2003
NATIONAL WINTER CANOLA VARIETY TRIAL

Department of Agronomy
Kansas State University Agricultural Experiment Station and Cooperative Extension Service

CONTENTS

Contribution no. 04-245-S from the Kansas Agricultural Experiment Station.

2003 National Winter Canola Variety Trial

INTRODUCTION

Canola is a specific crop developed from rapeseed. Canola also has been called double-zero rapeseed because of the low contents of erucic acid (less than 2 percent in the oil) and glucosinolates (less than 30 micromoles per gram in the oil-free meal). Food- and oil-processing industries have a great interest in canola because it produces a high-quality oil that is lower in saturated fat than other sources of dietary fats. The meal remaining after oil extraction is used as a protein supplement by the livestock industry.

Production of rapeseed was first reported in Europe in the 13th century, but it probably has been cultivated in Asia for thousands of years. It has long been used in Asia for cooking oil, but it was used originally in Europe as a source of lamp oil and as a lubricant. During World War II, Canada grew millions of acres to provide a marine lubricant, but production declined as diesel replaced steam engines.

The first oilseed rape with low levels of erucic acid in the oil was developed in Canada in 1957. Interest in rapeseed increased, and Canadian production reached 1 million acres in 1965. In 1971, 'Span', the first low erucic acid variety, was released. Three years later, 'Tower' was released. It is low in both erucic acid and glucosinolates and became the first true canola variety. The term canola was trademarked by the Western Canadian Oilseed Crushers Association in 1978 and still is used to describe rapeseed that is genetically low in erucic acid and glucosinolates. In 1985, the Food and Drug Administration in the United States ruled that rapeseed oil with less than 2 percent erucic acid is safe for human consumption. One year later, the American Heart Association urged Americans to reduce their saturated fat intake. Canola oil contains 6 percent saturated fat, the lowest level of any commercially available vegetable oil.

Canola oil consumption increased from zero before 1986 to the equivalent of more than 2 million acres of production in 1994. This represented an increase in consumption of 50% since 1992. Most of this oil was imported from Canada. Canola is one of the few new crops that possessed a substantial market before its production was established. United States canola production has quadrupled in the past 5 years and reached 1.61 million acres in 2001, but consumption still outpaces production at the rate of nearly 3 to 1. Most of this production is from spring types in the northern Great Plains states of North Dakota, Montana, and Minnesota. Over the past few years, interest in winter cultivars also has increased in areas where production is feasible, especially the Pacific Northwest, southern Great Plains, and the Southeast. A crushing facility at Velva, ND, has been crushing canola for several years. Colorado Mills, Lamar, CO, began crushing canola and other oilseeds in 1999, and has been the delivery point for the southern Great Plains crop since that time. Several oilseed crushers in the Southeast and Great Plains are capable of crushing canola and will crush the crop when sufficient quantities become available.

Canola-quality seed has been developed in three *Brassica* species. *Brassica napus*, also called Argentine rape, summer rape, winter rape, or Swede rape, was the first and is the most common canola grown. *Brassica rapa*, also called *B. campestris*, Polish rape, summer turnip rape, or field mustard, has many canola-quality cultivars and is grown on a large acreage where it is adapted. *Brassica juncea* (brown mustard) lines with canola quality have

been developed, and commercial production of these is just beginning. All *B. juncea* lines are spring types. Most winter canola varieties grown in the United States have been developed from *B. napus.*

Winter canola yields are generally 30% greater than yields of the spring types. Winter canola is planted in late summer. The plants need to reach the 6 to 8 true-leaf stage and about 8 to 10 inches in height to increase winter survival before freeze down. Plants overwinter as rosettes and bolt early the next spring. Harvest takes place about the same time as winter wheat harvest in a given area.

Canola research began in the United States in the late 1980's. Industrial rapeseed had been investigated before this but, because of the limited demand for this product, interest was low. Winter canola production was attempted in many parts of the United States in the late 1980's but was not successful. The failure was primarily because of the lack of adapted varieties, the lack of management recommendations for the areas, and the lack of a local market for the crop. Since that time, canola-quality lines have been developed that are significant improvements over previously tested varieties. Advancements in production research have led to management recommendations consistent with the conditions of the various regions. Increased oil consumption has led to increased demand for canola seed and a market interest by oil processors.

Canola production would fit well into Great Plains agriculture. Canola makes an excellent rotational crop with winter wheat. Yields of wheat following canola are reported to be 8 to 12% better than yields of wheat following wheat. Because canola is a broadleaf crop, more effective and less expensive herbicides can be used to control grass weeds. No major diseases are common between the two crops, so canola can help break some disease cycles. Canola also is produced with the same equipment used for small grains. A major investment in equipment is not needed to try a small acreage of canola. Because canola is an oilseed, its commodity price is not tied to that of grains, and it can be used to help spread economic risk to more than one commodity class.

2003 NATIONAL WINTER CANOLA VARIETY TRIAL

Objectives

The objectives of these tests are to evaluate germplasm over a wide range of environments, determine what canola varieties and experimental lines are adapted to what areas, and to increase the visibility of winter canola across the regions. The National Winter Canola Variety Trial (NWCVT) has been coordinated from Kansas State University since the 1994-95 growing season. The NWCVT was established to evaluate released cultivars and material that had been selected and advanced and has potential to become new released canola varieties. Information obtained from these tests will help determine what experimental lines should be released and where released cultivars might be marketed. Over the past few years, this nursery has expanded the number of environments and now has locations in the Great Plains, Midwest, and Southeast. The wide diversity in environments has increased our knowledge and understanding of winter rapeseed germplasm for use in the eastern half of the United States.

Procedures

The NWCVT was distributed to 31 locations in 16 states during the fall of 2001. This test included 11 released varieties and 23 experimental lines from eight different breeding programs. ‘Abilene’, ‘Plainsman’, and ‘Wichita’ were included with, and without, an insecticide and fungicide seed treatment. The GT- lines reported in this bulletin were treated with Gaucho 600, Thiram 42S, and Allegiance.

Management guidelines were supplied

to each cooperator, but past experience at that locality was used for final management decisions. Local management, site descriptions, and growing conditions can be found on the page for each location established. All tests were planted in small plots (approximately 100 square feet) and replicated three times. The University of Idaho, Moscow, ID, performed analysis for total-oil results. Results for yield and winter survival at most locations also include 2-year and 3-year summaries. Lines are listed in order, from highest to lowest yields for 2003. This test was continued in 2003-2004 and includes 22 experimental lines and 15 released cultivars from five different breeding programs. It was distributed to 40 locations in 21 states.

2002-2003 Growing Conditions

Temperature and precipitation data are plotted at the bottom of the site-description page for each location. On the temperature graph, the thick black line represents the long-term average daily temperatures (^{o}F) for that location. The upper thin line represents the actual daily high temperatures, and the lower thin line represents the actual daily low temperatures over the 2002-03 growing season. On the precipitation graph, the thick black line represents the long-term average precipitation, and the thin line represents the actual precipitation over the growing season. In general, 2002-03 growing season was dry, but most locations were able to establish. Winter conditions were mild, and early summer temperatures were cooler than normal.

Test Locations

Of the 31 tests distributed in 2002, one was not established successfully (Calhoun, GA). Two locations were lost during the winter (East Lansing, MI; and Prairie, MS). One site was lost during the spring growing season (Lubbock, TX). Twenty-seven locations in 15 states were harvested (Meridianville, AL; Kibler, and Mariana, AR; Walsh, CO; Griffin, GA; Bellville and Carbondale, IL; Columbia City, IN; Colby, Garden City, Hutchinson, Manhattan, Ottawa, and Parsons, KS; Lexington and Princeton, KY; Holly Springs, MS; Columbia and Novelty, MO; Lincoln and Sidney, NE; Goodwell, OK; Munday, TX; Orange, Petersburg, and Suffolk, VA; and Torrington, WY).

Results

Yields at most harvested locations were acceptable. Twenty-one of the 27 locations included at least one line with yields greater than 2000 lbs/a. VSX-1-exp (2245 lb/a), 'Jetton' (2234 lb/a), 'Banjo' (2116 lb/a), GT-Wichita (2053 lb/a), KS8200-exp (2039 lb/a), and KS7436-exp (1981 lb/a) yielded well at a variety of locations, but many other lines have consistently performed well in specific regions where they are best adapted. Winter hardiness continues to be an important trait to consider when selecting a winter canola cultivar. Winter hardiness has been improved over the past several years, but variability still exists for this trait in available cultivars. Banjo, Jetton, KS8200-exp, KS8367-exp, and VSX-1-exp all had the best average survival over the locations where differential winterkill was observed in 2003 (97%). Some of these lines are usually more winter tender when conditions are not as favorable.

ACKNOWLEDGMENTS

This work was funded in part by the National Canola Research Program, United States Department of Agriculture, Cooperative States Research Program and the Kansas Agricultural Experiment Station. Assistant Scientist Cindy LaBarge helped with planting, care, harvest, and data preparation for some of these tests.

MERIDIANVILLE, AL

COOPERATORS: U. Bishnoi and E. Cebert, Alabama A&M University

PREVIOUS CROP: fallow
PLANTING DATE: October 4, 2002
HARVEST DATE: June 10, 2003

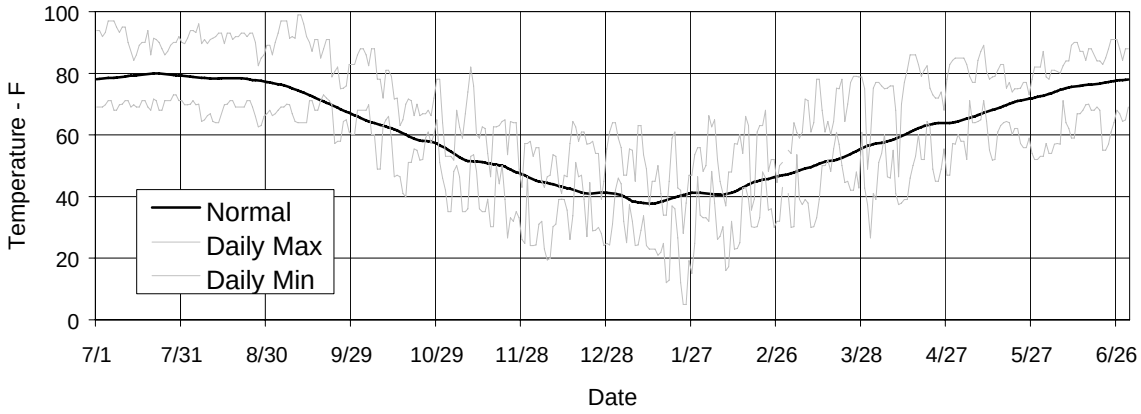
PESTICIDES:
Treflan, 2 pt/a

SOIL TEST:
P= high; K= high; pH= 6.0

FERTILIZATION
Fall: 30–30–30
Spring: 120–0–0

SEEDING RATE: 6.3 lb/a
ROW SPACING: 7.5 in
IRRIGATION: none
SOIL TYPE: Decatur silty clay loam

ELEVATION: 624 ft
LATITUDE: 34° 35' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 1130 lb/a



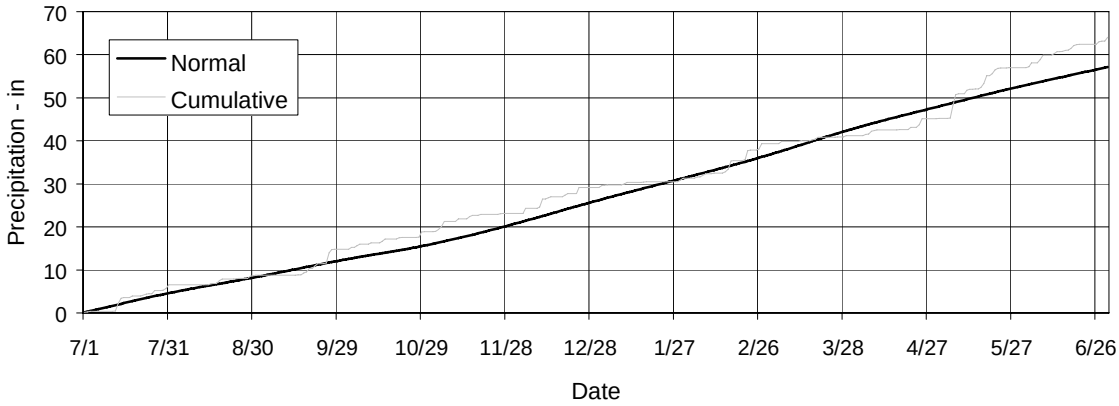


Table 1. Results from the 2003 National Winter Canola Variety Trial, Meridianville, AL.

Line	Yield			Winter Survival			Fall	50%	Matur-	Plant	Total
	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Bloom 3/	ity 3/	Height 4/	Oil
	----------lb/a----------			----------%----------			%	date	date	in	%
GT-Abilene	1612 *	-----	-----	100	---	---	77 *	3/29 e	5/27 e	44 t	38.6
AR90016-PR377	1583 *	-----	-----	100	---	---	75 *	4/4	6/1	43 t	39.1
AR91022-59-L4	1527 *	1351 *	1468 *	100	100	98.44	82 *	4/4	6/1	44 t	38.6
Jetton	1519 *	1694 *	1744 *	100	100	98.56	87 *	4/3	5/29 e	41 t	38.7
KS8227	1472 *	1516 *	-----	100	100	---	80 *	4/8	6/3 l	44 t	40.5 *
GT-Wichita	1472 *	-----	-----	100	---	---	73 *	4/5	6/1	42 t	39.3 *
USI2002	1465 *	-----	-----	100	---	---	78 *	4/7	6/1	44 t	40.0 *
Abilene	1337 *	1670 *	1694 *	100	100	98.11	58	4/2	5/29 e	44 t	39.6 *
VSX-1	1323 *	1353 *	1492 *	100	100	97.78	58	4/3	5/30 e	41	39.2
Banjo	1265 *	1612 *	-----	100	100	---	77 *	3/31 e	5/27 e	42 t	39.3 *
KS8285	1227 *	-----	-----	100	---	---	77 *	4/7	6/1	43 t	39.7 *
KS8200	1213 *	1413 *	-----	100	100	---	70 *	4/7	6/3 l	45 t	39.6 *
KS9012	1211 *	-----	-----	100	---	---	62 *	4/4	5/31 e	45 t	39.5 *
KS8367	1177 *	-----	-----	100	---	---	70 *	4/4	5/31	42 t	39.3 *
Celsius	1153 *	1688 *	-----	100	100	---	65 *	4/10 l	6/5 l	42 t	40.0 *
G02001	1150 *	-----	-----	100	---	---	75 *	3/29 e	5/27 e	41	40.2 *
G96036A.3	1116 *	-----	-----	100	---	---	55	4/7	5/31	42 t	39.3 *
Wichita	1088 *	1399 *	1516 *	100	100	98.11	48	4/9	6/1	41 t	39.2
GT-Plainsman	1072 *	-----	-----	100	---	---	60	4/14 l	6/6 l	43 t	39.3 *
Plainsman	1050 *	1112	1305	100	100	97.78	67 *	4/13 l	6/3 l	43 t	38.7
AR91016-41L2	1037 *	1132	1371	100	100	98.67	73 *	4/7	5/30 e	43 t	39.0
Casino	1031 *	1273	1318	100	100	98.89	67 *	4/12 l	6/4 l	41 t	39.0
KS8037	1021 *	-----	-----	100	---	---	70 *	4/13 l	6/3 l	44 t	39.8 *
AR91019-50-E2	1005 *	-----	-----	100	---	---	53	4/9	6/4 l	43 t	39.1
G02002	1004 *	-----	-----	100	---	---	47	4/1	5/30 e	43 t	39.6 *
KS9198	973 *	-----	-----	100	---	---	57	4/2	6/1	39 s	38.5
Ceres	927	1263	1302	100	100	99.56	50	4/10 l	5/31	39 s	39.9 *
G00012.G2	896	-----	-----	100	---	---	63 *	4/9	6/3 l	37 s	38.7
AR91023-63-L5	877	986	1215	100	100	99.78	60	4/3	5/30 e	40 s	39.1
KS7436	839	1158	1213	100	100	97.78	63 *	4/5	5/31 e	40 s	40.5 *
G96202	749	-----	-----	100	---	---	63 *	3/27 e	5/30 e	37 s	38.2
G96036A.10	734	-----	-----	100	---	---	37	4/7	5/31	37 s	38.8
Sumner	725	1059	1194	100	100	97.56	60	4/2	5/30 e	41 t	39.6 *
G96200E	553	658	719	100	100	99.22	38	3/28 e	5/27 e	36 s	38.1
Mean	1130	1280	1350	100	99	97.96	65	4/5	5/31	42	39.3
LSD (0.05)	661	393	314	NS	NS	2.87	26	4	4	5	1.3
CV (%)	35.9	26.9	25.2	----	0.2	3.0	24.6	2.8	1.7	6.7	0.6

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2001, 2002, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

KIBLER, AR

COOPERATORS: Robert Bacon and John Kelly, University of Arkansas

PREVIOUS CROP: Fallow
PLANTING DATE: October 3, 2002
HARVEST DATE: June 17, 2003

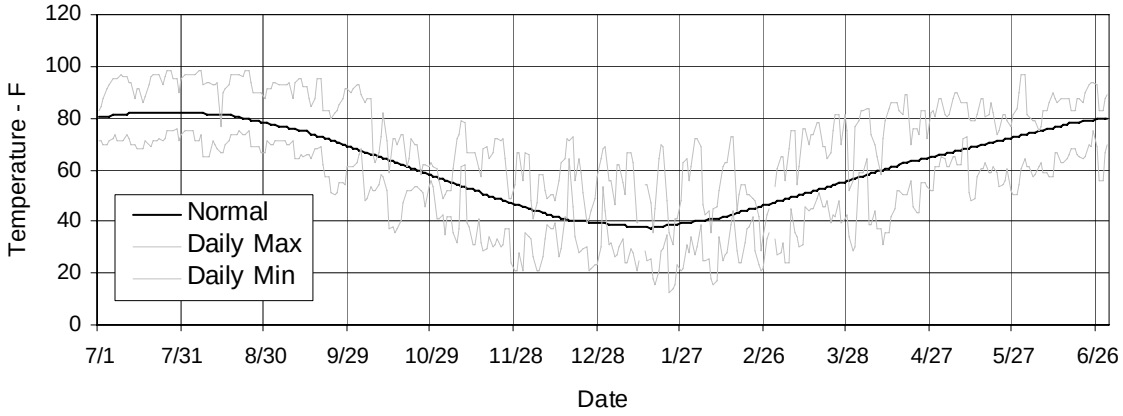
PESTICIDES:
Treflan, 1 pt/a

SOIL TEST
not available

FERTILIZATION
Fall: 0–0–0
Spring: 150–0–0 on Mar. 14

SEEDING RATE: 7 lb/a
ROW SPACING: 7 in
IRRIGATION: none
SOIL TYPE: Roxanna clay loam

ELEVATION: 392 ft
LATITUDE: 35° 23' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 1655 lb/a



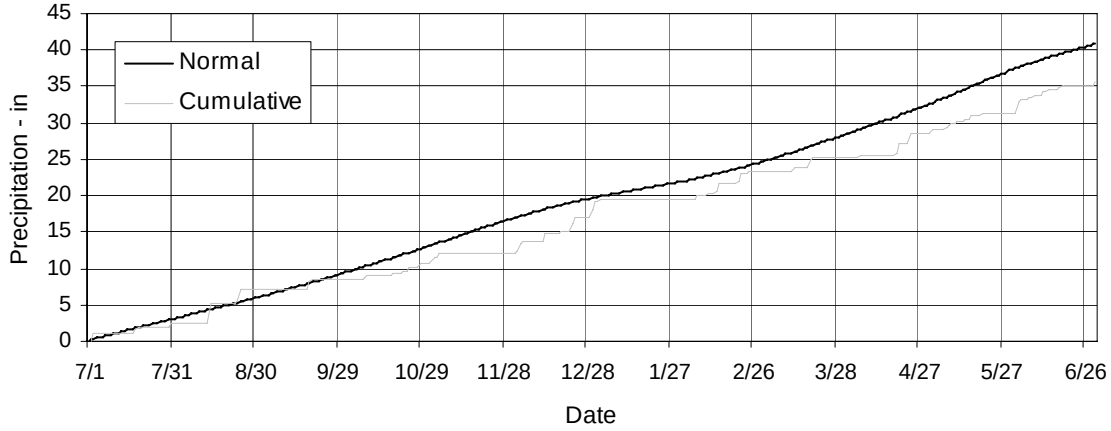


Table 2. Results from the 2003 National Winter Canola Variety Trial, Kibler, AR.

