

Project Title: 2021 Winter Canola Variety Trial

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

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Summary:

Ten different varieties of winter canola were planted on August 15th, 2020 and managed using irrigation until harvest on August 11th, 2021 (Table 1). There was minimal lodging in the trial.

The average yield was 85.0 bu/A with the lowest at 77.9 bu/A for CP115WRR and the highest yield being 91.9 bu/A from KSR4844S. The average height across all varieties was 116.4 cm. The oil content ranged from 43.8% for KSR4765 to 46.3 for KSR4843S with the overall average at 44.7%. The average protein content was 19.08%, with the lowest content at 18.47% for KSR4843S to the highest at 19.65% for KSR4848. The tallest variety was KSR4843S at 123.5 cm, followed closely by KSR4844S which also had the highest yield. The shortest variety was KSR4765 at 110.8 cm.

Shatter was generally low at 9% average and was unaffected by variety. The highest blooming variety was KSR477 at 97.3% bloom, assessed on May 21st, while the lowest bloom was 78.8% for KSR4848, which also had close to the lowest yield. The largest stand reduction observed between stand counts recorded in the fall and spring was 26.3% for CP225WRR, while the varieties KSR47844S and KSR4765 had minimal to no stand reduction throughout the overwintering period.

Table 1. Management information

Seeding date: 8/15/2020	Field Location: R3
Julian date: 272	Harvest date: 8/11/2021
Seeding rate: NA	Julian date: 223
Previous crop: Spring Wheat	Soil type: Fine Sandy Loam
Herbicide: None	Tillage: Conventional
Insecticide: Lambda-CY 6/11/21	Soil residual nutrient (NO₃⁻¹, P, K lb/A): 48-12-186
Fungicide: None	Nutrient fertilizer applied (N, P₂O₅, K₂O lb/A): 186-40-35-20S

Table 2. Agronomic performance of canola varieties

Variety	Overwinter Stand	FLWR %	SHTTR %	HT (cm)	YLD		
	Reduction %				(bu/A)	PRO %	Oil %
KSR4844S	0.0	92.0	7.5	123.4	91.9	18.76	45.8
CP320WRR	24.1	86.3	7.3	112.5	89.0	18.73	44.4
KSR4765	0.0	94.8	8.8	110.8	88.0	19.44	43.8
KSR4777	0.4	97.3	9.5	111.3	87.3	18.73	45.3
CP225WRR	26.3	91.3	9.3	113.8	85.2	18.92	44.4
KSR4767	17.2	92.5	6.8	120.4	84.5	19.32	44.4
KSR4843S	6.2	82.5	8.5	123.5	84.4	18.47	—
KSR4854S	15.3	95.5	10.5	114.8	81.8	19.44	44.4
KSR4848	3.2	78.8	12.8	121.4	79.8	19.65	44.3
CP115WRR	14.3	91.3	9.0	112.2	77.9	19.43	44.2
Mean	9.9	90.2	9.0	85.0	116.4	19.08	44.7
CV	128.4	7.1	41.8	4.8	5.7	2.4	1.1
LSD	18.5	9.3	5.4	5.9	9.5	0.7	0.7
PR>F	0.012061	0.00663	0.56699	0.00127	0.0334	0.00511	0.000001

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

FLWR = flowering, SHTTR = shatter, HT = height, YLD = yield, PRO = protein

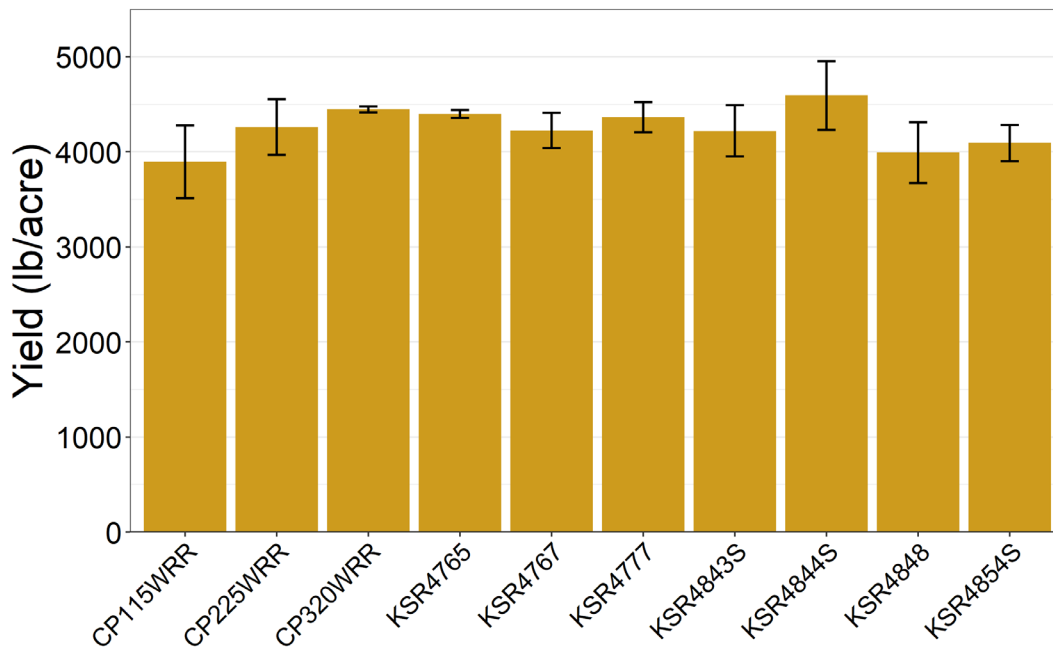


Figure 1 Winter canola yield