

**Project Title:** 2019 Spring Canola Variety Trial

**Objective:** To evaluate the performance of selected spring canola varieties in northwestern Montana

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**Summary:**

Seventeen different varieties of spring canola were planted on April 29, 2019 managed under dryland conditions (Table 1). Damage due to vegetative consumption by deer was extensive in the early part of the season (prior to flowering, primarily) and may have contributed to high variability in yields. There was no lodging and minimal shattering in the trial.

NWARC was the second-highest producing dryland site in the statewide trial, after Havre, with an average yield of 1,898 lb/A. Although CP930RR had the highest average yield across all six study sites (2,131 lb/A), in Kalispell it fell close to average value of 1,981 lb/A. Variety 4187RR had the highest yield in Kalispell (2,520 lb/A) and 16MH6004 had the lowest (1,616 lb/A) shown in Table 2. The 16MH6004 also had the lowest average yield across all study sites in the state.

The tallest variety was CS2300 (60.8 in.) and the shortest was 16MH6001 at 47.2 in. Average height across the trial was 52.2 in. Test weights were relatively consistent among all varieties, with an average of 48.7 lb/bu. 16MH6001 had the highest test weight (49.8 lb/bu), and 16CH4181 had the lowest, at 47.3 lb/bu. CP930RR had the highest oil content of 51.1% and NCC101S had the lowest (47.0 %). Average oil content across all varieties was 48.8%.

**Table 1. Management information**

Seeding date:	4/29/19	Field Location:	Y4
Julian date:	119	Harvest date:	9/12/19
Seeding rate:	12 plants/ft <sup>2</sup>	Julian date:	255
Previous crop:	Spring wheat	Soil type:	Silt loam
Herbicide:	Roundup Power Max: 6/5	Tillage:	conventional
Insecticide:	None	Soil residual nutrient (NO <sub>3</sub> <sup>-1</sup> , P, K lb/A):	106-12-262
Fungicide:	None	Nutrient fertilizer applied (N, P <sub>2</sub> O <sub>5</sub> , K <sub>2</sub> O lb/A):	50-35-35

**Table 2.** Performance of the canola varieties

<b>Cultivar</b>	<b>Herbicide Resistance</b>	<b>Yield* lbs/A</b>	<b>TWT (lb/bu)</b>	<b>OIL (%)</b>	<b>FLDT (julian)</b>	<b>Height (in)</b>	<b>Lodging %</b>	<b>SHTTR %</b>
4187RR	RR	2520.2	48.1	49.4	177.2	55.8	1	2
InVigor L234P	LL	2493.2	47.4	47.8	179.2	54	1	2
InVigor L255P	LL	2424.2	49.1	50.6	180.8	54	1	2
InVigor L233P	LL	2318.2	48	48.4	177	52.8	1	2
CS2300	RR	2231.5	48.3	49.3	178.2	60.8	1	2
6090RR	RR	2111.5	48.1	48.6	177	59.5	1	2
16MH6001	CL	2070.8	49.8	47.5	177	47.2	1	2
DKTF91SC	TruFlex RR	2000	49	49.6	171.5	47.5	1	2
CP930RR	RR	1981	48.2	51.1	173	50.5	1	2
DKTF92SC	TruFlex RR	1965.3	49.4	48.5	172	49.5	1	2
NCC101S	Conventional	1964.8	49.3	47	169	48	1	2
CS2100	RR	1947.2	49.1	48.8	175.5	52.8	1	2
5545CL	CL	1914	49.7	48.1	177	53.8	1	2
CP955RR	RR	1847.8	48.6	50.3	176	50.8	1	2
16CH4181	Conventional	1737.2	47.3	49.1	175.5	51.2	1	2
CS2500 CL	CL	1646.5	49	48.4	175.5	52.8	1	2
16MH6004	CL	1615.8	49.7	47.9	176.5	47.5	1	2
<b>Mean</b>		<b>2047.6</b>	<b>48.7</b>	<b>48.8</b>	<b>175.8</b>	<b>52.2</b>	<b>1</b>	<b>2</b>
<b>LSD (0.05)</b>		<b>NS**</b>	<b>0.4</b>	<b>1.3</b>	<b>2.6</b>	<b>4.5</b>		
<b>CV%</b>		<b>18.1</b>	<b>0.5</b>	<b>1.7</b>	<b>1</b>	<b>6.1</b>		
<b>Pr&gt;F</b>		<b>0.0194</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>		

\*Yield adjusted to 8.5% moisture

\*\*Fisher's protected LSD not significant when CV% > 15 (yield only)

TWT= test weight, FLDT=flowering date, SHTR= % pod shattering