

PROJECT TITLE National Winter Canola Variety Trial 2004-2005

PROJECT LEADER: Kansas State University
Cooperators: Duane Johnson, NWARC
Louise Strang, NWARC

OBJECTIVE: To evaluate germplasm over a wide range of environments and determine what canola varieties and experimental lines are adapted to a northwestern Montana environment.

METHODS: Twenty-nine cultivars/experimental lines of canola were seeded 9/10/04. Each plot consisted of 7-15' rows with 6" row spacing and 2' between plots. Seeding rate was 6 lbs/acre. The varieties were arranged in a split block configuration with 3 replicates. Stand establishment was evaluated by counting plants in square foot quadrats in each plot. The date on which 50% of the plants bloomed was recorded for each plot.

The plots were fertilized preplant on 9/8/04 with 50 lbs N, 60 lbs P₂O₅, 40 lbs K₂O, and 20 lbs S/a and topdressed 4/10/05 with 100 lbs/a N. No herbicides were used. The trial was swathed 7/21/05 and the seed thrashed 8/1/05. The seed was dried and weighed for yield determination, and 1-pint samples from each were weighed to determine test weight.

RESULTS: Stand establishment was good, with fall stands averaging 12.1 plants/ft² and spring stands averaging 10.2 plants/ft². Winter survival averaged 82.4%. The canola flowered between May 10 and May 16. Plant height varied from 48 to 69 inches. The plants matured between 7/26 and 8/1/05. Average lodging was 50% of the plot. Seed yield ranged from 1738 lbs/acre ('Rasmus') to 5023 lbs/acre ('Kronos'). Test weight ranged from 52.7 lbs/bu ('KS7436-055') to 53.9 lbs/bu ('Casino').

A table summarizing this data is presented on the next page.

NATIONAL WINTER CANOLA VARIETY TRIALS

Kalispell, 2004-2005

<u>Entry</u>	<u>Fall Std</u> <i>pl/sqft</i>	<u>Spr Std</u> <i>pl/sqft</i>	<u>Winter Survival</u> %	<u>First Flower</u> <i>date</i>	<u>Maturity</u> <i>date</i>	<u>Height</u> <i>inches</i>	<u>Lodging</u> <i>% of plot</i>	<u>Yield</u> <i>lbs/a</i>	<u>TWT</u> <i>lbs/bu</i>
Abilene	8.1	8.1	94.9	5/15	7/28	55.6	75	3113.4	53.8
ARC2180-1	16.9	14.8	87.8	5/15	7/29	57.8	83	3363.0	53.5
ARC2189-1	13.7	15.6	97.6	5/14	7/30	58.7	53	3388.0	53.5
ARC92004-1	13.4	12.6	86.9	5/16	7/28	62.0	83	3261.6	53.3
ARC92007-2	17.3	14.1	81.2	5/15	7/26	60.7	60	3628.5	53.1
Baldur	8.7	7.6	87.0	5/13	7/28	54.0	23	3283.2	53.1
Baros	12.1	10.8	90.3	5/15	7/28	54.7	58	3146.6	52.9
Casino	9.6	5.3	56.7	5/14	8/1	57.9	52	2002.4	53.9
Ceres	4.8	3.7	79.2	5/14	7/31	58.7	20	2884.9	53.7
KS7436-055	5.9	4.9	82.7	5/13	7/31	50.4	20	2896.8	52.7
KS3018	12.0	11.0	90.8	5/12	7/31	60.7	38	3360.6	53.6
Jetton	12.2	12.6	90.3	5/13	7/29	48.4	20	3126.8	53.0
Kronos	12.7	11.1	85.2	5/13	7/30	58.9	92	5022.7	53.9
KS2064	11.7	12.1	100.0	5/14	7/29	57.1	83	2867.2	53.1
KS2098	18.0	13.3	75.1	5/16	7/31	61.4	75	3005.3	53.0
KS2169	15.7	9.8	64.0	5/13	7/29	58.9	30	3073.2	53.4
KS2004	16.9	10.6	62.3	5/15	7/29	62.0	60	2721.0	53.0
KS2185	16.1	11.4	71.4	5/10	7/28	49.4	68	2889.7	52.8
KS7436-055	10.8	7.1	66.4	5/15	7/31	53.6	60	2847.8	53.1
KS9124	14.6	14.2	91.0	5/15	8/1	58.4	75	3194.3	53.1
KS9135	17.6	13.1	75.1	5/15	7/29	63.0	62	3578.0	53.7
NPZ 0326	13.7	11.9	82.3	5/14	7/28	55.4	20	4427.9	53.0
Plainsman	9.9	6.3	64.2	5/16	7/31	69.3	17	2339.5	53.4
Rasmus	5.7	4.4	75.8	5/11	7/31	54.0	45	1737.5	53.0
Sumner	8.3	7.7	88.8	5/11	7/28	55.8	53	2898.7	53.6
Titan	8.6	9.6	93.7	5/14	7/29	59.0	20	3400.8	52.9
Virginia	8.3	8.7	97.6	5/13	8/1	57.0	17	2517.8	53.5
VSX-2	14.0	11.3	81.8	5/14	7/31	53.2	30	3105.5	53.3
Wichita	12.9	11.4	89.0	5/12	7/27	49.9	67	3129.5	53.4
mean	12.1	10.2	82.4			57.1	50	3110.8	53.3
LSD(0.05)	3.9	3.9	25.2			6.7	43	829.3	0.8
Pr>F	< 0.0001	< 0.0001	0.045			< 0.0001	0.001	< 0.0001	0.086