Line	Yield 2003	Yield 2yr 1/	Yield 3yr 2/	Winter Survival 2003	Winter Survival 3yr 2/	Fall Stand	50% Bloom 3/	Lodging	Test Weight	Total Oil
	lb/ac	lb/ac	lb/ac	%	%	%	date	%	lb/bu	%
GT-Wichita	2148 *	-----	-----	100	---	95	4/12	0	42.4 *	35.8
VSX-1	2134 *	2050 *	-----	100	---	73	4/9	0	42.7 *	35.5
Jetton	2046 *	1955 *	2159 *	100	100	80	4/8	0	42.6 *	35.4
Wichita	2046 *	1664 *	2014 *	100	100	88	4/10	2	42.6 *	36.4 *
GT-Plainsman	2039 *	-----	-----	100	---	90	4/13	0	42.7 *	36.4 *
G02001	1995 *	-----	-----	100	---	85	4/8	2	42.1	36.3 *
Banjo	1979 *	-----	-----	100	---	92	4/8	4	42.5 *	35.8
AR91023-63-L5	1977 *	1965 *	-----	100	---	73	4/9	0	42.9 *	36.0
G02002	1921 *	-----	-----	100	---	67	4/9	0	42.4 *	37.2 *
KS7436	1907 *	1956 *	-----	100	---	92	4/10	0	42.5 *	36.9 *
KS8227	1883 *	-----	-----	100	---	73	4/12	2	42.5 *	36.9 *
Casino	1859 *	1472	1875 *	100	100	95	4/13	0	42.5 *	35.1
GT-Abilene	1827 *	-----	-----	100	---	80	4/10	0	42.7 *	34.6
USI2002	1758 *	-----	-----	100	---	80	4/9	0	42.6 *	36.3 *
Sumner	1668 *	1465	-----	100	---	90	4/8	0	42.5 *	34.2
KS9012	1642 *	-----	-----	100	---	97	4/8	0	42.5 *	35.7
KS8200	1619 *	-----	-----	100	---	83	4/11	0	42.5 *	36.3 *
KS8367	1595 *	-----	-----	100	---	97	4/8	1	42.6 *	35.8
Abilene	1590 *	1686 *	2166 *	100	100	73	4/10	7	42.5 *	34.3
G96202	1585 *	1273	1488	100	100	97	4/5 e	2	42.5 *	34.5
Plainsman	1568 *	1853 *	1952 *	100	100	63	4/12	2	42.5 *	35.4
AR90016-PR377	1531 *	-----	-----	100	---	55	4/11	0	42.0	37.2 *
G96036A.3	1523 *	-----	-----	100	---	90	4/10	0	42.5 *	35.5
AR91019-50-E2	1485 *	-----	-----	100	---	70	4/8	4	41.6	36.5 *
AR91022-59-L4	1483 *	1725 *	2098 *	100	100	50	4/11	0	42.5 *	35.6
Ceres	1479 *	1547 *	1681	100	100	99	4/10	0	42.5 *	35.9
G96036A.10	1340	-----	-----	100	---	70	4/8	10	41.8	36.1
G96200E	1331	1139	1910 *	100	100	78	4/5 e	0	42.4 *	36.0
Celsius	1309	-----	-----	100	---	73	4/15 l	0	42.9 *	37.4 *
G00012.G2	1267	-----	-----	100	---	55	4/9	0	41.7	35.2
KS8285	1228	-----	-----	100	---	60	4/10	5	42.7 *	36.0
AR91016-41-L2	1199	1247	1600	100	100	73	4/11	2	41.0	35.9
KS8037	1199	-----	-----	100	---	52	4/13	2	41.2	37.7 *
KS9198	1105	-----	-----	100	---	48	4/9	0	42.4 *	33.9
Mean	1655	1621	1810	100	100	78	4/10	1	42.4	35.8
LSD (0.05)	701	520	408	NS	NS	NS	2	NS	0.6	11.7
CV (%)	26.0	28.1	24.9	----	----	31.6	1.2	274.5	0.9	1.9

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2001 and 2003.

2/ 3yr means include data from 2000, 2001, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

MARIANNA, AR

COOPERATORS: Robert Bacon and John Kelly, University of Arkansas

PREVIOUS CROP: fallow
PLANTING DATE: not available
HARVEST DATE: June 24, 2003

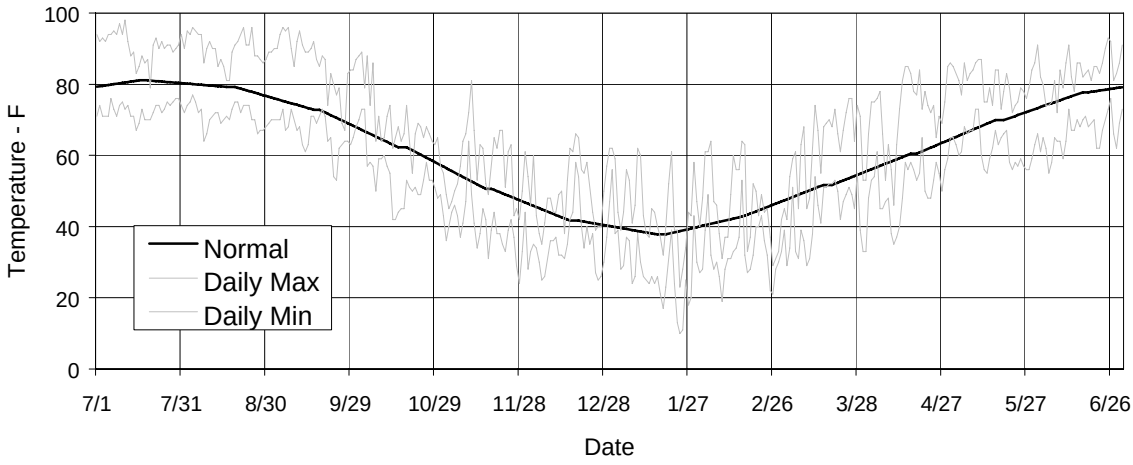
PESTICIDES:
Treflan, 1 pt/a

SOIL TEST
not available

FERTILIZATION
Fall: 0–0–0
Spring: 150–0–0 on March 2

SEEDING RATE: 7 lb/a
ROW SPACING: 7 in
IRRIGATION: none
SOIL TYPE: Loving silt loam

ELEVATION: 234 ft
LATITUDE: 34° 45' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 2185 lb/a



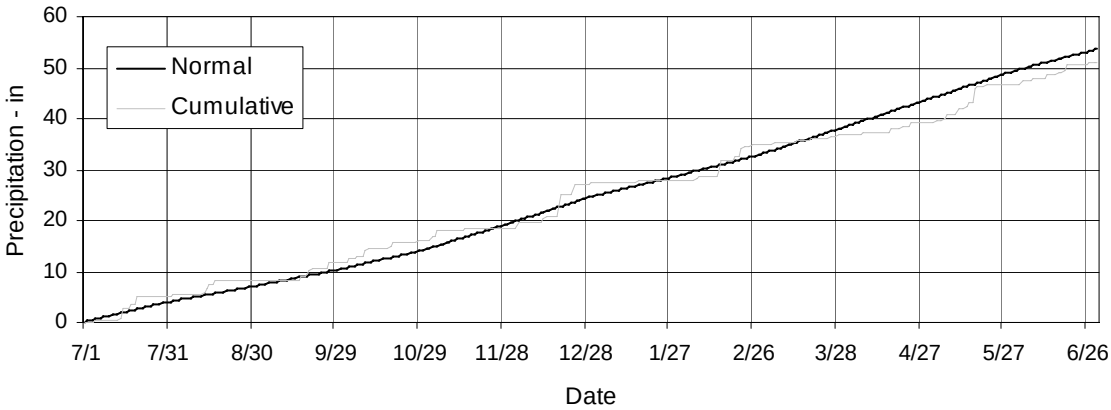


Table 3. Results from the 2003 National Winter Canola Variety Trial, Marianna, AR.

Line	Yield 2003	Yield 2yr 1/	Winter Survival 2003	Winter Survival 2yr 1/	Fall Stand	50% Bloom 2/	Maturity 2/	Lodging	Test Weight	Total Oil
	---------lb/a--------		-------%--------		%	date	date	%	lb/bu	%
GT-Wichita	3116 *	-----	100	---	93 *	3/30	5/19	0	46.9	39.9 *
GT-Abilene	2741 *	-----	100	---	88 *	3/30	5/19	0	47.3	38.7 *
Banjo	2644	2874 *	100	100	85 *	3/29	5/20	0	48.7	39.7 *
G96200E	2581	2780 *	100	100	92 *	3/24 e	5/16 e	0	45.8	39.9 *
VSX-1	2571	2736 *	100	100	88 *	3/26	5/21	2	47.0	39.8 *
Jetton	2519	2670 *	100	100	85 *	3/27	5/19	0	47.9	40.0 *
G00012.G2	2515	-----	100	---	90 *	3/29	5/21	0	48.5	38.7 *
Wichita	2465	2858 *	100	100	90 *	3/29	5/20	0	46.5	39.8 *
GT-Plainsman	2443	-----	100	---	80	4/3 l	5/30 l	0	48.0	37.3
AR91019-50-E2	2376	-----	100	---	93 *	3/27	5/21	0	47.1	39.8 *
AR90016-PR377	2376	-----	100	---	88 *	3/28	5/22	0	47.9	39.4 *
KS8227	2369	2775 *	100	100	77	3/31	5/23	0	48.1	39.7 *
G02002	2319	-----	100	---	88 *	3/27	5/23	0	47.5	40.3 *
G02001	2273	-----	100	---	92 *	3/26	5/21	0	47.4	37.0
Casino	2272	2660 *	100	100	93 *	4/1 l	5/27 l	0	47.8	38.6 *
KS8200	2176	2611 *	100	100	80	3/30	5/23	0	46.8	36.8
Abilene	2173	2690 *	100	100	83	3/30	5/20	0	47.2	38.5 *
AR91023-63-L5	2167	2672 *	100	100	85 *	3/27	5/24	0	47.9	38.7 *
KS8285	2106	-----	100	---	88 *	3/31	5/23	0	46.8	39.2 *
AR91022-59-L4	2096	2563 *	100	100	90 *	3/28	5/23	0	47.4	38.8 *
KS9198	2071	-----	100	---	75	3/28	5/20	0	47.0	39.4 *
Plainsman	2002	2496 *	100	100	78	4/3 l	5/31 l	0	47.6	37.0
KS7436	1977	2910 *	100	100	85 *	3/27	5/22	0	47.5	39.7 *
Sumner	1955	2401	100	100	77	3/27	5/18	0	47.3	40.0 *
AR91016-41-L2	1927	2573 *	100	100	88 *	3/29	5/22	0	47.8	38.9 *
KS8367	1924	-----	100	---	85 *	3/29	5/22	0	47.0	39.7 *
Ceres	1877	2623 *	100	100	92 *	3/30	5/20	0	47.6	38.9 *
G96036A.3	1854	-----	100	---	87 *	3/27	5/19	0	47.2	39.3 *
KS9012	1831	-----	100	---	83	3/28	5/22	0	46.6	39.3 *
G96202	1781	-----	100	---	92 *	3/23 e	5/13 e	0	46.4	39.2 *
Celsius	1754	2567 *	100	100	78	4/2 l	5/30 l	0	47.4	39.8 *
USI2002	1705	-----	100	---	80	3/28	5/24	0	47.3	39.8 *
KS8037	1678	-----	100	---	77	4/1 l	5/31 l	0	47.1	36.8
G96036A.10	1659	-----	100	---	93 *	3/27	5/18	3	46.9	39.9 *
Mean	2185	2593	100	100	86	3/29	5/22	0	47.3	39.0
LSD (0.05)	451	447	NS	NS	9	2	3	NS	NS	11.7
CV (%)	12.7	14.3	----	----	6.7	1.6	1.5	757	2.5	2.6

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

GRIFFIN, GA

COOPERATORS: Paul Raymer and Paul Rose, University of Georgia

PREVIOUS CROP: sorghum
PLANTING DATE: October 3, 2002
HARVEST DATE: June 6, 2003

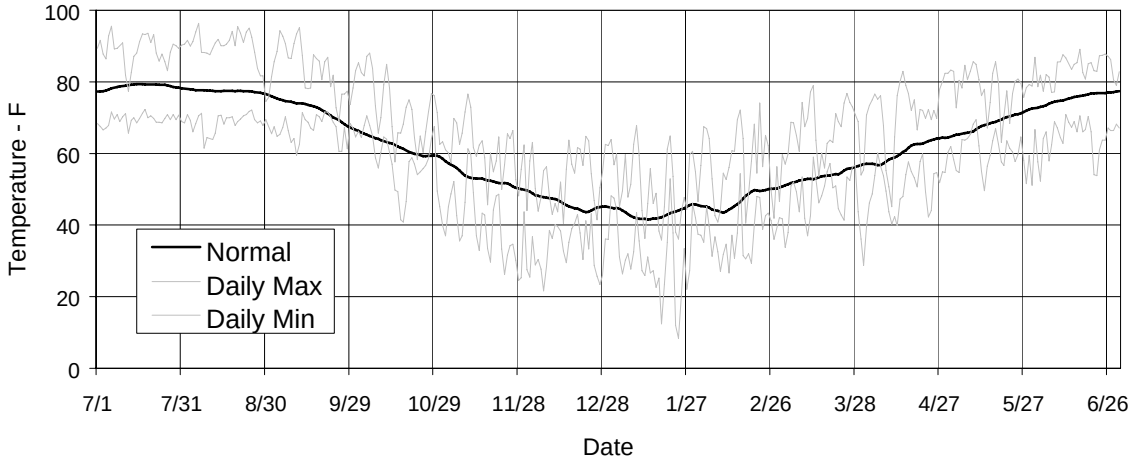
PESTICIDES:
Treflan, Select (herbicides)
Capture (insecticide)

SOIL TEST:
P = medium; K = high; pH = 6.2

FERTILIZATION
Fall: 49–98–147
Spring: 120–0–0

SEEDING RATE: 5 lb/a
ROW SPACING: 7 in
IRRIGATION: none
SOIL TYPE: Pacolet coarse sandy loam

ELEVATION: 924 ft
LATITUDE: 33° 16' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 1647 lb/a



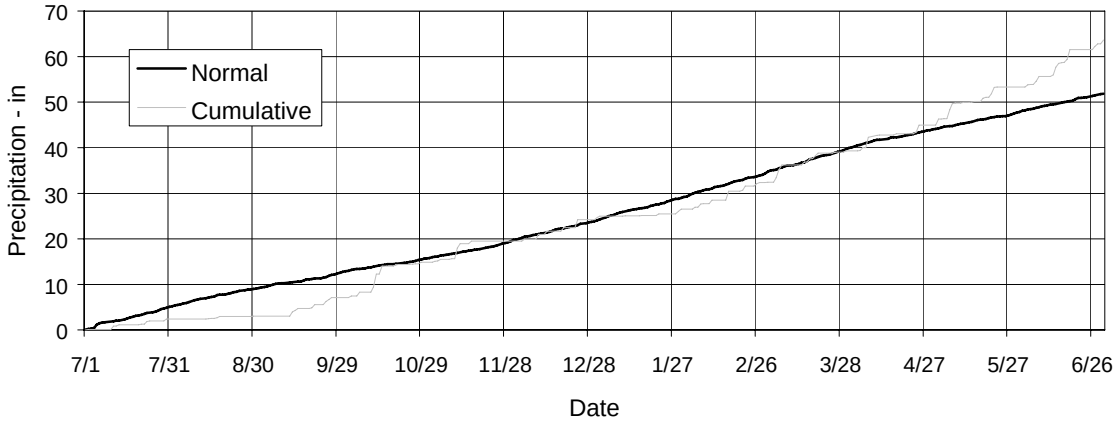


Table 4. Results from the 2003 National Winter Canola Variety Trial, Griffin, GA.

Line	Yield 2003	Yield 2yr 1/	Yield 3yr 2/	Winter Survival 2003	Winter Survival 3yr 2/	50% Bloom 3/	Maturity 3/	Plant Height 4/	Total Oil
	----------lb/a----------			------- % --------		date	date	in	%
Banjo	2074 *	1721 *	-----	100	---	3/20	5/26	54 s	42.0 *
GT-Wichita	2062 *	-----	-----	100	---	3/20	5/27	57	42.1 *
G96200E	1976 *	-----	-----	100	---	3/10 e	5/18 e	53 s	43.5 *
AR91023-63-L5	1932 *	1480	1835 *	100	100	3/20	5/29	60 t	41.4
KS7436	1906 *	1510 *	1954 *	100	100	3/20	5/28	59 t	41.0
VSX-1	1895 *	1398	-----	100	---	3/20	5/27	51 s	42.1 *
Wichita	1841 *	1347	1748	100	100	3/21 l	5/28	55	41.9 *
Jetton	1831 *	1232	1837 *	100	100	3/20	5/27	49 s	41.4
AR91022-59-L4	1808 *	1434	1860 *	100	100	3/20	5/28	58 t	41.2
Sumner	1807 *	1210	1693	100	100	3/19	5/26	55	41.5
G02002	1775 *	-----	-----	100	---	3/19	5/29	57	42.8 *
G02001	1763 *	-----	-----	100	---	3/20	5/29	59 t	42.2 *
G96202	1711	1591 *	1726	100	100	3/10 e	5/18 e	52 s	42.3 *
AR90016-PR377	1702	-----	-----	100	---	3/18	5/29	62 t	41.5
AR91016-41-L2	1688	1549 *	1828 *	100	100	3/21 l	5/27	58 t	41.3
GT-Abilene	1669	-----	-----	100	---	3/21 l	5/27	56	41.1
KS8227	1652	1437	-----	100	---	3/22 l	5/30	58 t	41.7
G96036A.3	1630	-----	-----	100	---	3/19	5/27	60 t	42.0 *
Abilene	1628	1324	1833 *	100	100	3/20	5/27	63 t	40.0
KS9198	1608	-----	-----	100	---	3/19	5/28	57	41.2
KS8200	1606	1521 *	-----	100	---	3/21 l	5/30	59 t	42.6 *
Celsius	1590	1273	-----	100	---	3/22 l	5/30	54 s	40.7
Plainsman	1551	1170	1615	100	100	3/23 l	5/31 l	63 t	40.5
KS8037	1497	-----	-----	100	---	3/21 l	5/31 l	58 t	40.3
G00012.G2	1466	-----	-----	100	---	3/20	5/26	55	41.5
KS8367	1457	-----	-----	100	---	3/20	5/29	59 t	41.1
GT-Plainsman	1439	-----	-----	100	---	3/23 l	6/1 l	64 t	38.1
AR91019-50-E2	1402	-----	-----	100	---	3/21 l	5/28	59 t	42.4 *
USI2002	1398	-----	-----	100	---	3/19	5/31 l	56	41.3
G96036A.10	1383	-----	-----	100	---	3/16	5/23	63 t	41.9 *
KS9012	1369	-----	-----	100	---	3/20	5/28	61 t	41.8
KS8285	1359	-----	-----	100	---	3/20	5/30	60 t	41.7
Casino	1290	1125	1751	100	100	3/21 l	5/31 l	58 t	40.6
Ceres	1242	1020	1523	100	100	3/22 l	5/28	60 t	41.5
Mean	1647	1331	1748	100	100	3/20	5/28	58	41.5
LSD (0.05)	342	220	184	NS	NS	2	1	6	1.7
CV (%)	12.7	14.8	12.6	---	---	---	---	---	---

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2001, 2002, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

LEXINGTON, KY

COOPERATORS: Greg Schwab and Lloyd Murdock, University of Kentucky

PREVIOUS CROP: corn
PLANTING DATE: September 25, 2002
HARVEST DATE: June 23, 2003

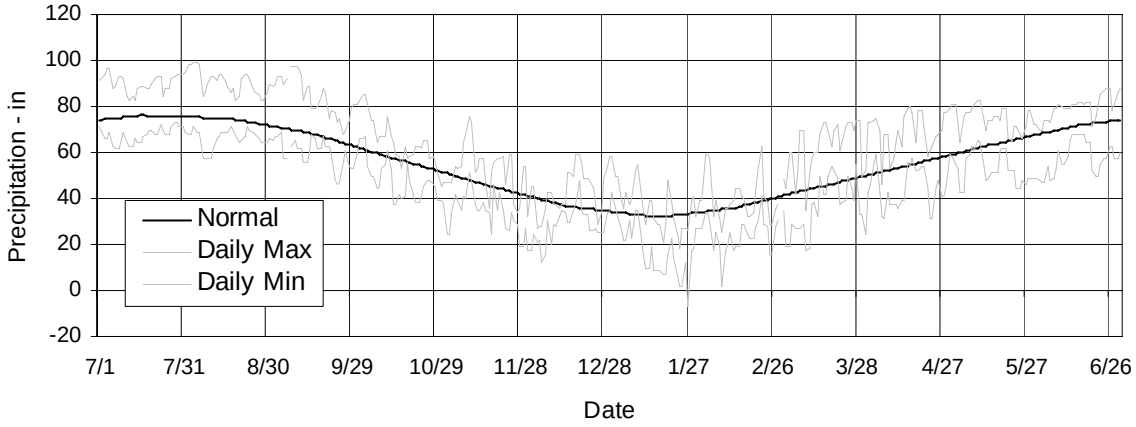
PESTICIDES:
Benlate

SOIL TEST
not available

FERTILIZATION
Fall: 0–0–0
Spring: 120–0–0

SEEDING RATE: 6.4 lb/a
ROW SPACING: 7.5 in
IRRIGATION: none
SOIL TYPE: Maury silt loam

ELEVATION: 850 ft
LATITUDE: 38° 6' N
AVG. WINTER SURVIVAL: n.a.
AVERAGE YIELD: 2289 lb/a



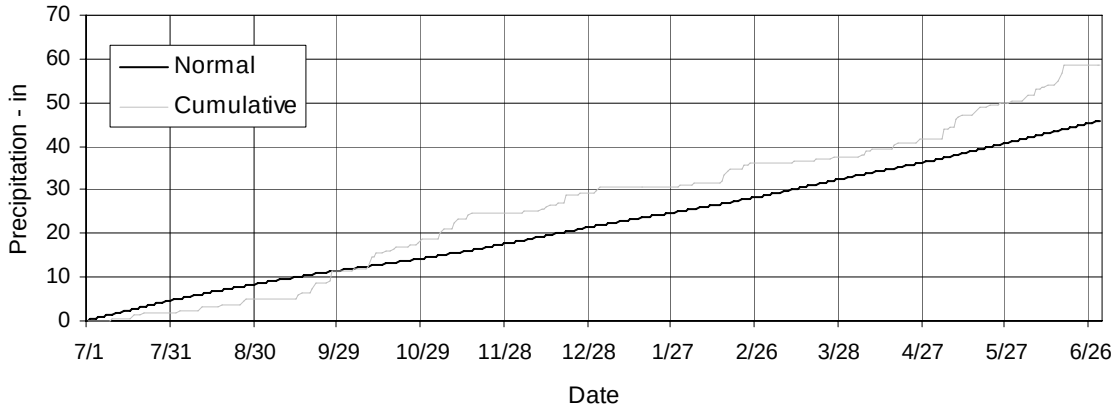


Table 5. Results from the 2003 National Winter Canola Variety Trial, Lexington, KY.

