0.7	181	59.0	88.8	1.3	225	1393.5	27.9	43.6	49.5
Gem	11.8	0.9	180	57.8	77.5	2.5	224	1339.5	26.8	48.8	48.0
Arriba	17.8	0.6	179	56.0	93.8	0.0	224	1016.1	20.3	43.8	48.1
Mean	15.0	1.2	180.8	59.9	48.9	1.8	224.9	2108.7	42.2	46.4	48.3
CV	30.4	54.5	0.6	6.9	37.7	151.2	0.52	15.0	15.0	1.8	0.8
LSD (P=.05)	6.4	0.9	1.6	5.9	26.0	3.8	1.67	446.7	8.9	1.2	0.5
Pr>F	0.0404	0.0001	0.0001	0.0001	0.0001	0.0742	0.0001	0.0001	0.0001	0.0001	0.0001

PLNT: plant, FB: flea beetle damage, FLWR: 50% flowering, HT: height, LOD: lodging, SHTTR: shatter, PM: physiological maturity, YLD: yield, TWT: test weight