

Project Title:

2025 Montana Statewide Spring Canola Variety Trial

Objective:

To evaluate the agronomic performance of available canola hybrids and breeding lines submitted by commercial entities at testing locations across the state. The information obtained from these trials is intended to provide canola growers in Montana with unbiased information regarding which canola hybrids are best suited to their specific growing conditions

Personnel:

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Summary:

Performance of 16 spring canola entries was evaluated at the Northwestern Agricultural Research Center (See Table 1 for detailed management practices). The trials were established using a randomized complete block design with four replications. Plots were managed according to best practices for each location (see 'Management Information'). Agronomic data were collected throughout the growing season.

CS3300TF was the top performer in yield at 3,648 lbs/ac followed closely by LR354PC (3,562 lbs/A) and DK401TL (3,496 lbs/A), all of which were above the average (Table 2) but statistical differences were not detected.

CS26000 CR-T had the highest oil content at 51% and the rest had oil content lower than 51% (Table 2). Test weight ranged from 49.2 lbs/bu (L340PC) to 50.8 lbs/bu (RUBCL0225) with an average of 49.7 lb/bu. The resulting plant count per square foot was similar across entries (and are not significantly different from each other) with an average plant count of 16.2/ ft² following the target uniform seed density of the nursery. Plant height ranged from 52.2 in. (CP9221TF) to 57 in. (DL231945TF). The CS2600CR-T had the highest lodging score at 42%. However, the overall lodging of the nursery was minimal – with an average of 5.5% (Table 2). Though CS3000TF and CS2600CR-T had the highest average percentage of shattering at 9%, all entries are not significantly different in terms of pod shattering.

Table 1. Management Information

Seeding date:	5/2/2025 (Julian 122)	Field Location:	Y8
Seeding rate:	Standard	Harvest date:	9/2/2025 (Julian 245)
Previous crop:	Barley	Soil type:	Swims Silty Clay Loam
Herbicide:	Pre-Plant: Triflurex HFP 1pt/A	Tillage:	Conventional
Insecticide:	Lambda-CY 3.5oz/A	Soil residual nutrient (NO₃-, P, K, SO₄ lb/A):	93.5-22-250-84 (Fall 2024)
Fungicide:	N/A	Nutrient fertilizer applied (N, P₂O₅, K₂O, SO₄ lb/A):	115-35-40-0 (Spring 2025)

Table 2. Agronomic Performance

Entries	FLWR (Julian)	Plant Count (ft ²)	Canopy Height (in)	LOD (%)	Pod Shatter (%)	Yield ¹ (lbs/A)	TWT (lbs/bu)	Oil Content (%)
CS2600CR-T	168*	16.5	53.7	42*	9	3318	50.4	51.0*
CS3000TF	168*	14.5	54.0	18	9	3141	50.4	50.4
CS3300TF	168*	15.9	57.2	0.0	0	3648	50.4	50.8
CS4000LL	169	15.1	58.0	2.0	3	3203	50.0	50.6
DG661LCM	169	15.6	59.2	0.0	0	3208	50.1	50.4
DG783TCN	168*	14.8	54.0	0.0	0	3382	50.4	50.4
DK401TL	168*	16.5	57.6	0.0	0	3496	50.4	50.3
L333PC	171	15.9	57.9	1.0	0	3163	50.1	48.8
L340PC	169	20.1	56.0	0.0	0	3178	49.2	48.8
L345PC	171	14.2	58.3	5.0	0	3375	50.5	48.9

LR344PC	171	16.5	59.0	0.0	0	3276	50.2	49.1
LR354PC	174	15.5	63.4*	0.0	0	3562	50.6	49.8
NCC101S	168*	18.8	52.5	12	8	3145	50.2	47.0
NCC2504B	168*	14.6	52.2	2.0	5	2868	50.2	49.6
RUBCL0225	171	16.8	54.6	4.0	0	3116	50.8*	49.9
RUBCL0924	168*	17.9	53.6	1.0	0	3191	50.2	49.1
Mean	169	16.2	56.3	5.5	0.5	3267	50.3	49.7
CV%	0.210	21.2	3.16	230	300	8.733	0.352	1.24
LSD	0.506	NS	2.53	18	NS	NS	0.252	0.880
P-Value	<0.001	0.596	<0.001	0.002	0.360	0.061	<0.001	<0.001

Bold* = top performer within a column; **Bold** = equivalent to top performer within a column;

NS= Not significant

LOD: lodging; FLWR: flowering date; TWT: test weight