Line	Yield 2003	Fall Stand 1/	Spring Stand 2/	Test Weight	Total Oil
	lb/a			lb/bu	%
Jetton	2891 *	3.0 *	488	50.8	38.8
KS8200	2827 *	2.8 *	331	51.5	41.2 *
Banjo	2819 *	3.0 *	348	52.2 *	39.8
Celsius	2734 *	3.0 *	348	51.2	40.5 *
KS7436	2329	3.0 *	401	52.1 *	40.3 *
Casino	2324	2.8 *	174	52.1 *	38.4
Ceres	2163	2.0	366	52.5 *	39.7
Abilene	2046	1.8	279	51.4	39.2
Plainsman	1415	1.0	105	51.1	37.2
Wichita	1339	1.0	139	50.9	40.9 *
Mean	2289	2.3	298	51.6	39.6
LSD (0.05)	400	------	------	------	6.8
CV (%)	------	------	------	------	1.4

Means within a column followed by * are not significantly different (p<0.10).

1/ Visual rating of emergence and vigor taken on 10/14/02 (3 = best, 1 = worst).

2/ Plants per acre (x 1000). Stand counts taken on 3/14/03.

PRINCETON, KY

COOPERATORS: Greg Schwab and Lloyd Murdock, University of Kentucky

PREVIOUS CROP: corn
PLANTING DATE: September 24, 2002
HARVEST DATE: June 6, 2003

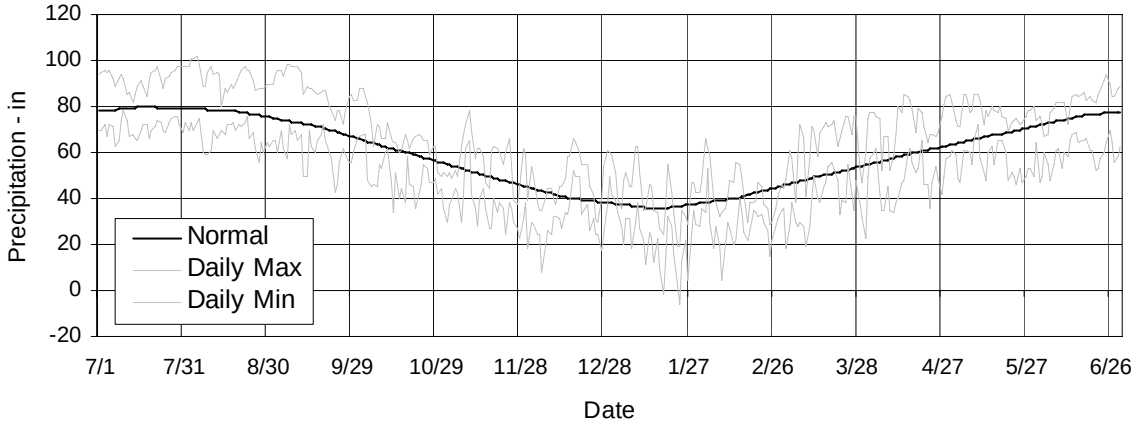
PESTICIDES:
Benlate
Treflan

SOIL TEST
not available

FERTILIZATION
Fall: 0–0–0
Spring: 120–90–40

SEEDING RATE: 6.4 lb/a
ROW SPACING: 7.5 in
IRRIGATION: none
SOIL TYPE: Pembroke silt loam

ELEVATION: 450 ft
LATITUDE: 37° 4' N
AVG. WINTER SURVIVAL: n.a.
AVERAGE YIELD: 2374 lb/a



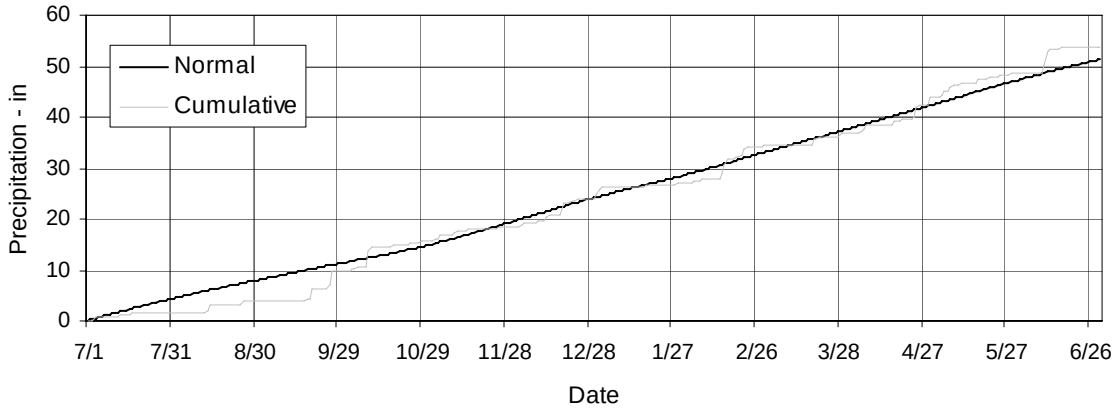


Table 6. Results from the 2003 National Winter Canola Variety Trial, Princeton, KY.

Line	Yield 2003	Fall Stand 1/	Spring Stand 2/	Test Weight	Total Oil
	lb/a			lb/bu	%
Banjo	3027 *	3.0	521	51.3 *	37.7
Wichita	2664 *	1.0	245	48.8	39.4
Jetton	2594 *	3.0	579	48.4	36.1
Abilene	2454	1.8	327	48.4	37.8
KS 8200	2411	2.8	567	49.4 *	37.2
Celsius	2356	3.0	576	49.8 *	38.0
KS 7436	2271	3.0	627	49.7 *	37.4
Ceres	2237	2.0	430	47.9	37.5
Casino	2019	2.8	490	49.0	37.5
Plainsman	1705	1.0	318	46.7	38.0
Mean	2374	2.3	468	48.9	37.6
LSD (0.05)	------	------	------	------	NS
CV (%)	------	------	------	------	3.7

Means within a column followed by * are not significantly different (p<0.10).

1/ Visual rating of emergence and vigor taken on 10/14/02 (3 = best, 1 = worst).

2/ Plants per acre (x 1000). Stand counts taken on 3/14/03.

HOLLY SPRINGS, MS

COOPERATOR: Joe Johnson,
Mississippi State University

PREVIOUS CROP: corn
PLANTING DATE: October 17, 2002
HARVEST DATE: June 13, 2003

PESTICIDES:
None

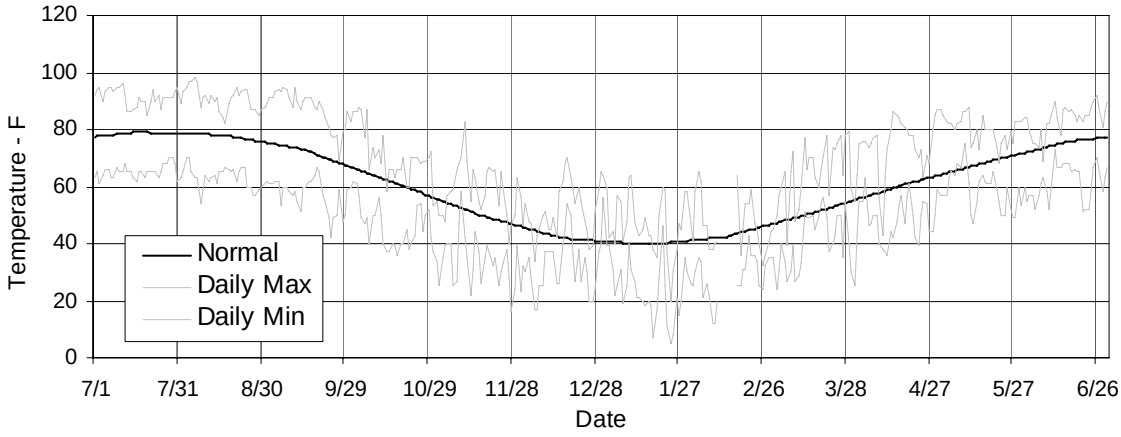
SOIL TEST
P = med.; K = med.; pH = 5.8

FERTILIZATION
Fall: 65–65–65 on Oct. 31
Spring: 119–0–0 on Mar 17

SEEDING RATE: 5 lb/a
ROW SPACING: 7.5 in
IRRIGATION: none
SOIL TYPE: Grenada silt loam

ELEVATION: 451 ft
LATITUDE: 34° 49' N
AVG. WINTER SURVIVAL: 98%
AVERAGE YIELD: 1851 lb/a

COMMENTS:
Rep 1 was in a low spot in the field and survival for all varieties appeared to reflect this.



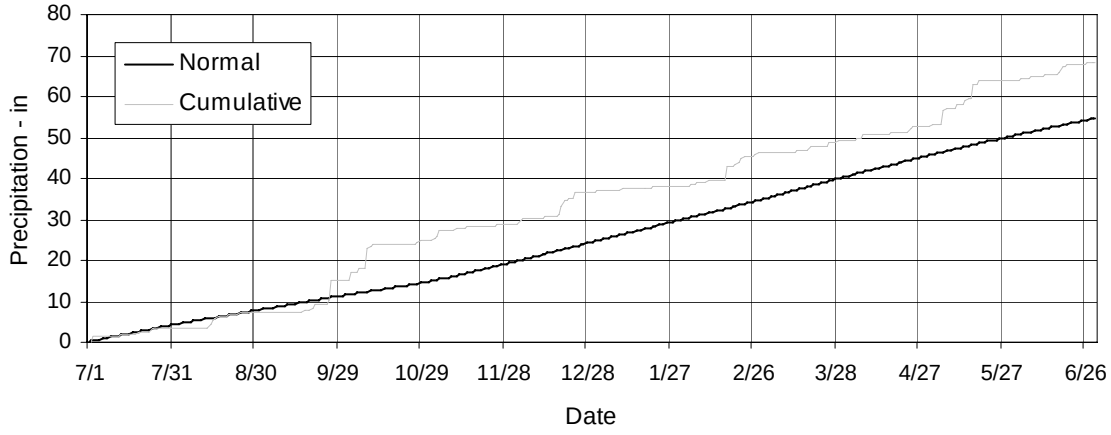


Table 7. Results from the 2003 National Winter Canola Variety Trial, Holly Springs, MS.

Line	Yield			Winter Survival			Fall	50%	Matur-	Plant	Lodg-	Shat-	Total
	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Bloom 3/	ity 3/	Height 4/	ing	tering	Oil
	----------lb/a----------			----------%----------			%	date	date	in	%	%	%
G02002	2451 *	----	----	98	----	----	93 *	4/10	6/8 l	41	0	0	39.3
Jetton	2333 *	2224 *	2070 *	98	98 *	97 *	95 *	4/7	6/6 e	43	0	0	37.2
KS9012	2299 *	----	----	98	----	----	92 *	4/7	6/7 e	47	0	0	38.3
KS7436	2241 *	----	----	98	----	----	90 *	4/7	6/7 e	46	0	0	40.5 *
Banjo	2210 *	----	----	98	----	----	95 *	4/10	6/7 e	39 s	0	0	39.8
G02001	2210 *	----	----	98	----	----	93 *	4/10	6/7 e	45	0	0	39.1
AR91022	2149 *	1950 *	1729	98	97	97 *	93 *	4/14	6/10 l	49 t	0	0	37.2
AR91019	2149 *	----	----	98	----	----	95 *	4/7	6/6 e	49	3	0	38.3
AR91023	2091	----	----	98	----	----	93 *	4/10	6/8 l	50 t	0	0	37.7
KS8200	2028	----	----	98	----	----	92 *	4/10	6/8 l	45	0	0	40.1
VSX-1	1997	----	----	98	----	----	95 *	4/7	6/7 e	45	2	0	36.7
G96202	1968	1777	1326	98	97	78	92 *	4/3 e	6/6 e	41	0	1	37.8
AR90016	1968	----	----	98	----	----	95 *	4/10	6/6 e	48	0	0	38.3
AR91016	1938	1867	1675	98	97	96 *	95 *	4/10	6/7 e	48	2	0	39.5
KS9198	1938	----	----	98	----	----	90 *	4/7	6/7 e	46	0	0	39.1
GT-Plainsman	1936	----	----	98	----	----	58	4/14	6/10 l	45	0	0	38.0
Wichita	1876	2114 *	2193 *	98	97 *	97 *	93 *	4/14	6/10 l	44	0	0	39.4
KS8037	1876	----	----	98	----	----	92 *	4/7	6/7 e	45	0	0	38.1
KS8227	1876	----	----	98	----	----	93 *	4/14	6/10 l	46	0	0	39.8
KS8367	1815	----	----	98	----	----	92 *	4/7	6/6 e	47	0	0	38.1
Casino	1757	1592	1542	98	97	97 *	90 *	4/14	6/10 l	47	0	0	38.8
G96036A.3	1755	----	----	98	----	----	85	4/10	6/7 e	46	0	0	38.6
Ceres	1696	1643	1388	98	97	91 *	93 *	4/14	6/10 l	39 s	0	0	39.1
GT-Abilene	1696	----	----	98	----	----	88 *	4/7	6/7 e	45	0	0	36.3
G00012.G2	1665	----	----	98	----	----	90 *	4/10	6/8 l	51 t	0	0	37.8
Celsius	1605	----	----	98	----	----	93 *	4/16 l	6/10 l	43	0	0	39.1
Sumner	1605	----	----	98	----	----	93 *	4/7	6/6 e	47	0	0	39.0
Abilene	1544	1619	----	98	97	----	93 *	4/7	6/6 e	46	0	0	37.9
GT-Wichita	1515	----	----	98	----	----	90 *	4/14	6/10 l	45	0	0	40.8 *
KS8285	1423	----	----	98	----	----	95 *	4/14	6/10 l	45	0	0	39.0
Plainsman	1394	1558	1210	98	97	96 *	7	4/16 l	6/10 l	51 t	0	0	37.7
G96036A.10	1394	----	----	98	----	----	82	4/10	6/10 l	49 t	0	0	39.3
G96200E	1304	1823	----	98	97	----	78	4/3 e	6/6 e	41	0	1	38.1
USI2002	1249	----	----	98	----	----	93 *	4/7	6/6 e	44	0	0	39.5
Mean	1851	1715	1503	98	97	95	88	4/9	6/8	46	0	0	38.6
LSD (0.05)	335	314	316	NS	NS	7	10	0.2	2	2	NS	NS	0.6
CV (%)	11.1	16.1	24.5	----	----	7.8	6.7	0.1	0.9	2.7	582	250	0.8

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2000 and 2003.

2/ 3yr means include data from 1998, 2000, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

ORANGE, VA

COOPERATOR: David Startner,
N. Piedmont AREC, Virginia Tech

PREVIOUS CROP: small grain
PLANTING DATE: September 25, 2002
HARVEST DATE: June 26, 2003

PESTICIDES:
Treflan, 1 qt/a, Sept. 23

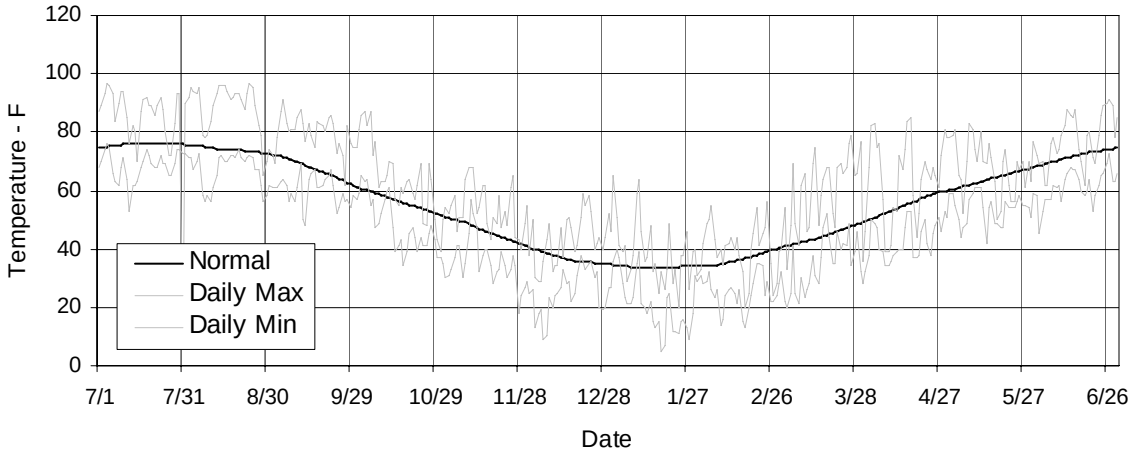
SOIL TEST;
P = 18 ppm; K = 149 ppm; pH = 6.9

FERTILIZATION
Fall: 25–50–50–15(S) on Sept 19
Spring: 60–0–0 on Mar. 11

SEEDING RATE: 5.3 lb/a
ROW SPACING: 12 in
IRRIGATION: none
SOIL TYPE: Star silty clay loam

ELEVATION: 520 ft
LATITUDE: 38° 13' N
AVG. WINTER SURVIVAL: 97%
AVERAGE YIELD: 2668 lb/a

COMMENTS:
Height notes were taken after lodging/ leaning so measurements were variable.



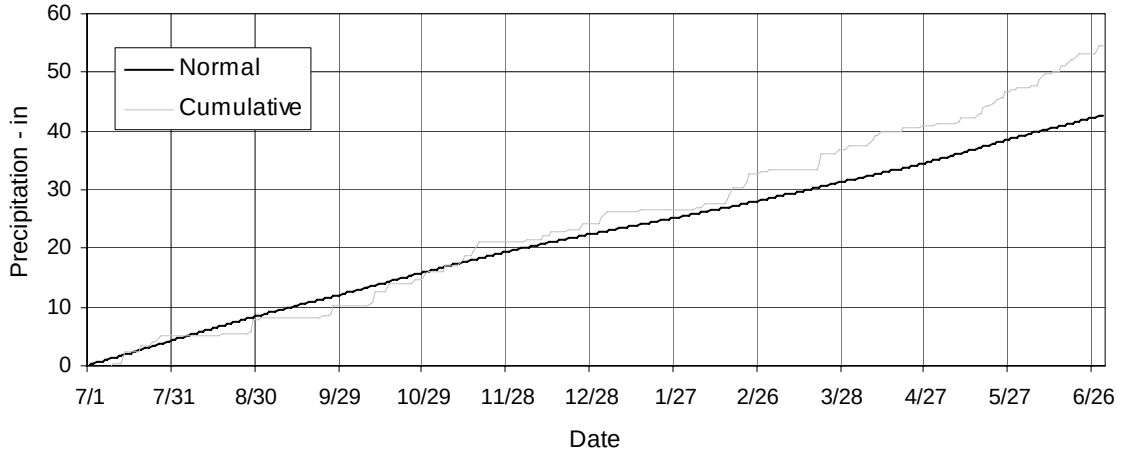


Table 8. Results from the 2003 National Winter Canola Variety Trial, Orange, VA.

