

**Project Title:** 2022 Winter Canola Variety Trial

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

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**Summary:**

Twenty varieties of winter canola were planted on August 23<sup>rd</sup>, 2021. Irrigation was utilized in 2021 to establish a stand. Canola only received rainfed moisture in 2022 until harvest on August 16<sup>th</sup>, 2022 (Table 1). There were 8.9" of rainfall during the 2022 growing period (Apr-Aug).

The average yield was 46.84 bu/A with the lowest at 39.7 bu/A for KSR4839S and the highest yield being 55.6 bu/A from KSU103 (Figure 1). The average maturity height was 48.15 inches, but there was no significant difference in heights between varieties. The average spring stand was 6.1 plants/ft<sup>2</sup>, with the highest stand at 8.3 plants/ft<sup>2</sup> from KSR4925 and the lowest stand at 2.8 plants/ft<sup>2</sup> from KSU102, which also had the second highest yield.

Winter survival averaged 78.35%, the highest survival rate was 88.3% for KSR4854S, while the lowest was 67.3% for TFW104. There was minimal lodging across varieties, however the highest percentage was 15% for TFW103, which also had the highest yield. Generally low amounts of lodging overall.

**Table 1.** Management information

<b>Seeding date:</b>	8/23/2021	<b>Field Location:</b>	Y7
<b>Julian date:</b>	235	<b>Harvest date:</b>	8/16/2022
<b>Seeding rate:</b>	NA	<b>Julian date:</b>	228
<b>Previous crop:</b>	Fallow	<b>Soil type:</b>	Silty Clay Loam
<b>Herbicide:</b>	None	<b>Tillage:</b>	Conventional
<b>Insecticide:</b>	Lambda-CY 5/24/22	<b>Soil residual nutrient (NO3-1, P, K lb/A):</b>	167-12-143-72S
<b>Fungicide:</b>	None	<b>Nutrient fertilizer applied (N, P2O5, K2O lb/A):</b>	Applied Spring 2022 100-42-37-20S

**Table 2.** Agronomic performance of canola varieties

Variety/Line	Spring Stand (plt/ft <sup>2</sup> )	Winter Survival (%)	FLWR (julian)	LOD (%)	HT (in)	YLD (bu/A)
KSU103	5.6	74.0	146.0	15.0	50.3	<b><u>55.6</u></b>
KSU102	2.8	70.0	146.0	<b>1.7</b>	49.7	<b>53.0</b>
KSU104	3.6	67.3	146.0	<b><u>0.0</u></b>	49.7	<b>51.3</b>
KSU107D	4.9	77.0	<b><u>144.3</u></b>	<b><u>0.0</u></b>	41.7	49.0
KSR4854S	<b>7.3</b>	<b><u>88.3</u></b>	146.0	<b>1.7</b>	49.3	49.0
KSR4927S	5.3	80.0	146.0	<b>1.7</b>	46.3	48.3
KSR4925	<b><u>8.3</u></b>	75.0	149.3	<b><u>0.0</u></b>	46.3	48.1
CP320WRR	5.6	<b>86.3</b>	146.0	<b><u>0.0</u></b>	45.0	47.3
KSR4767	<b>6.9</b>	77.3	146.0	<b>0.0</b>	51.3	47.2
KSR4848	<b>6.7</b>	<b>80.7</b>	146.0	<b>1.7</b>	50.3	46.6
KSR4837	<b>6.6</b>	75.0	147.0	<b><u>0.0</u></b>	48.0	46.2
KSR4928	<b>6.2</b>	79.3	147.7	<b><u>0.0</u></b>	55.0	46.0
KSR4852S	5.6	<b>83.0</b>	146.0	<b><u>0.0</u></b>	46.0	45.9
KSR4926S	<b>7.0</b>	77.3	146.0	<b>1.7</b>	45.0	45.2
CP225WRR	<b>6.8</b>	<b>84.7</b>	146.0	<b>1.7</b>	45.3	44.9
KSR4966S	<b>7.1</b>	76.0	146.3	<b>5.3</b>	49.0	44.3
KSR4846	5.1	75.7	146.0	<b>3.3</b>	45.3	44.2
KSR4850	<b>7.0</b>	<b>85.0</b>	146.0	<b>1.7</b>	47.0	43.4
KSR4967	5.8	72.7	146.3	<b><u>0.0</u></b>	50.3	41.6
KSR4839S	<b>7.7</b>	<b>82.3</b>	146.0	<b>1.7</b>	52.0	39.7
<b>Mean</b>	<b>6.1</b>	<b>78.4</b>	<b>146.3</b>	<b>1.9</b>	<b>48.2</b>	<b>46.8</b>
<b>CV</b>	<b>22.2</b>	<b>6.2</b>	<b>0.7</b>	<b>224.0</b>	<b>9.0</b>	<b>7.3</b>
<b>LSD</b>	<b>2.2</b>	<b>8.0</b>	<b>1.6</b>	<b>6.9</b>	<b>7.1</b>	<b>5.7</b>
<b>PR&gt;F</b>	<b>0.003</b>	<b>&lt;.001</b>	<b>&lt;.001</b>	<b>0.035</b>	<b>0.123</b>	<b>&lt;.001</b>

**Bolding** denotes equal value to highest or earliest value within a column based on LSD(0.05)

FLWR = flowering, HT = height, YLD = yield, LOD = lodging