

National Winter Canola Variety Performance Test, Walsh 2003
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Purpose: To identify the best adapted, highest yielding varieties of winter canola.

Results and Discussion: On June 3, a hailstorm shattered seeds, dropped pods, and broke branches resulting in approximately 50% to 70% seed loss in the winter canola. The hailstorm also lowered yield in the two spring canola trials but yield losses were more difficult to estimate. An adjacent wheat field had yield loss around 35%. This illustrates that canola cannot withstand hail near harvest.

The yield average of spring canola varieties was less than half produced by the winter canola varieties. Before the hail, the winter canola trials appear as if they had the potential of 2000 Lb/A yield averages. The spring canola trials never look as if they would be high yielding tests. None of the spring canola varieties appeared to be well adapted to our environment.

All of the plants of winter canola varieties survived the winter. The 100% winter survival is indicative of a mild winter. Severe winter can cause large stand losses. Typically, selecting winter canola varieties with high winter survival is a wise choice for our environment.

Canola would be a good candidate as a limited irrigated crop. This year, we had good soil moisture at planting. However, lack of soil moisture at planting is a more common scenario. Because we frequently have dry conditions at planting, and recommend maximum planting depth for canola is only 1.5 in., irrigating after planting may be the only way to assure a stand.

Flowering dates are an important consideration because they reflect timeliness of harvest and flower sensitive freeze dates. The earlier flowering varieties are ready for harvest before the later flowering varieties. This could be important because the timing of wheat and canola harvests could clash. Remember, canola is one of the worst crops for shattering; do not delay harvest when it is ready for harvest. Varieties that flower early risk late-season frost damage. The earliness of some canola varieties may help avoid harvesting conflicts with wheat, but costly freeze damage on early flowering varieties may negate the harvest scheduling benefit.

Materials and Methods: We planted 27 winter canola varieties for the National Winter Canola Trial and 32 varieties for the Great Plains Nursery on September 6, 2002. We planted 16 spring canola varieties for the Regional Spring Canola Variety Trial on March 26, 2003, and 8 varieties for the Blue Sun Spring Canola (*B. juncea*) Variety Trial on April 11. All four trials were planted at 6 Lb Seed/A with a 12 in. row-spaced drill to a depth of 1.5 inches in good soil moisture. We fertilized the site with 75 Lb N/A using a sweep plow prior to planting and topdressed the winter canola with an additional 50 Lb N/A in March. No other fertilizers were applied. The soil test was: N, 14 ppm; P, 2.0 ppm; and K, 395 ppm. For weed control, we applied Treflan 24 Oz/A prior to planting. We furrow irrigated one time in the fall and one time in the spring with about 8 to 10 in./A of total water applied for the winter canola trials; the spring canola trials received only the spring irrigation. We harvested both winter canola variety trials on June 27. The spring canola trials were harvested on July 21 for the Regional Spring Canola

Variety Trial and August 12 for the Blue Sun Spring Canola Variety Trial. All plots were harvested using a small grain head attached to a self-propelled combine equipped with a digital scale.

National Winter Canola Trials, NVT, Walsh, CO 2003.

Line	Fall Stand	Winter Survival	50% Flowering	Plant Height	Seed Yield
	0-10	0-10	Date	In	Lb/A
Casino	9.3	10.0	25-Apr	43	890
Celius	9.8	10.0	26-Apr	43	870
Jetton	9.5	10.0	20-Apr	37	860
Banjo	9.2	10.0	23-Apr	41	840
GT-2	8.2	10.0	26-Apr	39	820
ARC91022-59-L4	9.7	10.0	23-Apr	39	810
GT-3	9.5	10.0	21-Apr	36	750
ARC91019-50-E2	9.8	10.0	24-Apr	42	740
VSX-1	8.7	10.0	21-Apr	36	730
ARC90016-PR377	10.0	10.0	24-Apr	40	720
KS7436	9.8	10.0	23-Apr	36	710
Wichita	9.5	10.0	24-Apr	38	700
Plainsman	7.7	10.0	26-Apr	42	690
ARC91023-63-L5	9.8	10.0	22-Apr	43	670
Abilene	7.7	10.0	22-Apr	37	650
Ceres	6.5	10.0	26-Apr	40	650
KS8200	9.5	10.0	22-Apr	37	640
KS9198	8.7	10.0	17-Apr	39	640
KS8073	9.5	10.0	25-Apr	43	600
KS8227	9.8	10.0	23-Apr	37	600
ARC91016-41-L2	9.5	10.0	25-Apr	44	590
KS8285	9.3	10.0	24-Apr	39	590
KS8367	9.0	10.0	23-Apr	39	570
KS-SU-W05	7.2	10.0	15-Apr	37	570
USI2002	9.3	10.0	22-Apr	38	570
GT-1	9.0	10.0	22-Apr	36	560
KS9012	8.8	10.0	22-Apr	42	520
Mean	9.1	10.0	22-Apr	39	688
LSD 0.05	1.3				256
CV %					35.6

Planted: September 6, 2002 at 6 lb/A; Harvested: June 27, 2003.
Hail damage from a June 3 storm was estimated at 50% to 70%.