Line	Yield			Winter Survival			Fall	50%	Matur-	Plant	Lodg-	Test	Total
	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Bloom 3/	ity 3/	Height 4/	ing	Weight	Oil
	lb/ac			%			%	date	date	in.	%	lb/bu	%
Banjo	3585 *	3532 *	-----	100 *	100 *	----	100 *	4/17	6/22	61	77	50.4 *	38.5 *
GT-Wichita	3335 *	-----	-----	100 *	----	----	98 *	4/17	6/24	61	43	48.2	37.2
AR91022-59-L4	3199 *	2343	2060	100 *	100 *	100 *	99 *	4/17	6/25	65 t	73	48.8 *	37.0
GT-Abilene	3131	-----	-----	100 *	----	----	100 *	4/17	6/21 e	65 t	75	48.1	37.5 *
AR90016-PR377	3052	-----	-----	99 *	----	----	99 *	4/17	6/25	63	68	48.1	38.4 *
G02001	3006	-----	-----	100 *	----	----	100 *	4/17	6/25	60	30 *	50.0 *	38.0 *
KS9198	2982	-----	-----	95 *	----	----	98 *	4/17	6/23	62	47	48.3	38.0 *
KS8200	2947	2634	-----	100 *	100 *	----	100 *	4/17	6/25	68 t	72	49.2 *	37.8 *
Wichita	2894	1614	1526	95 *	98 *	98 *	100 *	4/17	6/24	66 t	63	48.1	37.7 *
G96036A.3	2880	-----	-----	95 *	----	----	98 *	4/17	6/25	60	37	48.7 *	37.7 *
Celsius	2842	2578	-----	100 *	100 *	----	99 *	4/19	6/26 l	65 t	67	48.8 *	37.1
KS7436	2827	2504	2054	99 *	100 *	100 *	100 *	4/17	6/24	63	37	48.9 *	39.4 *
Jetton	2822	2935	2447 *	96 *	98 *	99 *	97 *	4/17	6/23	59	37	49.1 *	37.6 *
Sumner	2754	2279	1961	96 *	98 *	99 *	99 *	4/17	6/22	57 s	17 *	48.9 *	39.8 *
KS9012	2728	-----	-----	97 *	----	----	97 *	4/17	6/23	65 t	60	49.0 *	37.7 *
VSX-1	2670	2487	2389 *	100 *	100 *	100 *	100 *	4/17	6/24	58	53	48.7 *	37.5 *
AR91019-50-E2	2642	-----	-----	100 *	----	----	99 *	4/17	6/25	68 t	82	46.5	37.5 *
G96202	2621	-----	-----	100 *	----	----	100 *	4/11 e	6/19 e	55 s	37	48.3	37.0
USI2002	2599	-----	-----	99 *	----	----	100 *	4/17	6/24	59	52	49.0 *	38.4 *
G96036A.10	2548	-----	-----	96 *	----	----	95	4/17	6/23	57 s	23 *	48.6	34.6
KS8367	2547	-----	-----	98 *	----	----	98 *	4/17	6/24	65 t	73	48.7 *	37.8 *
Ceres	2540	2352	1850	94	97 *	98 *	98 *	4/17	6/23	59	7 *	50.3 *	38.5 *
Abilene	2537	2509	2089	78	89	93	92	4/17	6/22	59	75	48.4	36.1
AR91016-41-L2	2513	1753	1651	99 *	100 *	100 *	99 *	4/17	6/22	64	91	47.1	35.7
KS8227	2456	2338	-----	99 *	99 *	----	100 *	4/17	6/24	66 t	50	49.9 *	37.4
AR91023-63-L5	2434	1826	-----	99 *	100 *	----	99 *	4/17	6/25	67 t	68	48.8 *	36.5
Casino	2393	2070	1958	100 *	100 *	100 *	100 *	4/18	6/27 l	64	72	48.6 *	36.4
KS8037	2251	-----	-----	95 *	----	----	99 *	4/17	6/26 l	66 t	43	50.0 *	36.6
KS8285	2165	-----	-----	93	----	----	98 *	4/17	6/25	69 t	72	48.9 *	37.5 *
G96200E	2114	1656	1752	97 *	98 *	99 *	92	4/11 e	6/19 e	50 s	17 *	50.2 *	34.5
GT-Plainsman	1692	-----	-----	95 *	----	----	100 *	4/22 l	6/25	67 t	50	49.8 *	36.2
Plainsman	1678	1340	1258	87	93	96	97 *	4/21 l	6/26 l	67 t	52	49.5 *	36.7
Mean	2668	2268	1986	97	98	99	99	4/17	6/24	63	54	48.9	37.3
LSD (0.05)	445	374	294	6	3.4	2.3	4	1/0	1/1	7	35	1.7	11.4
CV (%)	10.3	15.1	16.9	3.9	2.9	1.9	2.8	0.6	0.6	6.9	40.7	2.2	3.2

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2001, 2002, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

PETERSBURG, VA

COOPERATOR: Harbans Bhardwaj,
Virginia State University

PREVIOUS CROP: white lupin
PLANTING DATE: October 2, 2002
HARVEST DATE: July 5, 2003

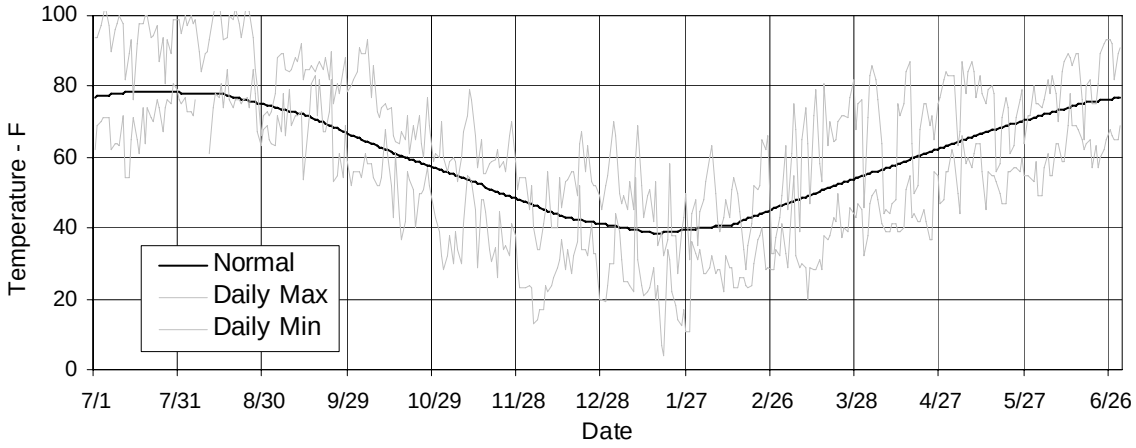
PESTICIDES:
Treflan 1.5 pt/acre
Karate, 1 application

SOIL TEST:
P = high; K = medium; pH = 6.2

FERTILIZATION
Fall: none
Spring: 100–100–100

SEEDING RATE: 6 lb/a
ROW SPACING: 12 in
IRRIGATION: none
SOIL TYPE: Abell sandy loam

ELEVATION: 15 ft
LATITUDE: 37° 14' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 2450 lb/a



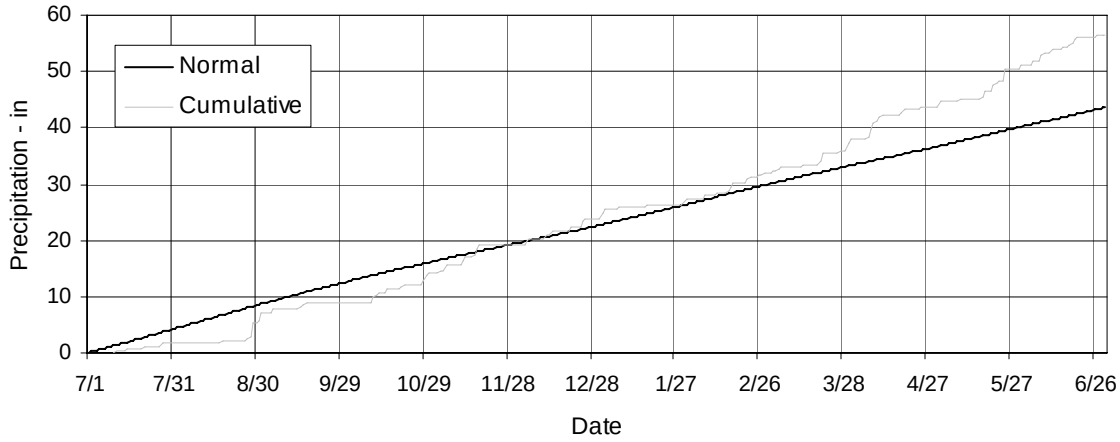


Table 9. Results from the 2003 National Winter Canola Variety Trial, Petersburg, VA.

Line	Yield 2003	Yield 2yr 1/	Yield 3yr 2/	Winter Survival 2003	Winter Survival 3yr 2/	Plant Height 3/	Total Oil
	lb/a			%		in	%
VSX-1	3561 *	3796 *	3739 *	100	100	35 s	34.6
KS8227	3558 *	3387 *	-----	100	---	41 t	37.3 *
Wichita	3236 *	3068 *	3036	100	100	36 s	36.1 *
GT-Wichita	3163 *	-----	-----	100	---	37 s	35.7 *
AR91022-59-L4	2987 *	2895	2858	100	100	41 t	36.3 *
KS8200	2965 *	3520 *	-----	100	---	40 t	36.4 *
G02002	2943 *	-----	-----	100	---	40 t	35.3
GT-Abilene	2788 *	-----	-----	100	---	35 s	35.1
KS8367	2695	-----	-----	100	---	33 s	35.4
G96038A.3	2679	-----	-----	100	---	40 t	36.2 *
KS8285	2671	-----	-----	100	---	38 t	36.6 *
G96202	2632	-----	-----	100	---	35 s	35.7 *
AR91019-50-E2	2628	-----	-----	100	---	41 t	35.7 *
Celsius	2576	2522	-----	100	---	40 t	36.5 *
KS8073	2574	-----	-----	100	---	41 t	35.8 *
Casino	2541	2323	2395	100	100	42 t	35.3
Abilene	2511	2865	2893	100	100	38 t	34.6
Banjo	2510	2125	-----	100	---	37 s	35.8 *
AR90016-PR377	2457	-----	-----	100	---	36 s	35.1
G96200E	2440	2505	2569	100	100	37 s	35.6
Sumner	2274	2439	2355	100	100	37	36.3 *
Jetton	2234	2649	2859	100	100	32 s	34.3
KS7436	2199	2540	2614	100	100	41 t	36.8 *
AR91016-41-L2	2180	2023	2215	100	100	37 s	35.8 *
USI2002	2135	-----	-----	100	---	43 t	35.5
AR91023-63-L5	2082	2165	2591	100	100	37 s	35.3
KS9012	2043	-----	-----	100	---	37 s	36.9 *
GT-Plainsman	1998	-----	-----	100	---	40 t	34.1
KS9198	1941	-----	-----	100	---	36 s	35.7 *
G96038A.10	1908	-----	-----	100	---	36 s	36.3 *
G00012.G2	1760	-----	-----	100	---	36 s	35.9 *
Plainsman	1664	2091	2388	100	100	39 t	34.3
Ceres	1423	1617	1831	100	100	36 s	34.8
G02001	1355	-----	-----	100	---	34 s	35.6
Mean	2450	2428	2554	100	100	38	35.6
LSD (0.05)	831	0	0	NS	NS	5	1.6
CV (%)	20.8	26.7	26.7	---	---	8.1	2.2

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2001, 2002, and 2003.

3/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

SUFFOLK, VA

COOPERATOR: Harbans Bhardwaj,
Virginia State University

PREVIOUS CROP: fallow
PLANTING DATE: October 3, 2002
HARVEST DATE: July 9, 2003

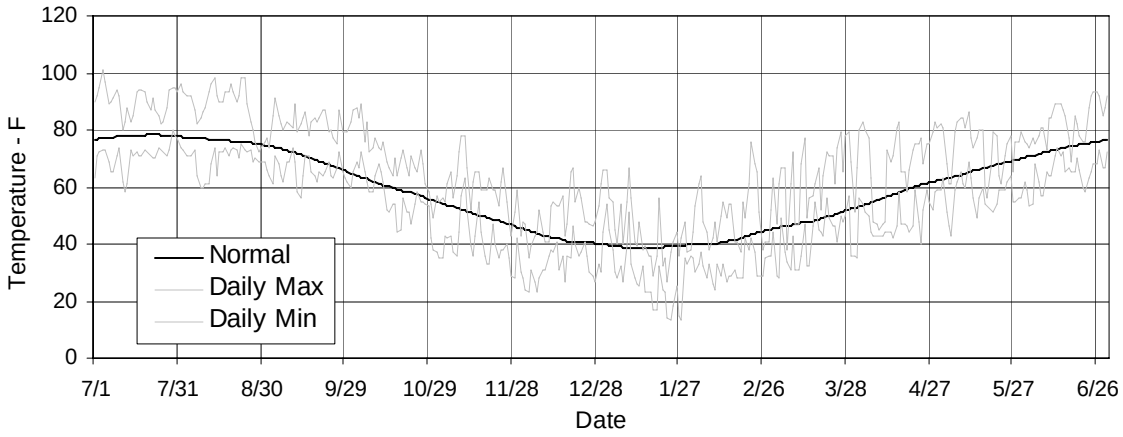
PESTICIDES:
Karate, 1 application

SOIL TEST
P = medium; K = medium; pH = 5.6

FERTILIZATION
Fall: none
Spring: 100–100–100

SEEDING RATE: 6 lb/a
ROW SPACING: 12 inches
IRRIGATION: none
SOIL TYPE: Rains fine sandy loam

ELEVATION: 22 ft
LATITUDE: 36° 44' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 1957 lb/a



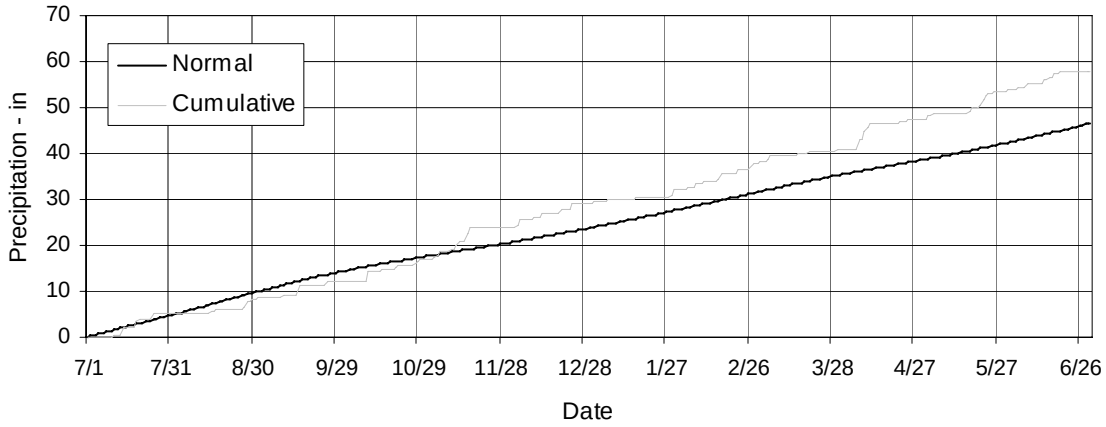


Table 10. Results from the 2003 National Winter Canola Variety Trial, Suffolk, VA.

Line	Yield 2003	Yield 2yr 1/	Yield 3yr 2/	Winter Survival 2003	Winter Survival 3yr 2/	Plant Height 3/	Total Oil
	lb/a			%		in	%
VSX-1	2988 *	2819 *	2418 *	100	100	41 s	39.3
Banjo	2868 *	2119	-----	100	---	44 t	40.7
AR91023-63-L5	2704 *	2136	1637	100	100	44 t	39.9
Sumner	2642 *	2123	1780	100	100	42 s	40.3
AR91022-59-L4	2604 *	2089	1614	100	100	46 t	39.8
GT-Wichita	2375 *	-----	-----	100	---	44 t	40.3
AR91016-41-L2	2373 *	1940	1522	100	100	45 t	40.1
Abilene	2352 *	2141	1743	100	100	46 t	38.6
AR91019-50-E2	2350 *	-----	-----	100	---	47 t	40.4
KS7436	2348 *	2314	1730	100	100	45 t	40.6
AR90016-PR377	2297 *	-----	-----	100	---	47 t	40.2
GT-Abilene	2244 *	-----	-----	100	---	41 s	39.0
G96200E	2168 *	1978	1679	100	100	44 t	39.6
KS8073	2162 *	-----	-----	100	---	44 t	39.1
KS8285	1968	-----	-----	100	---	47 t	40.8
KS8367	1959	-----	-----	100	---	48 t	39.6
Wichita	1919	1959	1865	100	100	42 s	41.2
Celsius	1912	1607	-----	100	---	46 t	40.9
Jetton	1812	1934	1717	100	100	39 s	39.8
KS9198	1798	-----	-----	100	---	47 t	39.8
Ceres	1791	1444	1131	100	100	45 t	39.4
Casino	1768	1712	1228	100	100	47 t	39.5
KS8227	1710	1934	-----	100	---	44 t	42.1 *
KS8200	1590	1853	-----	100	---	46 t	41.3
G02001	1485	-----	-----	100	---	37 s	41.1
KS9012	1471	-----	-----	100	---	42 s	40.4
USI2002	1390	-----	-----	100	---	46 t	41.2
GT-Plainsman	1380	-----	-----	100	---	49 t	39.2
Plainsman	1133	1204	1030	100	100	48 t	38.4
G96202	1125	-----	-----	100	---	41 s	39.3
G96038A.3	1031	-----	-----	100	---	41 s	40.2
G96038A.10	917	-----	-----	100	---	44 t	41.0
Mean	1957	1816	1471	100	100	44	40.1
LSD (0.05)	1019	390	376	NS	NS	5	0.7
CV (%)	31.9	28.8	28.2	---	---	7.4	0.1

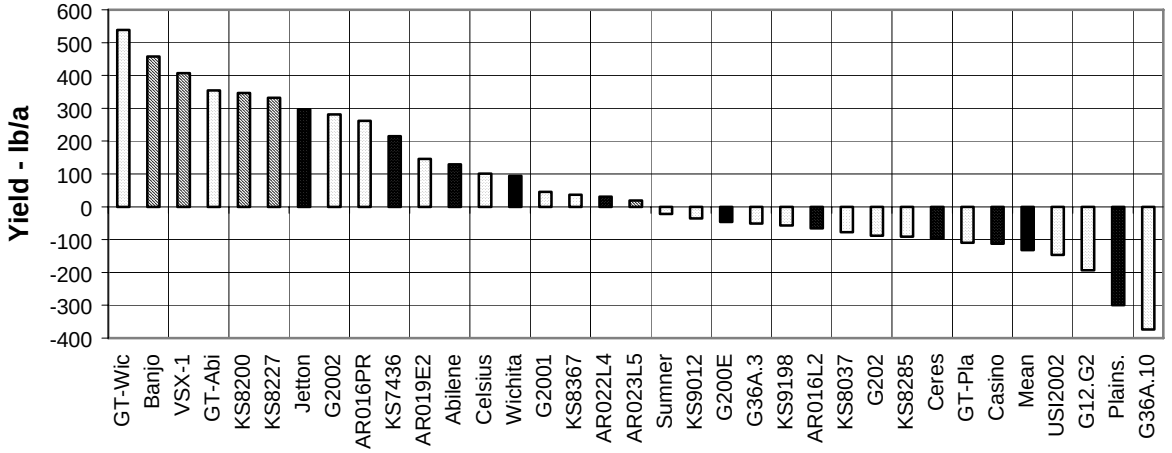
* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

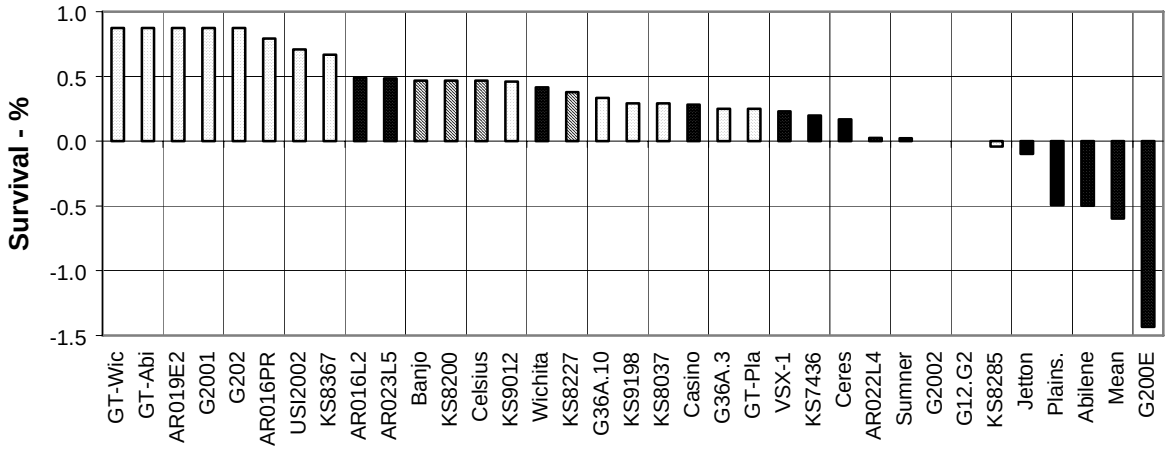
1/ 2yr means include data from 2002 and 2003.

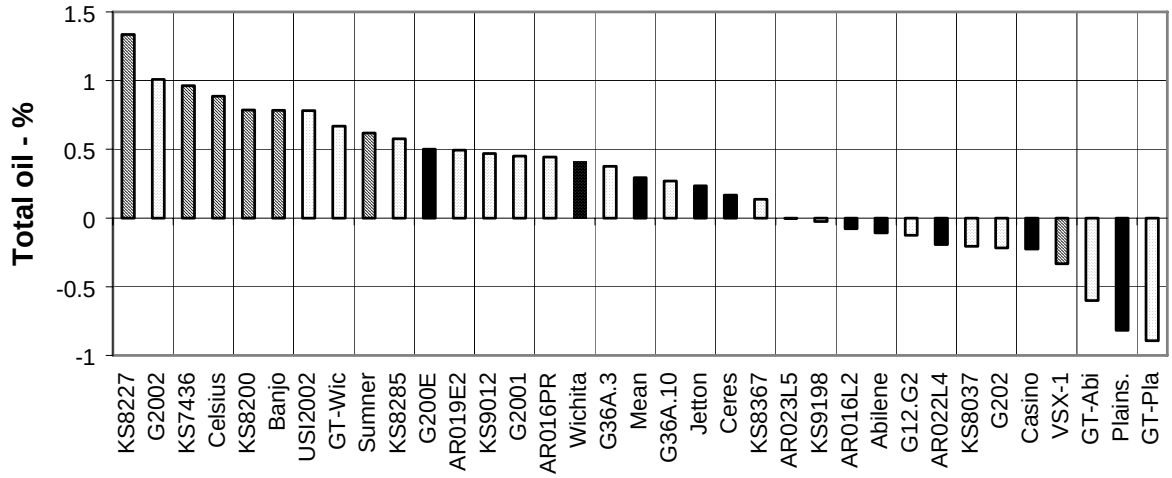
2/ 3yr means include data from 2001, 2002, and 2003.

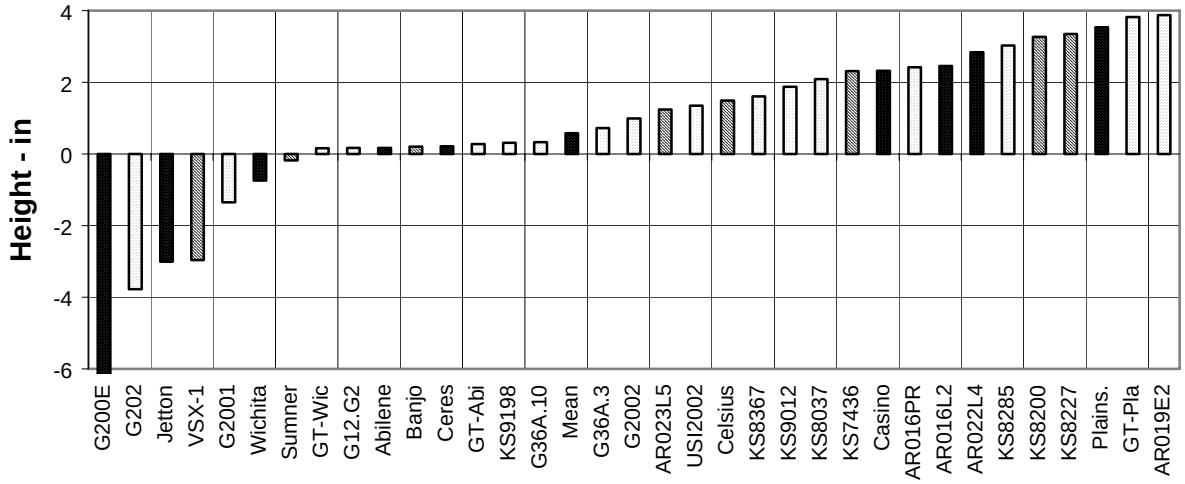
3/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

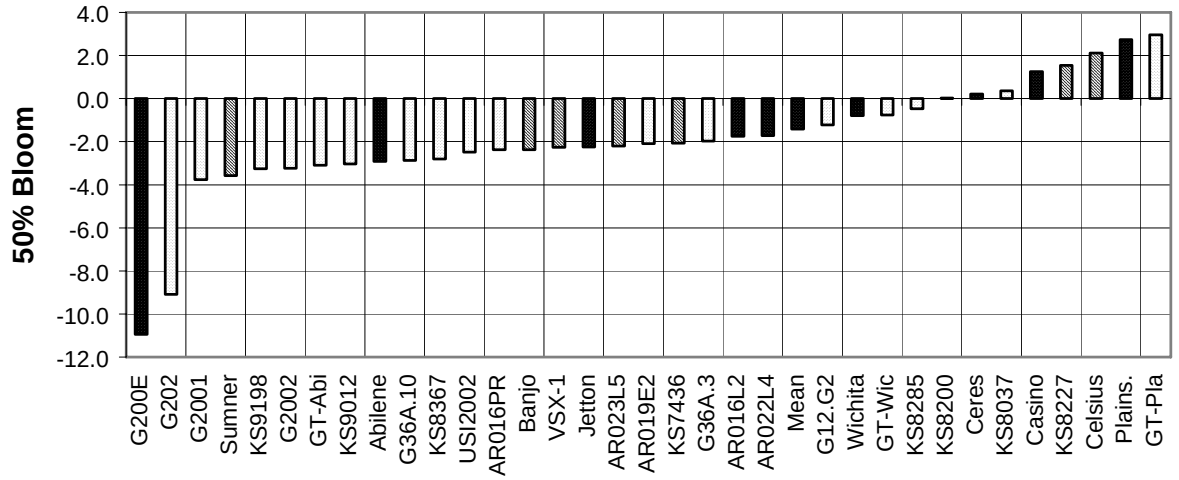
Figure 1. Southeast Winter Canola Summary, 1996-2003.



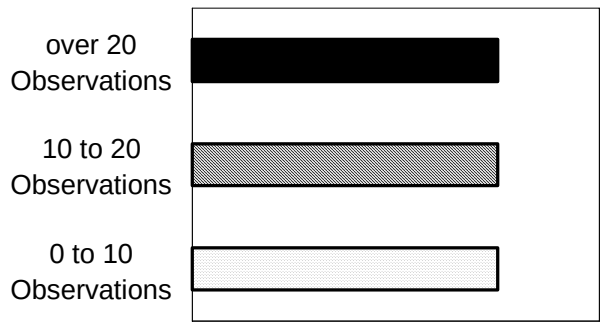








Note: Values are averages of the differences between each cultivar and the mean of Jetton, Ceres, Plainsman, and Wichita for yield (lb/a), winter survival (%), total oil content (%), plant height (inches), and 50% bloom date (days). The number of observations for each trait is represented by the different colors of the bars (as shown at the right).



BELLEVILLE, IL

COOPERATORS: Jim Klein and Mike Schmidt, Southern Illinois University, Carbondale

PREVIOUS CROP: fallow
PLANTING DATE: September 25, 2002
HARVEST DATE: June 25, 2003

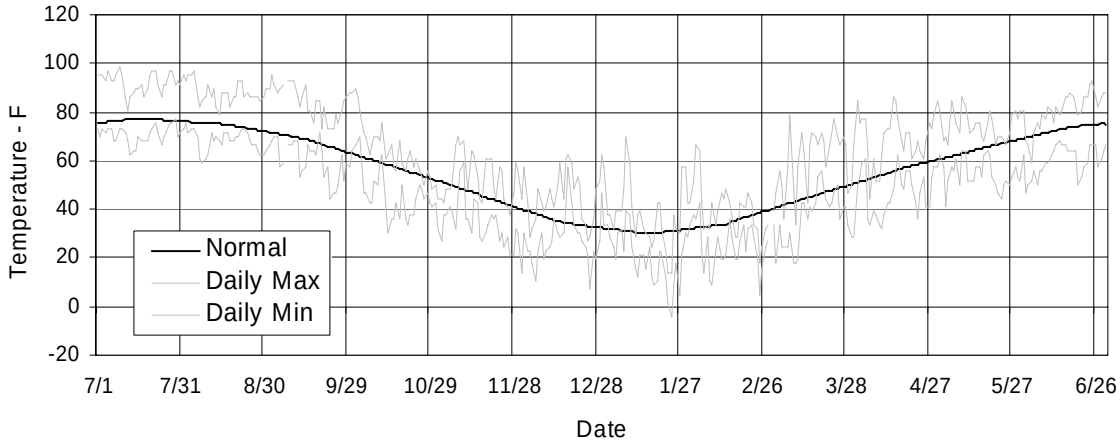
PESTICIDES:
none

SOIL TEST:
not available

FERTILIZATION
Fall: 30–0–0
Spring: 120–0–0

SEEDING RATE: 6 lb/a
ROW SPACING: 7.5 in
IRRIGATION: none
SOIL TYPE: Stoy silt loam

ELEVATION: 400 ft
LATITUDE: 38° 30' N
AVG. WINTER SURVIVAL: 86%
AVERAGE YIELD: 3302 lb/a



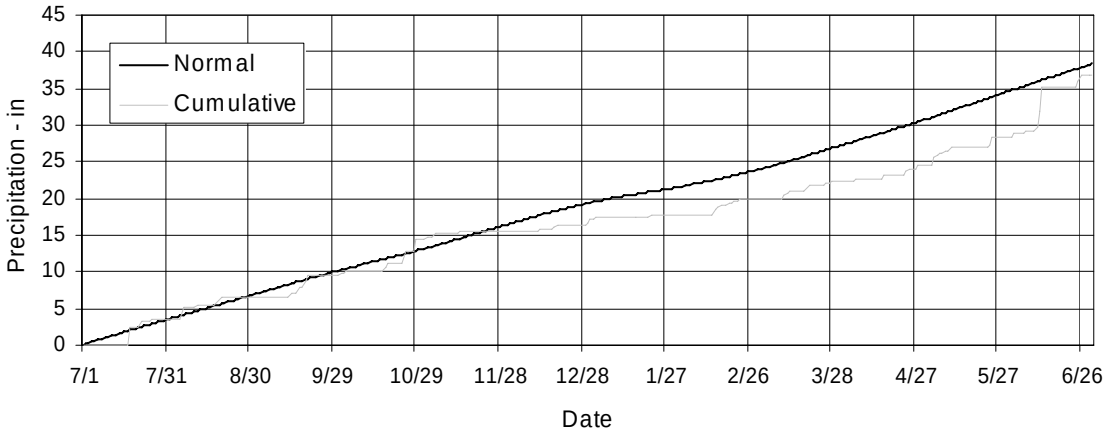


Table 11. Results from the 2003 National Winter Canola Variety Trial, Belleville, IL.

Line	Yield			Winter Survival			Fall Stand	Lodging	Test Weight	Total Oil
	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/				
	lb/a			%			%	%	lb/bu	%
G02001	4257 *	-----	-----	83	---	---	47	100	49.3	37.3
GT-Wichita	4239 *	-----	-----	93	---	---	67 *	100	50.3 *	38.0
VSX-1	4185 *	2918 *	2881 *	100	92 *	79	87 *	100	49.5	38.1
Jetton	4143 *	3002 *	3063 *	100	97 *	84 *	90 *	100	49.8	37.9
Wichita	3873 *	2936 *	2970 *	100	95 *	87 *	53	100	50.2 *	37.9
KS8200	3771 *	2825 *	-----	100	93 *	---	87 *	100	51.0 *	37.5
AR90016-PR377	3696 *	-----	-----	100	---	---	77 *	100	49.0	37.8
KS9198	3565 *	-----	-----	100	---	---	53	100	50.8 *	38.0
AR91019-50-E2	3548 *	-----	-----	100	---	---	67 *	100	48.3	38.3 *
Ceres	3538 *	2438	2582	100	83	76	37	100	51.0 *	37.8
AR91016-41-L2	3528 *	2432	2581	100	100 *	84 *	73 *	100	50.3 *	38.1 *
KS7436	3485	2218	2395	93	78	77	77 *	100	50.5 *	39.0 *
G96038A.3	3450	-----	-----	80	---	---	43	100	48.5	39.5 *
AR91022-59-L4	3393	2409	2452	100	98 *	87 *	77 *	100	50.2 *	37.6
AR91023-63-L5	3347	2340	2536	100	93 *	84 *	63	100	49.7	37.5
Sumner	3295	2396	2547	100	92 *	84 *	33	100	51.2 *	39.1 *
USI2002	3241	-----	-----	100	---	---	67 *	100	51.2 *	38.6 *
Abilene	3240	2481	2666	93	93 *	88 *	50	100	50.5 *	37.3
G96202	3230	-----	-----	97	---	---	60	100	51.2 *	38.8 *
G96200E	3202	2314	2318	100	93 *	74	27	100	50.2 *	38.5 *
KS9012	3190	-----	-----	93	---	---	67 *	100	50.0	38.5 *
KS8227	3171	2243	-----	100	95 *	---	83 *	100	49.7	38.5 *
KS8073	3155	-----	-----	83	---	---	73 *	100	49.2	37.1
Banjo	3108	2298	-----	100	97 *	---	73 *	100	51.7 *	38.2 *
GT-Abilene	3030	-----	-----	100	---	---	80 *	100	50.7 *	36.3
KS8367	2764	-----	-----	100	---	---	83 *	100	50.3 *	38.5 *
G96038A.10	2729	-----	-----	87	---	---	57	100	50.5 *	38.2 *
Celsius	2581	1831	-----	100	87 *	---	63	100	50.2 *	37.9
KS8285	2575	-----	-----	83	---	---	77 *	100	49.5	37.1
Casino	2497	1808	2181	100	85	83 *	70 *	100	47.8	35.8
GT-Plainsman	2437	-----	-----	100	---	---	17	100	48.3	36.3
Plainsman	2200	1696	1939	100	88 *	83 *	13	100	47.3	36.1
Mean	3302	2345	2480	96	90	82	62	100	49.9	37.8
LSD (0.05)	755	491	359	NS	14	11	26	NS	1.6	11.4
CV (%)	14.0	21.0	17.0	12.3	13.7	14.3	25.5	---	2.0	1.8

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2001, 2002, and 2003.

CARBONDALE, IL

COOPERATORS: Jim Klein and Mike Schmidt, Southern Illinois University, Carbondale

PREVIOUS CROP: fallow
PLANTING DATE: September 18, 2002
HARVEST DATE: June 16, 2003

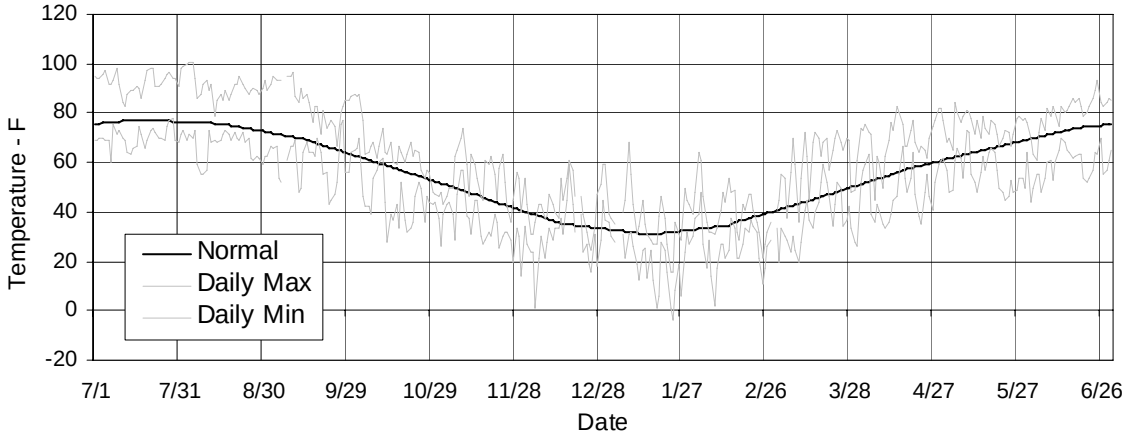
PESTICIDES:
Selct, 7 oz/a

SOIL TEST:
not available

FERTILIZATION
Fall: 0–0–0
Spring: 120–0–0

SEEDING RATE: 6 lb/a
ROW SPACING: 7.5 in
IRRIGATION: none
SOIL TYPE: Stoy silt loam

ELEVATION: 415 ft
LATITUDE: 37° 47' N
AVG. WINTER SURVIVAL: 83%
AVERAGE YIELD: 1513 lb/a



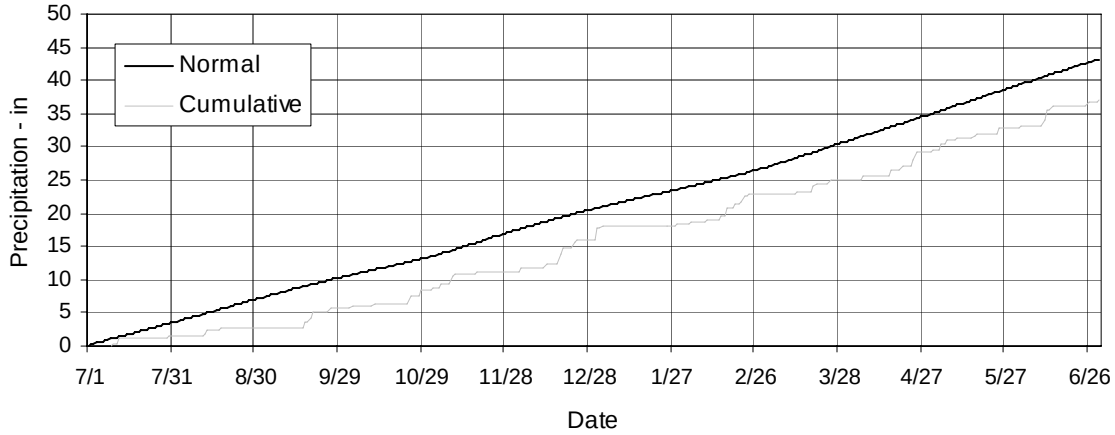


Table 12. Results from the 2003 National Winter Canola Variety Trial, Carbondale, IL.

Line	Yield			Winter Survival			Fall	Plant	Lodg-	Shatt-	Test	Total
	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Height 3/	ing	ering	Weight	Oil
	lb/ac			%			%	in.	%	%	lb/bu	%
Banjo	2415 *	2478 *	-----	83	90 *	---	70 *	43	0	5 *	51.7 *	40.9
KS7436	2396 *	2372 *	2114 *	87	85 *	86 *	67 *	41	0	5 *	51.2 *	41.8 *
VSX-1	2207 *	2330 *	2071 *	73	80 *	72	63 *	39	0	2 *	49.5	40.5
Jetton	2197 *	2429 *	2153 *	87	90 *	78	70 *	36 s	0	0 *	50.2 *	40.8
AR91022-59-L4	2122 *	2068	1941 *	90	85 *	83 *	53	45	0	10 *	48.7	41.0
AR90016-PR377	2100 *	-----	-----	83	---	---	60 *	45	0	10 *	48.0	41.6 *
AR91019-50-E2	2028 *	-----	-----	83	---	---	67 *	47 t	0	12 *	50.3 *	40.9
AR91016-41-L2	1848 *	1952	1886	90	87 *	86 *	60 *	42	0	7 *	50.2 *	40.7
KS8200	1775	2062	-----	90	88 *	---	63 *	44	0	8 *	50.5 *	39.4
KS9012	1685	-----	-----	90	---	---	47	43	0	8 *	51.0 *	40.7
KS8367	1678	-----	-----	93	---	---	50	44	3	13	50.7 *	40.8
GT-Abilene	1659	-----	-----	73	---	---	43	42	0	7 *	51.2 *	39.6
GT-Wichita	1652	-----	-----	90	---	---	43	41	0	0 *	49.2	41.6 *
AR91023-63-L5	1639	1848	1818	93	90 *	86 *	57	43	0	12 *	49.7	40.7
KS8227	1516	2017	-----	70	78	---	67 *	40	0	0 *	48.8	42.9 *
Casino	1503	1836	1913 *	90	90 *	92 *	33	44	0	10 *	50.3 *	40.3
Abilene	1495	1772	1826	77	80 *	82	40	44	0	2 *	49.8 *	39.8
Wichita	1494	2024	2093 *	87	92 *	90 *	33	42	3	4 *	50.7 *	40.0
G96202	1470	-----	-----	83	---	---	43	35 s	0	0 *	50.5 *	39.4
Celsius	1435	1849	-----	77	75	---	50	43	0	8 *	49.8 *	41.7 *
G02001	1386	-----	-----	93	---	---	40	39	0	5 *	49.7	41.1
KS9198	1379	-----	-----	77	---	---	43	41	0	12 *	50.2 *	39.4
KS8073	1378	-----	-----	67	---	---	57	44	0	13	49.2	40.7
KS8285	1372	-----	-----	77	---	---	57	43	0	7 *	49.8 *	40.8
USI2002	1355	-----	-----	83	---	---	57	42	0	10 *	49.3	41.4 *
Sumner	1208	1745	1830	87	82 *	83 *	33	41	0	5 *	50.7 *	40.3
G96038A.3	1068	-----	-----	80	---	---	27	43	0	12 *	48.8	41.0
Ceres	916	1658	1725	77	75	78	30	41	0	12 *	47.3	39.3
G96200E	655	1120	1218	73	80 *	71	20	33 s	0	0 *	45.3	39.5
G96038A.10	555	-----	-----	100	---	---	10	44	0	20	50.0 *	40.0
Plainsman	446	1145	1204	73	82 *	81	10	48 t	0	20	50.0 *	40.1
GT-Plainsman	400	-----	-----	83	---	---	17	45	0	17	48.5	37.7
Mean	1513	1804	1771	83	84	83	46	42	0	8	49.7	40.5
LSD (0.05)	571	339	262	NS	13	10	13	3	NS	12	2.0	1.7
CV (%)	23.1	16.9	16.0	14.9	13.2	12.7	17.6	4.8	670	91.2	2.5	0.1

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2001, 2002, and 2003.

3/ Values marked "s" are not statistically different from the shortest value; and those marked "t" are not different from the tallest value.

COLUMBIA CITY, IN

COOPERATOR: Ellsworth Christmas,
NE Purdue Agric. Center

PREVIOUS CROP: wheat
PLANTING DATE: September 12, 2002
HARVEST DATE: July 17, 2003

PESTICIDES:
none

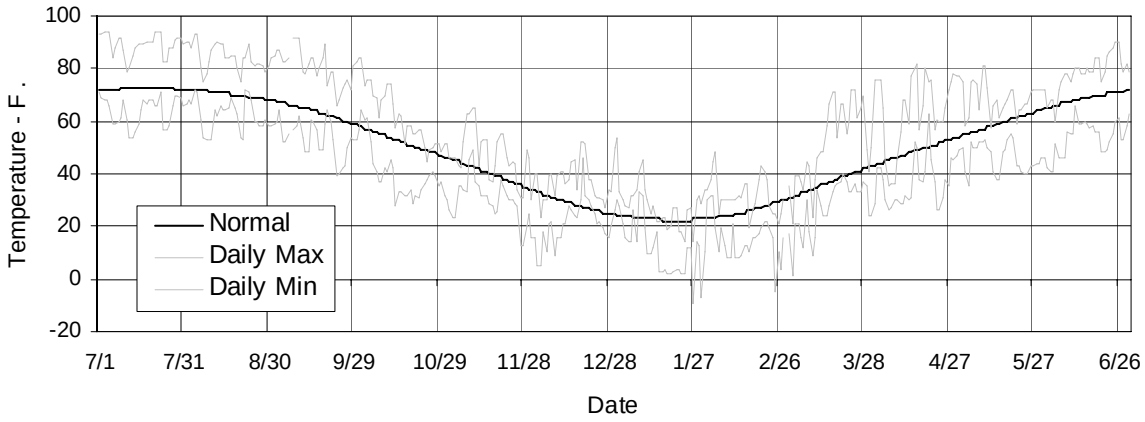
SOIL TEST
P=36 ppm; K=135 ppm; pH= 6.8

FERTILIZATION
Fall: 27–69–73
Spring: 120–0–0

SEEDING RATE: 5 lb/a
ROW SPACING: 6 in
IRRIGATION: none
SOIL TYPE: Boyer sandy loam

ELEVATION: 840 ft
LATITUDE: 41° 5' N
AVG. WINTER SURVIVAL: 98%
AVERAGE YIELD: 963 lb/a

COMMENTS:
Plots suffered from high winds, heavy rain and hail, causing significant shattering of the seed. This occurred about the time that harvest should have taken place and caused a delay in harvest by at least 10 days.



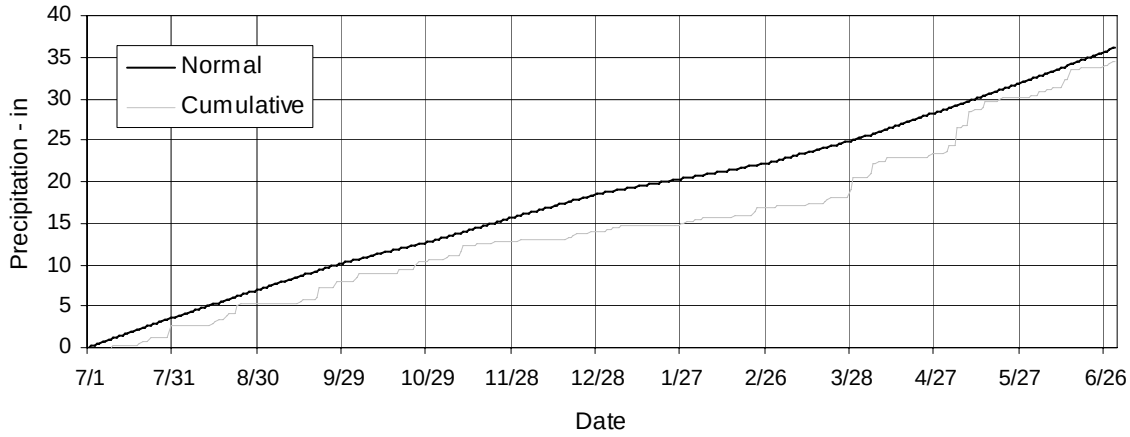


Table 13. Results from the 2003 National Winter Canola Variety Trial, Columbia City, IN.

Line	Yield 2003	Yield 2yr 1/	Yield 3yr 2/	Winter Survival 2003	Winter Survival 2yr 1/	Winter Survival 3yr 3/	Fall Stand	50% Bloom	Maturity 4/	Plant Height 5/	Lodging	Test Weight	Total Oil
	lb/ac	lb/ac	lb/ac	%	%	%	%	date	date	in.	%	lb/bu	%
Jetton	1343 *	1368 *	1622 *	100 *	100 *	84 *	100	4/29	6/29 l	43	33	48.1	40.8 *
Explus	1336 *	-----	-----	100 *	---	---	100	4/29	6/20 e	43	87	48.5 *	38.4
Banjo	1287 *	1552 *	-----	100 *	100 *	---	100	4/28	6/20 e	42 s	87	49.1 *	40.3 *
GT-Wichita	1281 *	-----	-----	100 *	---	---	100	4/30	6/23	44	57	49.1 *	39.4
VSX-1	1262 *	1395 *	1588 *	97 *	98 *	---	100	4/29	6/25	37 s	57	48.5 *	41.9 *
AR91022-59-L4	1107 *	1295 *	1587 *	100 *	90	84 *	100	4/30	6/24	46 t	73	48.1	38.6
KS8227	1103 *	1365 *	-----	100 *	100 *	---	100	5/1	6/24	51 t	83	48.8 *	40.5 *
Sumner	1051 *	1273	1689 *	97 *	95 *	---	100	4/30	6/20 e	41 s	70	49.1 *	39.4
GT-Abilene	1031 *	-----	-----	97 *	---	---	100	5/1	6/22	45	60	48.6 *	38.4
CWH 042	1022 *	-----	-----	100 *	---	---	100	4/29	6/22 e	41 s	80	49.6 *	38.0
KS7436	1014 *	1276 *	1580 *	100 *	100 *	---	100	4/30	6/24	47 t	73	48.2	40.7 *
KS8200	1010 *	1357 *	-----	100 *	100 *	---	100	5/1	6/24	46 t	67	48.6 *	41.3 *
Abilene	1009 *	1247	1592 *	90	95 *	85 *	100	5/1	6/22 e	45	90	48.5 *	37.6
GT-Plainsman	988 *	-----	-----	93	---	---	93	5/5	6/29 l	47 t	57	48.5 *	38.5
AR91023-63-L5	965 *	1345 *	1664 *	100 *	92 *	---	100	4/30	6/24	43	63	48.2	40.3 *
AR90016-PR377	958 *	-----	-----	100 *	---	---	100	5/1	6/24	41 s	53	47.6	41.3 *
Plainsman	943 *	1068	1302	87	75	66	97	4/25	6/28 l	48 t	77	48.4 *	38.1
Extra	921	-----	-----	100 *	---	---	100	4/30	6/23	45	77	49.2 *	40.2
KS9198	921	-----	-----	97 *	---	---	100	4/30	6/21 e	44	70	49.4 *	39.3
AR91019-50-E2	872	-----	-----	100 *	---	---	93	5/1	6/23	45	63	47.5	40.2
KS8073	820	-----	-----	100 *	---	---	100	5/2	6/25	50 t	63	47.9	40.4 *
Wichita	809	1330 *	1667 *	100 *	100 *	94 *	100	4/30	6/22 e	39 s	77	48.6 *	40.1
KS9012	798	-----	-----	100 *	---	---	100	4/30	6/21 e	49 t	83	49.0 *	40.1
KS8367	789	-----	-----	100 *	---	---	100	5/1	6/22	43	70	48.0	39.6
Ceres	767	1032	1348	93	93 *	84 *	100	5/2	6/22	42 s	67	47.4	40.8 *
Casino	760	1147	1487 *	100 *	100 *	84 *	100	5/1	6/24	45	63	47.5	38.6
Celsius	730	1078	-----	100 *	100 *	---	100	5/3	6/26	45	87	44.7	38.9
KS8285	711	-----	-----	100 *	---	---	100	5/2	6/22	44	90	48.4	39.7
AR91016-41-L2	689	1149	1429	100 *	77	83 *	100	5/1	6/23	38 s	80	46.4	38.3
USI2002	583	-----	-----	100 *	---	---	93	5/1	6/24	41 s	87	47.3	39.5
Mean	963	1212	1485	98	95	84	99	4/30	6/23	44	71	48.2	39.6
LSD (0.05)	416	277	212	5	9	13	NS	NS	2	5	NS	1.2	1.6
CV (%)	26.5	21.0	17.1	3.4	7.4	14.2	3.9	2.6	0.8	7.4	26.5	1.6	1.9

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2001, 2002, and 2003.

3/ 3yr means include data from 2000, 2002, and 2003.

4/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

5/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

COLUMBIA, MO

COOPERATORS: Tim Reinbolt and Shawn Conley, University of Missouri

PREVIOUS CROP: wheat
PLANTING DATE: September 10, 2002
HARVEST DATE: June 17, 2003

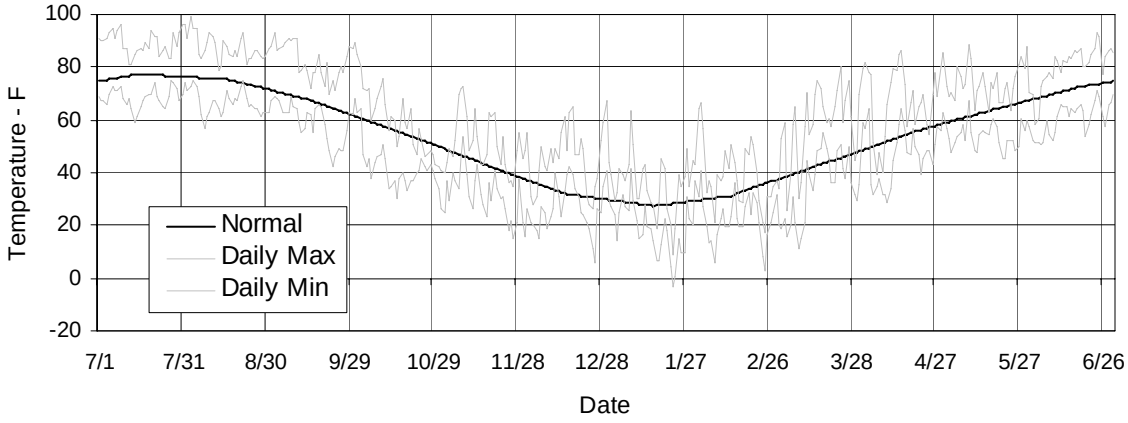
PESTICIDES:
Prowl, September 9

SOIL TEST:
not available

FERTILIZATION
Fall: 50–40–50 at planting
Spring: 56–0–0

SEEDING RATE: 8 lb/a
ROW SPACING: 7.5 in
IRRIGATION: none
SOIL TYPE: Mexico silt loam

ELEVATION: 870 ft
LATITUDE: 38° 32' N
AVG. WINTER SURVIVAL: 78%
AVERAGE YIELD: 771 lb/a



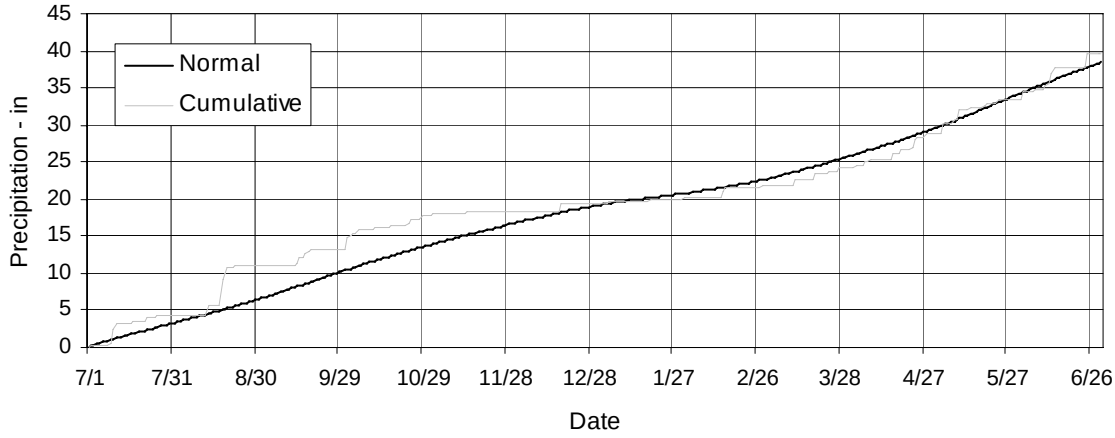


Table 14. Results from the 2003 National Winter Canola Variety Trial, Columbia, MO.

	Yield			Winter Survival			Fall	50%	Matur-	Plant	Lodg-		Total
Line	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Bloom 3/	ity 3/	Height 4/	ing	note	Oil
	lb/a			%			%	date	date	in	%		%
VSX-1	1691 *	1895 *	1275 *	82	78	54	95 *	4/10	6/12 l	33 s	0 *	0	43.5 *
Jetton	1431 *	1800 *	1226 *	85 *	80	65	93 *	4/11	6/15 l	31 s	0 *	0	41.6 *
AR90016-PR377	1284 *	1263	863	83 *	81	56	95 *	4/11	6/1 e	40 t	25 *	3	41.5 *
Ceres	1220 *	1509 *	1138 *	83 *	86 *	59	90 *	4/13	6/3	36	17 *	8	42.6 *
KS8200	1100	1610 *	-----	78	81	---	92 *	4/13	6/10 l	40 t	47	7	41.3 *
G02001	959	-----	-----	72	---	---	78	4/11	6/12 l	36	20 *	0	43.1 *
Extra	946	-----	-----	82	---	---	88 *	4/10	6/4	41 t	12 *	0	41.1 *
GT-Plainsman	944	-----	-----	73	---	---	88 *	4/19 l	6/2	37	27 *	3	41.6 *
Plainsman	870	1206	915	60	67	64	80	4/17 l	6/9 l	40 t	27 *	5	40.7 *
Sumner	857	1068	818	77	78	65	83	4/10 e	6/1 e	40 t	33	2	41.5 *
AR91019-50-E2	836	-----	-----	83 *	---	---	88 *	4/14	6/6 l	39 t	28 *	12	39.9
KS8073	815	-----	-----	78	---	---	90 *	4/15	6/7 l	39 t	40	7	41.2 *
KS7436	802	1519 *	1181 *	83 *	86 *	79 *	93 *	4/11	6/5	38 t	25 *	2	42.7 *
KS8227	800	1459	-----	78	81	---	90 *	4/13	6/7 l	41 t	40	5	42.5 *
Abilene	798	1127	895	77	77	66	90 *	4/11	5/26 e	37	57	5	40.2
Explus	787	-----	-----	83 *	---	---	95 *	4/10	5/31 e	39 t	60	2	38.8
AR91022-59-L4	777	950	724	80	74	63	88 *	4/13	6/3	39 t	43	7	41.0 *
G96038A.3	726	-----	-----	75	---	---	88 *	4/12	6/6 l	42 t	42	7	42.4 *
GT-Abilene	726	-----	-----	75	---	---	82	4/11	5/29 e	35 s	50	10	40.0
G96038A.10	692	-----	-----	68	---	---	78	4/12	6/3	41 t	40	15	41.3 *
AR91023-63-L5	688	850	-----	80	71	---	92 *	4/11	6/3	35 s	40	7	41.8 *
CWH 042	667	-----	-----	78	---	---	90 *	4/10 e	5/29 e	35 s	40	0	38.6
KS9012	642	-----	-----	77	---	---	88 *	4/13	5/30 e	39 t	55	22	41.4 *
KS8285	600	-----	-----	77	---	---	85 *	4/15	6/6 l	38 t	57	13	40.4
USI2002	598	-----	-----	85 *	---	---	93 *	4/12	6/5	36	53	12	37.9
Celsius	595	1391	-----	77	79	---	90 *	4/17 l	5/30 e	32 s	73	17	39.4
GT-Wichita	585	-----	-----	80	---	---	87 *	4/12	6/2 e	37	50	2	41.1 *
Casino	553	1115	809	87 *	83 *	66	90 *	4/16	6/4	38 t	53	10	40.3
KS9198	469	-----	-----	78	---	---	90 *	4/10	5/28 e	36	67	13	39.3
G96200E	460	377	253	70	58	39	87 *	4/10	5/27 e	36	88	23	36.9
AR91016-41-L2	431	736	539	80	72	50	93 *	4/12	5/31 e	38 t	57	2	41.7 *
KS8367	431	751	-----	77	79	---	88 *	4/14	6/5	39 t	67	7	41.1 *
Wichita	412	890	696	77	78	62	92 *	4/11	6/3	38 t	33	3	39.7
Banjo	408	1281	-----	90 *	91 *	---	92 *	4/10	6/2 e	37	53	8	40.3
G96202	401	-----	-----	75	---	---	88 *	4/9 e	5/24 e	32 s	90	10	39.7
Mean	771	1154	841	78	77	60	90	4/12	6/3	37	43	7	40.8
LSD (0.05)	483	393	325	8	9	9	10	3	9	5	32	NS	0.0
CV (%)	38.5	31.9	53.5	6.0	9.6	26.4	6.7	1.5	3.7	7.6	45.8	134.7	0.5

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2001, 2002, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

NOVELTY, MO

COOPERATORS: Randy Smoot and Shawn Conley, University of Missouri

PREVIOUS CROP: wheat
PLANTING DATE: September 2, 2002
HARVEST DATE: July 3, 2003

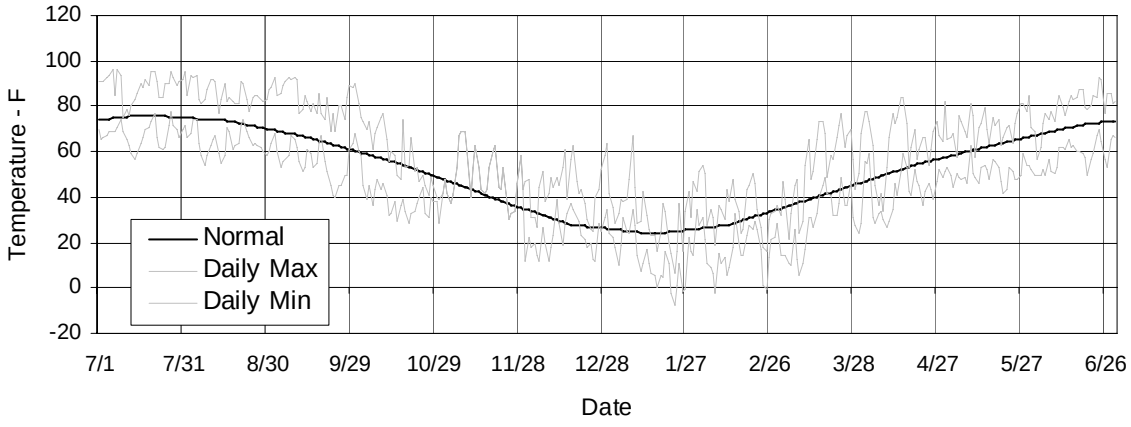
PESTICIDES:
Treflan, 1 qt/a

SOIL TEST:
not available

FERTILIZATION
Fall: 40–0–0
Spring: 50–0–0

SEEDING RATE: 8 lb/a
ROW SPACING: 7.5 in
IRRIGATION: none
SOIL TYPE: Putnam silt loam

ELEVATION: 823 ft
LATITUDE: 40° 1' N
AVG. WINTER SURVIVAL: 84%
AVERAGE YIELD: 1823 lb/a



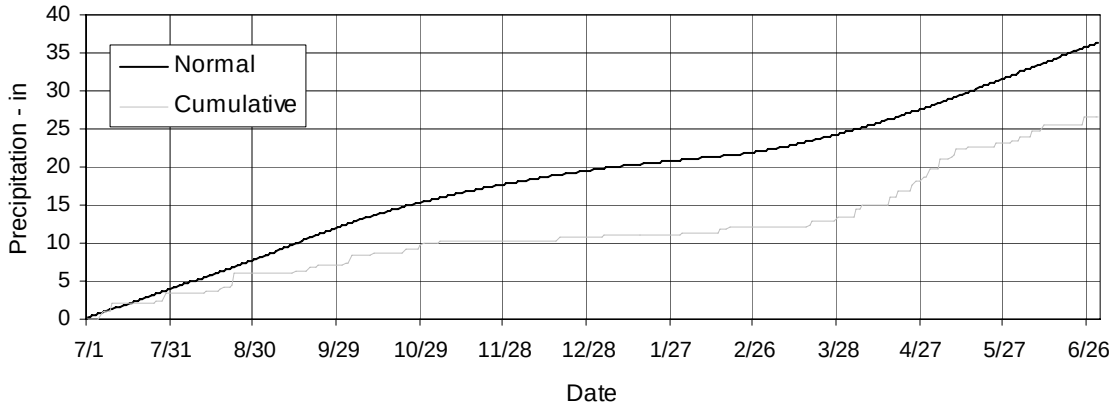


Table 15. Results from the 2003 National Winter Canola Variety Trial, Novelty, MO.

Line	Yield			Winter Survival			Fall	50%	Matur-	Plant	Lodg-	Total
	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Bloom 3/	ity 3/	Height 4/	ing	Oil
	lb/a			%			%	date	date	in	%	%
VSX-1	3093 *	2414 *	-----	87 *	83 *	---	85	4/23 e	6/26 l	42 st	0 *	42.6 *
Jetton	2906 *	2360 *	2659 *	90 *	83 *	89 *	93 *	4/22 e	6/26 l	43 st	0 *	41.6 *
AR90016-PR377	2387	-----	-----	83	---	---	88 *	4/26	6/26 l	46 t	0 *	40.0
Banjo	2280	2228 *	-----	85	83 *	---	87 *	4/22 e	6/22 e	43 st	0 *	40.2
GT-Wichita	2231	-----	-----	90 *	---	---	83	4/24 e	6/25 l	43 st	0 *	40.4
Casino	2175	1852	2167	93 *	84 *	89 *	92 *	4/26	6/26 l	45 t	0 *	39.9
KS8200	2096	2011	-----	92 *	83 *	---	87 *	4/24 e	6/25 l	45 t	0 *	41.4 *
Celsius	2068	1585	-----	85	78	---	88 *	5/2	6/26 l	44 t	0 *	40.5
Wichita	1956	1802	2204	85	80 *	87 *	85	4/25 e	6/24	39 s	7 *	39.5
Ceres	1951	1930	2044	82	73	80	83	4/30	6/26 l	45 t	3 *	40.6
Explus	1929	-----	-----	88 *	---	---	92 *	4/22 e	6/22 e	43 st	3 *	39.5
KS7436	1846	1790	-----	87 *	83 *	---	87 *	4/26	6/25 l	46 t	0 *	41.1 *
KS8227	1842	1847	-----	80	78	---	88 *	4/27	6/25 l	45 t	0 *	42.2 *
Sumner	1829	1665	-----	83	77	---	85	4/22 e	6/20 e	42 st	0 *	40.8
AR91023-63-L5	1816	1624	-----	82	77	---	87 *	4/26	6/24	41 s	3 *	39.9
AR91016-41-L2	1783	1629	-----	83	73	---	85	4/27	6/24	44 t	0 *	40.2
GT-Abilene	1710	-----	-----	85	---	---	87 *	4/25 e	6/21 e	44 t	0 *	38.6
KS9012	1674	-----	-----	82	---	---	75	4/26	6/24	41 s	13	40.0
CWH 042	1640	-----	-----	90 *	---	---	88 *	4/23 e	6/20 e	41 s	10	38.7
KS8073	1631	-----	-----	83	---	---	82	4/29	6/26 l	45 t	0 *	40.3
AR91019-50-E2	1628	-----	-----	85	---	---	88 *	4/28	6/26 l	43 st	0 *	39.8
AR91022-59-L4	1581	1442	1866	80	73	80	83	4/26	6/25 l	44 t	3 *	40.7
Extra	1575	-----	-----	82	---	---	90 *	4/26	6/26 l	45 t	0 *	39.0
Abilene	1533	1684	2071	82	81 *	86 *	85	4/26	6/23	42 st	0 *	37.4
KS8367	1518	1282	-----	85	78 *	---	80	4/27	6/23	41 s	2 *	40.1
Plainsman	1404	1408	1840	73	69	79	83	5/7 l	6/25 l	45 t	0 *	38.0
KS9198	1229	-----	-----	83	---	---	87 *	4/27	6/22 e	40 s	7 *	38.4
GT-Plainsman	1159	-----	-----	78	---	---	87 *	5/1	6/28 l	43 st	0 *	39.4
USI2002	1121	-----	-----	78	---	---	90 *	4/26	6/22 e	41 s	3 *	38.6
KS8285	1097	-----	-----	83	---	---	83	4/28	6/25 l	41 s	10	39.4
Mean	1823	1694	1990	84	79	84	86	4/26	6/24	43	2	39.9
LSD (0.05)	502	374	309	8	7	6	8	4	3	4	8	1.5
CV (%)	16.9	19.3	17.3	5.6	7.2	7.1	5.4	2.0	1.1	5.8	236	1.8

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

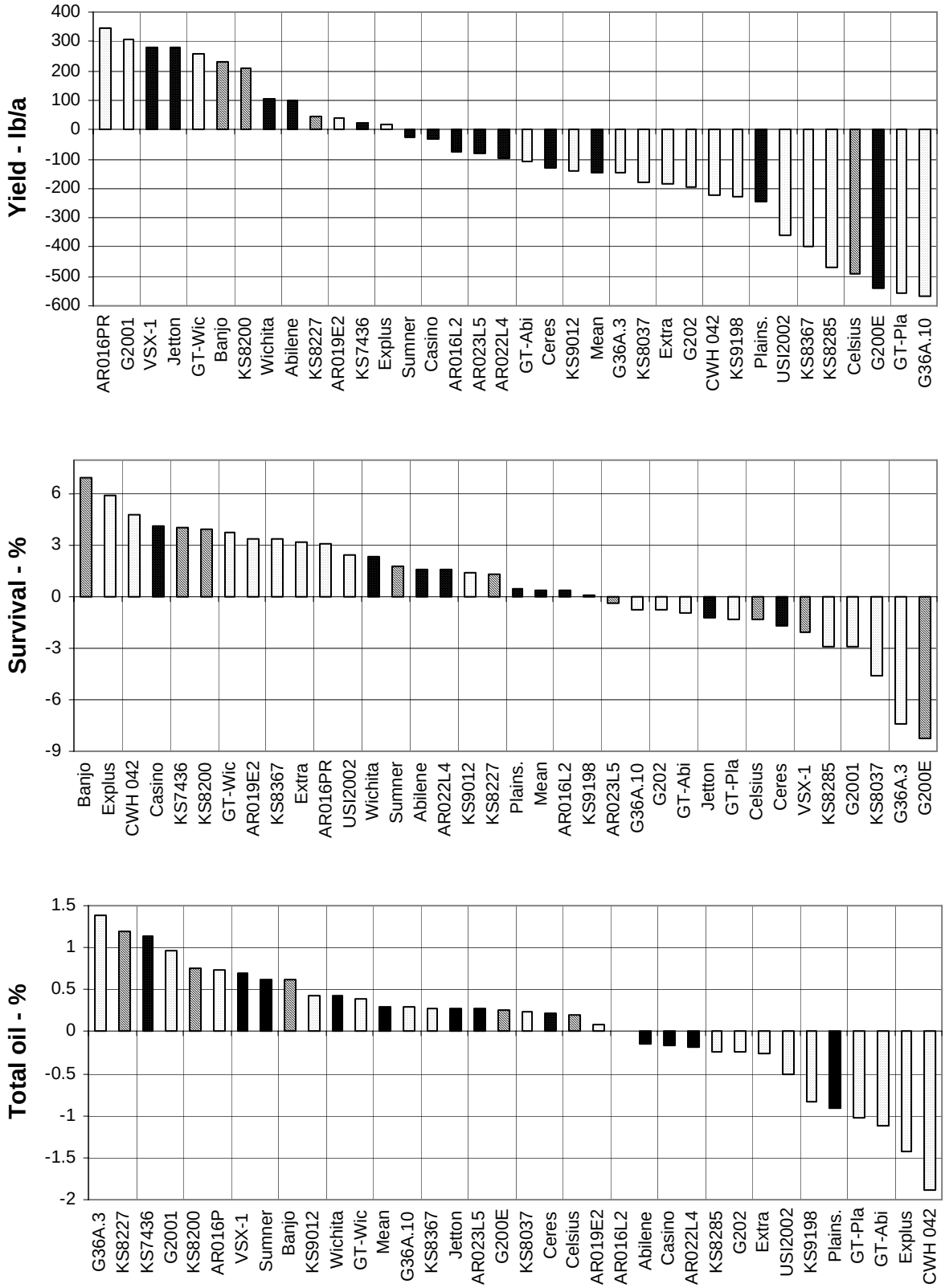
1/ 2yr means include data from 2002 and 2003.

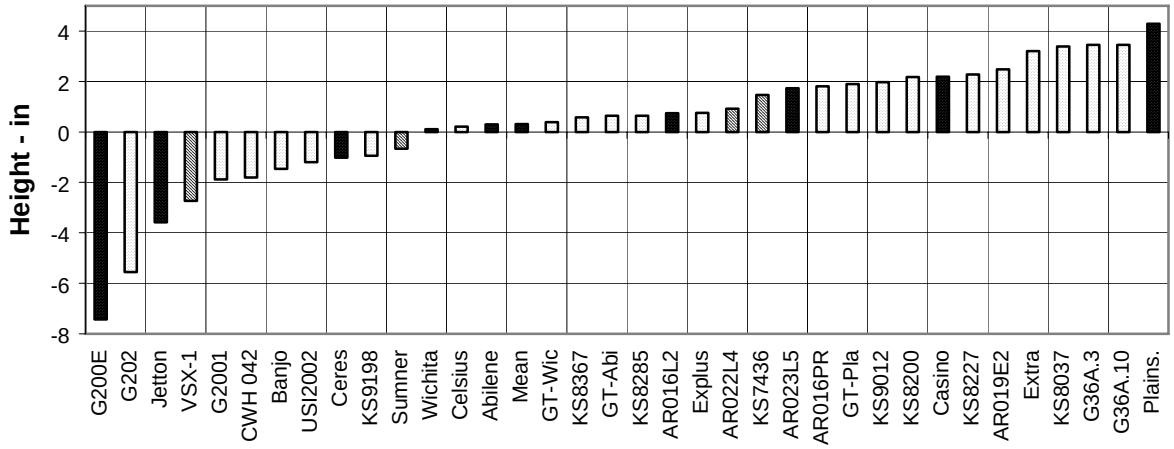
2/ 3yr means include data from 2000, 2002, and 2003.

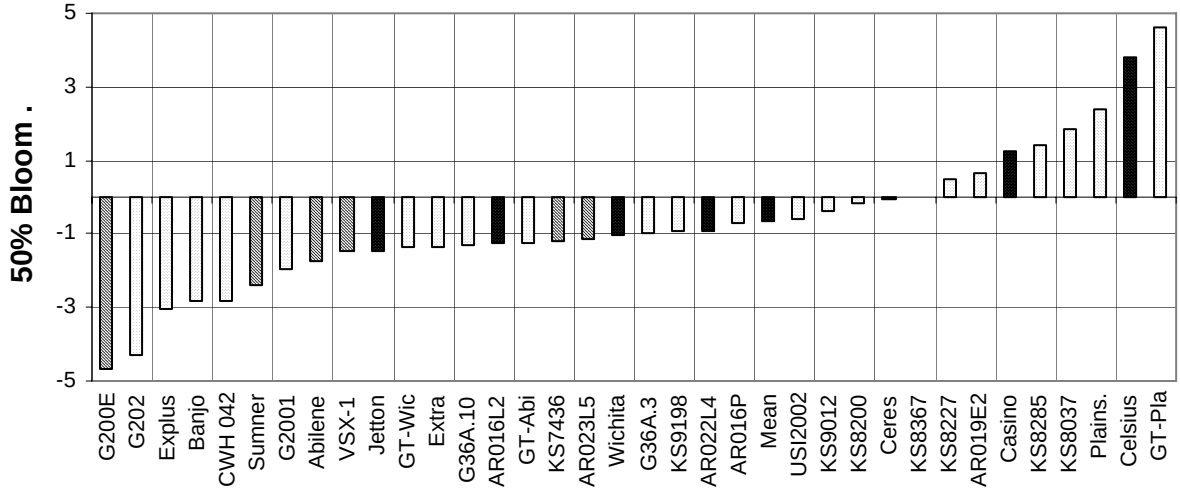
3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

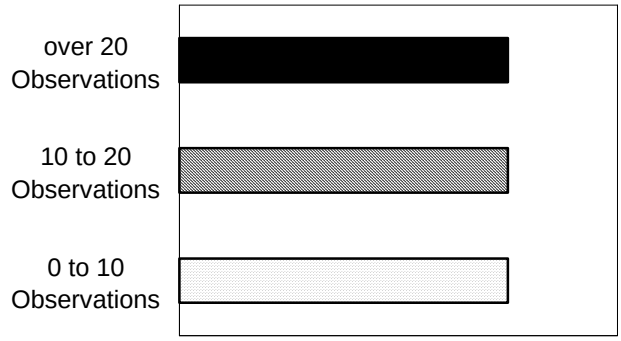
Figure 2. Midwest Winter Canola Summary, 1996-2003.







Note: Values are averages of the differences between each cultivar and the mean of Jetton, Ceres, Plainsman, and Wichita for yield (lb/a), winter survival (%), total oil content (%), plant height (inches), and 50% bloom date (days). The number of observations for each trait is represented by the different colors of the bars (as shown at the right).



WALSH, CO

COOPERATORS: Kevin Larson and Jerry Johnson, Colorado State University

PREVIOUS CROP: wheat
PLANTING DATE: September 6, 2002
HARVEST DATE: June 27, 2003

PESTICIDES:
Treflan, 1.5 pt/a

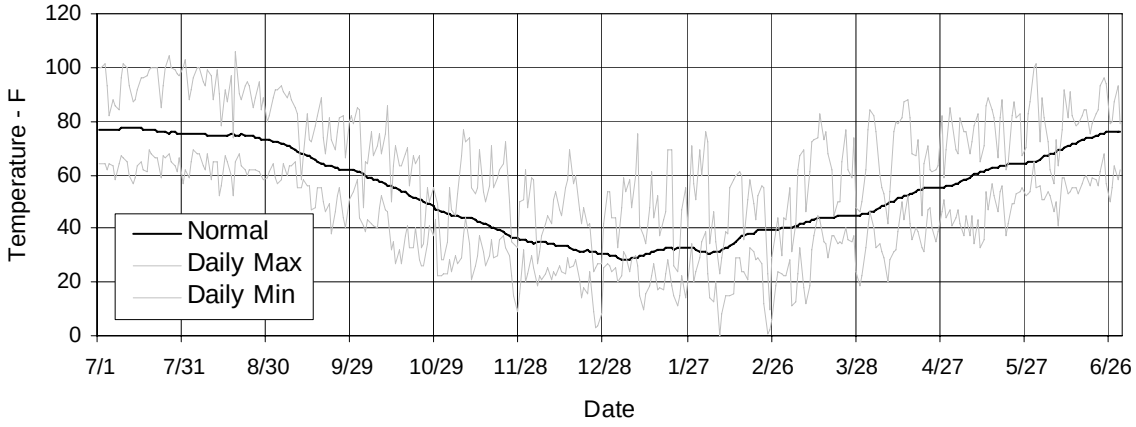
SOIL TEST:
P = 2 ppm; K = 395 ppm

FERTILIZATION
Fall: 75–0–0
Spring: 50–0–0

SEEDING RATE: 5 lb/a
ROW SPACING: 12 in
IRRIGATION: once fall, once spring
8 to 10 in total
SOIL TYPE: Richfield silty clay

ELEVATION: 4300 ft
LATITUDE: 37° 23" N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 688 lb/a

COMMENTS:
Hail damage from a June 3 storm reduced seed yield by 50% to 70%.



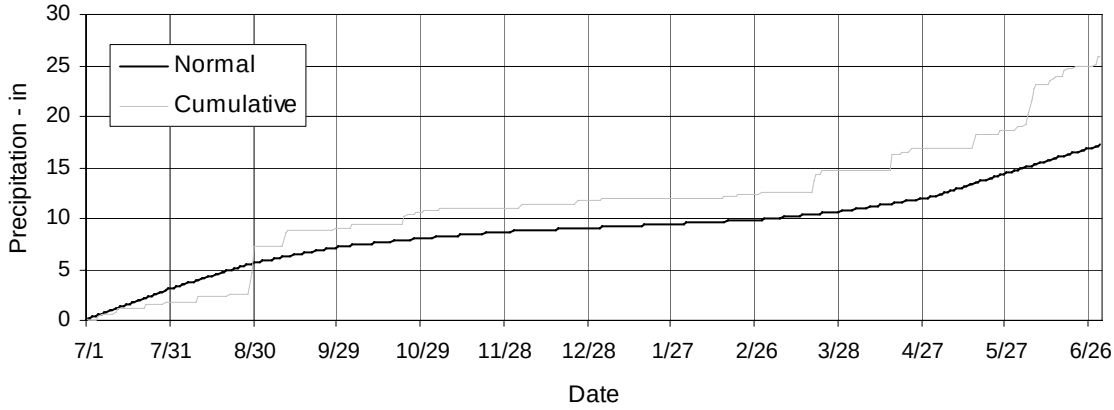


Table 16. Results from the 2003 National Winter Canola Variety Trial, Walsh, CO.

	Yield			Winter Survival			Fall	50%	Plant	Total
Line	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Bloom	Height	Oil
	lb/ac			%			%	date	in.	%
Casino	890 *	785 *	1046	100	96 *	97 *	93 *	4/25	43	----
Celius	870 *	900 *	-----	100	95 *	----	98 *	4/26	43	----
Jetton	860 *	800 *	933	100	95 *	84	95 *	4/20	37	----
Banjo	840 *	825 *	-----	100	89	----	92 *	4/23	41	----
GT-Plainsman	820 *	-----	-----	100	----	----	82	4/26	39	----
AR91022-59-L4	810 *	760 *	-----	100	94	----	97 *	4/23	39	----
GT-Wichita	750 *	-----	-----	100	----	----	95 *	4/21	36	----
AR91019-50-E2	740 *	-----	-----	100	----	----	98 *	4/24	42	----
VSX-1	730 *	785 *	-----	100	94	----	87	4/21	36	----
AR90016-PR377	720 *	-----	-----	100	----	----	100 *	4/24	40	----
KS7436	710 *	785 *	-----	100	99 *	----	98 *	4/23	36	----
Wichita	700 *	695	1135	100	98 *	98 *	95 *	4/24	38	----
Plainsman	690 *	770 *	1131	100	97 *	97 *	77	4/26	42	----
AR91023-63-L5	670 *	660	-----	100	94	----	98 *	4/22	43	----
Ceres	650 *	615	1130	100	88	77	65	4/26	40	----
Abilene	650 *	710	-----	100	93	----	77	4/22	37	----
KS8200	640 *	655	-----	100	98 *	----	95 *	4/22	37	----
KS9198	640 *	-----	-----	100	----	----	87	4/17	39	----
KS8227	600	695	-----	100	98 *	----	98 *	4/23	37	----
KS8073	600	-----	-----	100	----	----	95 *	4/25	43	----
AR91016-41-L2	590	645	-----	100	96 *	----	95 *	4/25	44	----
KS8285	590	-----	-----	100	----	----	93 *	4/24	39	----
Sumner	570	605	-----	100	96 *	----	72	4/15	37	----
KS8367	570	680	-----	100	97 *	----	90 *	4/23	39	----
USI2002	570	-----	-----	100	----	----	93 *	4/22	38	----
GT-Abilene	560	-----	-----	100	----	----	90 *	4/22	36	----
KS9012	520	-----	-----	100	----	----	88 *	4/22	42	----
Mean	688	714	1090	100	95	93	91	4/22	39	----
LSD (0.05)	256	184	NS	NS	4	8	13	----	----	----
CV %	35.6	35.8	31.5	0.0	15.0	15.3	----	----	----	----

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 1997, 2002, and 2003.

COLBY, KS

COOPERATORS: Pat Evans and Rob Aiken, KSU Northwest Res.-Ext. Center

PREVIOUS CROP: fallow
PLANTING DATE: August 23, 2003
REPLANT: September 3, 2003
HARVEST DATE: July 8, 2003

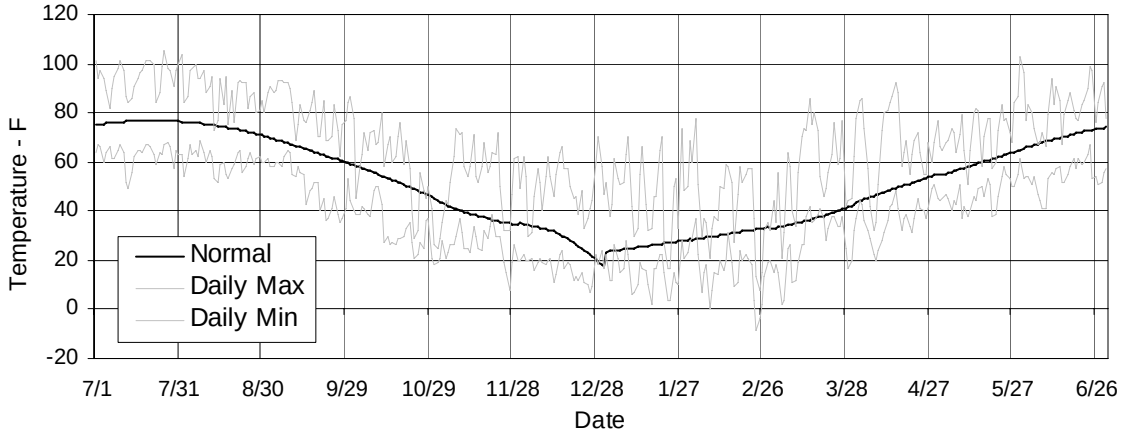
PESTICIDES:
Treflan

SOIL TEST
not available

FERTILIZATION
Fall: 70–30–0 on Aug 23
Spring: 0–0–0

SEEDING RATE: 5 lb/a
ROW SPACING: 12 in
IRRIGATION: 1.75 in June
SOIL TYPE: Keith silt loam

ELEVATION: 3170 ft
LATITUDE: 39° 29' N
AVG. WINTER SURVIVAL: 98%
AVERAGE YIELD: 1170 lb/a



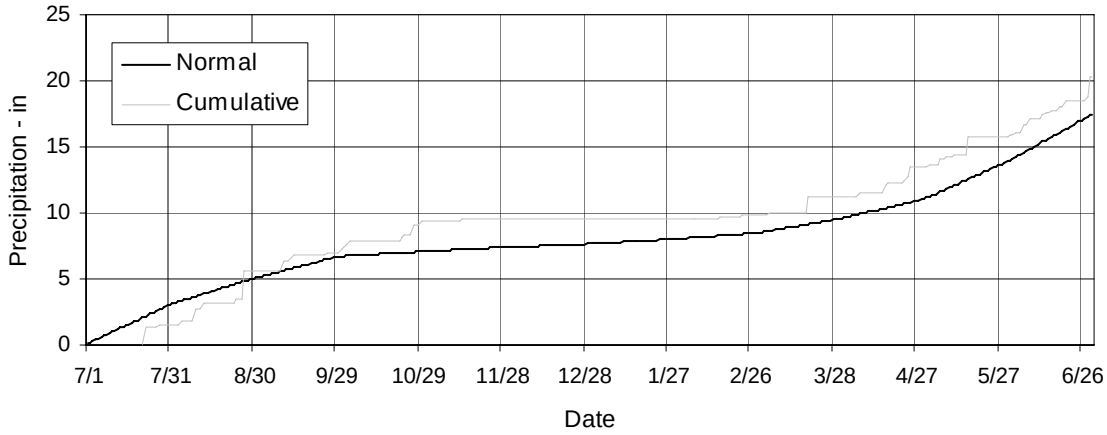


Table 17. Results from the 2003 National Winter Canola Variety Trial, Colby, KS.

	Yield			Winter Survival			Fall	Percent	Plant	Shatt-	Test	Total
Line	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Bloom 3/	Height 4/	ering	Weight	Oil
	----------lb/a----------			----------%----------			%	on 4/24	in	%	lb/bu	%
KS8200 ‡	1966 *	-----	-----	99 *	----	----	33	32	45	12	46.2 *	35.9
KS8367 ‡	1779 *	-----	-----	99 *	----	----	33	38	50	18	48.0 *	36.4
KS7436 ‡	1761 *	-----	-----	99 *	----	----	40	53 e	49	13	49.0 *	37.2
KS8227	1673 *	-----	-----	99 *	----	----	47	40	46	13	44.3	36.5
Banjo ‡	1637 *	-----	-----	99 *	----	----	33	75 e	47	20	48.6 *	34.3
AR91019-50-E2	1621 *	-----	-----	99 *	----	----	53	42	48	18	45.9 *	35.3
Jetton	1552 *	1358 *	1510 *	99 *	100 *	98 *	40	42	43	5	47.6 *	34.5
KS9198 ‡	1445 *	-----	-----	99 *	----	----	27	57 e	42	10	47.7 *	36.0
AR90016-PR377	1421 *	-----	-----	98 *	----	----	47	62 e	46	20	45.0	35.6
GT-Wichita	1397 *	-----	-----	99 *	----	----	47	65 e	44	18	48.3 *	35.3
KS8285	1273 *	-----	-----	98 *	----	----	33	27	47	17	46.6 *	35.8
KS9012	1246 *	-----	-----	99 *	----	----	20	27	41	10	44.9	35.6
AR91022-59-L4	1236 *	1107 *	1122	99 *	100 *	100 *	33	48	49	27	46.6 *	35.5
VSX-1 ‡	1203	-----	-----	99 *	----	----	20	50 e	43	8	46.5 *	35.4
Casino	1186	1268 *	1477 *	98 *	99 *	99 *	27	13 l	48	23	43.9	35.1
GT-Abilene	1170	-----	-----	97 *	----	----	33	68 e	42	22	45.7	34.0
CWH 042 ‡	1153	-----	-----	98 *	----	----	20	40	44	5	47.7 *	34.8
USI2002	1108	-----	-----	99 *	----	----	33	30	44	20	45.4	35.8
AR91023-63-L5	1097	-----	-----	99 *	----	----	40	35	45	17	44.7	35.4
AR91016-41-L2	1095	1186 *	1241 *	98 *	99 *	99 *	33	35	47	23	45.9 *	35.5
Wichita ‡	969	1029 *	1222	99 *	100 *	100 *	33	35	41	14	47.4 *	34.3
Explus	910	-----	-----	98 *	----	----	27	30	45	7	46.1 *	34.6
Sumner	749	-----	-----	99 *	----	----	33	25 l	40	22	47.4 *	34.3
Celsius ‡	745	-----	-----	99 *	----	----	27	0 l	47	13	43.4	35.4
Extra	720	-----	-----	98 *	----	----	40	20 l	46	12	48.1 *	33.8
KS8073	674	-----	-----	98 *	----	----	27	12 l	46	7	44.7	34.3
GT-Plainsman ‡	652	-----	-----	99 *	----	----	13	30	45	10	46.6 *	32.7
Abilene	582	982	-----	96	98 *	----	20	38	41	4	45.1	33.5
Ceres	558	843	1073	90	95	96	20	37	43	18	46.8 *	30.9
Plainsman ‡	508	806	1149	99 *	100 *	100 *	20	0 l	45	5	46.2 *	34.6
Mean	1170	1095	1243	98	99	99	32	37	45	14	46.3	34.9
LSD (0.05)	737	374	285	2	2	2	NS	2	NS	NS	2.0	NS
CV %	34.2	25.5	22.7	2.1	2.1	2.0	42.3	39.9	7.2	65.1	3.2	0.2

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2000 and 2003.

2/ 3yr means include data from 1999, 2000, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

‡ A bad spot in the test led to the calculation of missing plot values for one replication of the eleven lines marked.

GARDEN CITY, KS

COOPERATOR: Merle Witt,
KSU Southwest Res.-Ext. Center

PREVIOUS CROP: fallow
PLANTING DATE: September 6, 2002
HARVEST DATE: July 1, 2003

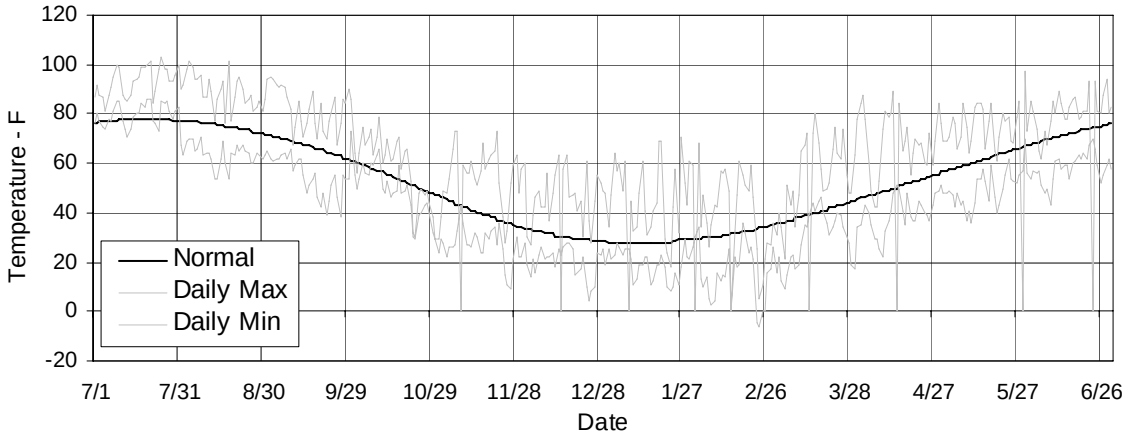
PESTICIDES:
none

SOIL TEST
not available

FERTILIZATION
Fall: 0–0–0
Spring: 0–0–0

SEEDING RATE: 9 lb/a
ROW SPACING: 12 in
IRRIGATION: none
SOIL TYPE: Keith silt loam

ELEVATION: 2874 ft
LATITUDE: 37° 55' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 1635 lb/a



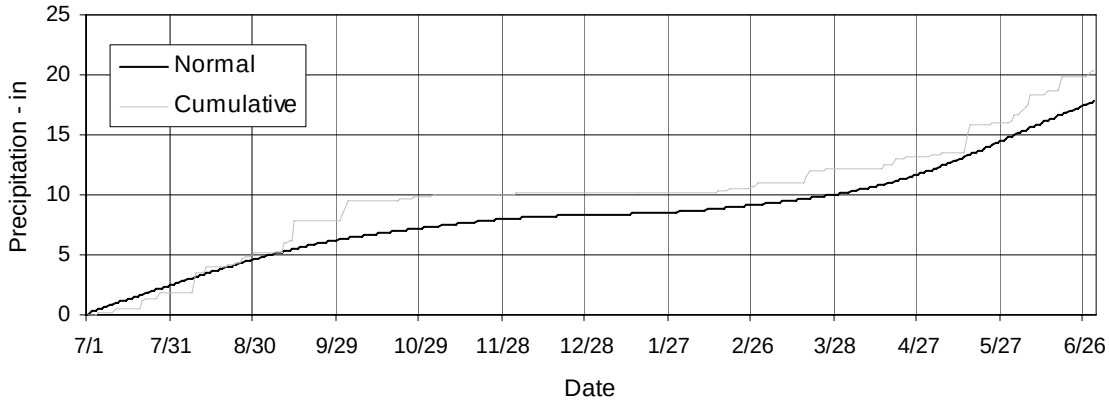


Table 18. Results from the 2003 National Winter Canola Variety Trial, Garden City, KS.

Line	Yield			Winter Survival			Fall Stand	Plant Height	Lodging	Total Oil
	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 3/				
	lb/a			%			%	in	%	%
KS8200	2178 *	-----	-----	100	---	---	100	52	0	36.0
AR91023-63-L5	2017 *	-----	-----	100	---	---	100	49	0	37.1
KS8227	2017 *	-----	-----	100	---	---	100	49	0	36.9
Banjo	1936 *	-----	-----	100	---	---	100	48	0	36.4
Explus	1896 *	-----	-----	100	---	---	100	48	0	36.3
Jetton	1855 *	1362 *	1237 *	100	100	82	100	47	0	34.1
AR90016-PR377	1855 *	-----	-----	100	---	---	100	48	0	36.4
CWH 042	1855 *	-----	-----	100	---	---	100	48	0	34.2
KS7436	1855 *	-----	-----	100	---	---	100	50	0	37.8
Ceres	1815 *	1146	1013	100	100	81	100	50	0	36.8
VSX-1	1775 *	-----	-----	100	---	---	100	48	0	35.5
AR91016-41-L2	1694	1527 *	-----	100	100	91 *	100	49	0	36.4
Extra	1694	-----	-----	100	---	---	100	50	0	36.1
AR91019-50-E2	1654	-----	-----	100	---	---	100	49	0	36.6
KS9012	1654	-----	-----	100	---	---	100	50	0	36.2
KS9198	1613	-----	-----	100	---	---	100	49	0	36.6
AR91022-59-L4	1573	1250 *	1147 *	100	100	94 *	100	49	0	36.3
KS8073	1573	-----	-----	100	---	---	100	50	5	35.1
Sumner	1573	-----	-----	100	---	---	100	48	0	36.3
Plainsman	1533	1230	1065 *	100	100	91 *	100	49	0	35.8
GT-Abilene	1533	-----	-----	100	---	---	100	48	0	34.6
KS8367	1533	-----	-----	100	---	---	100	48	0	35.4
Wichita	1412	1099	1132 *	100	100	91 *	100	48	0	34.3
GT-Wichita	1412	-----	-----	100	---	---	100	47	0	35.9
Casino	1331	995	1002	100	100	88 *	100	51	0	36.4
GT-Plainsman	1331	-----	-----	100	---	---	100	50	5	35.5
Abilene	1250	1047	-----	100	100	---	100	49	0	35.4
KS8285	1250	-----	-----	100	---	---	100	48	0	37.3
USI2002	1210	-----	-----	100	---	---	100	50	0	36.8
Celsius	1170	-----	-----	100	---	---	100	50	0	36.7
Mean	1635	1142	1040	100	100	88	100	49	0	36.0
LSD (0.05)	474	281	198	NS	NS	8	NS	NS	NS	NS
CV %	14.2	23.9	20.8	---	---	22.9	---	3.0	538	0.1

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2000 and 2003.

2/ 3yr means include data from 1998, 2000, and 2003.

3/ 3yr means include data from 1999, 2000, and 2003.

HUTCHINSON, KS

COOPERATOR: William Heer, South Central Exp. Field, Kansas State University

PREVIOUS CROP: wheat
PLANTING DATE: September 17, 2002
HARVEST DATE: June 23, 2003

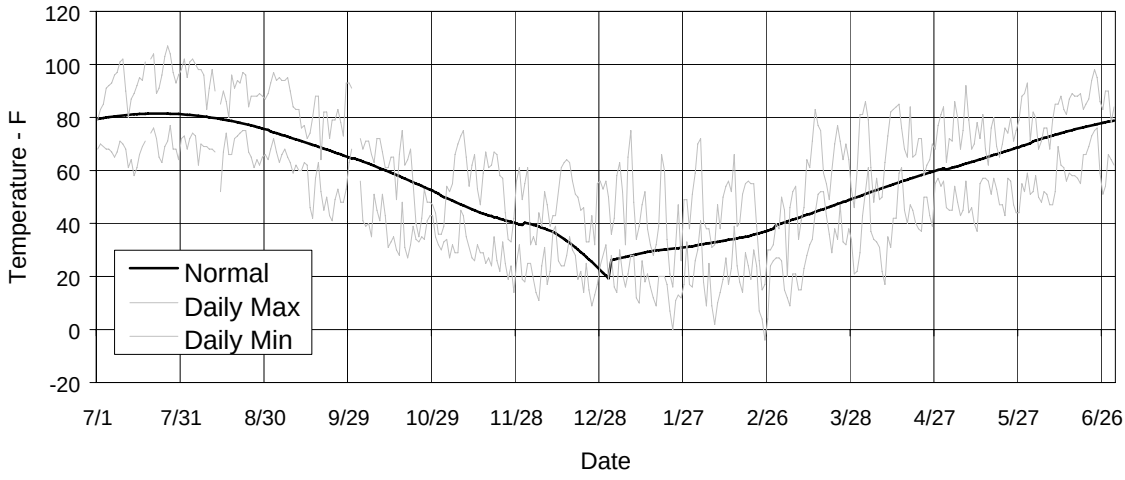
PESTICIDES:
Treflan, 2 pt/a, preplant
Pounce for army cutworms

SOIL TEST
not available

FERTILIZATION
Fall: 25–40–0
Spring: 50–0–0

SEEDING RATE: 5 lb/a
ROW SPACING: 8 in
IRRIGATION: none
SOIL TYPE: Ost silt loam

ELEVATION: 1570 ft
LATITUDE: 37° 56' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 2967 lb/a



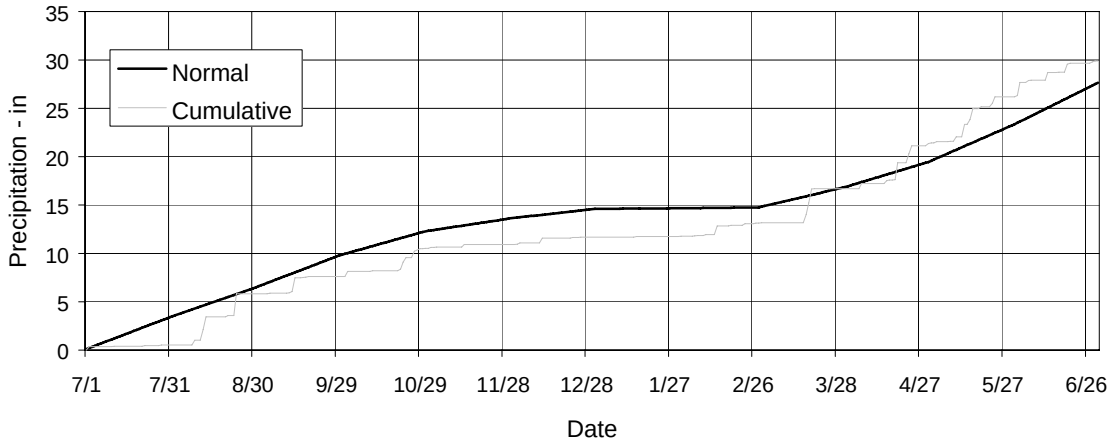


Table 19. Results from the 2003 National Winter Canola Variety Trial, Hutchinson, KS.

	Yield			Winter Survival			Fall	50%	Plant	Lodg-	Shat-	Test	Total
Line	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Bloom 3/	Height 4/	ing	tering	Weight	Oil
	----------lb/a----------			----------%----------			%	date	in	%	%	lb/bu	%
Explus	4012 *	----	----	100	---	---	97 *	4/12 e	52	17 *	3	50.8	39.0
Jetton	3690 *	2002 *	2030 *	100	69	79	97 *	4/12	49 s	0 *	3	50.8	39.3
Abilene	3605 *	2067 *	2177 *	100	83	88	80	4/14	51	0 *	8	50.8	37.9
VSX-1	3505 *	1792 *	----	100	54	---	87	4/13	49 s	0 *	6	50.3	39.2
Wichita	3463 *	2173 *	2158 *	100	83	89 *	87	4/12	51 s	0 *	15	50.6	39.1
GT-Plainsman	3426 *	----	----	100	---	---	90	4/17 l	61 t	0 *	6	50.4	37.3
CWH 042	3340 *	----	----	100	---	---	83	4/14	47 s	0 *	6	51.6 *	38.2
AR91023-63-L5	3331 *	1845 *	----	100	64	---	97 *	4/13	56	0 *	8	51.3 *	38.6
GT-Wichita	3303 *	----	----	100	---	---	100 *	4/12	55	0 *	12	51.4 *	36.2
KS8200	3301 *	2248 *	----	100	99 *	---	97 *	4/14	57	0 *	4	50.6	38.7
G96036A.3	3251	----	----	100	---	---	90	4/15	53	0 *	10	50.7	39.6
Plainsman	3241	2287 *	2224 *	100	98 *	98 *	80	4/18 l	64 t	0 *	4	50.8	37.9
Ceres	3214	1661	1946 *	100	55	70	87	4/15	55	0 *	10	52.1 *	39.0
KS8227	3197	2047 *	----	100	90 *	---	93 *	4/15	55	0 *	7	50.8	39.0
KS7436	3105	2198 *	----	100	90 *	---	97 *	4/13	53	50	5	51.5 *	39.1
Extra	2902	----	----	100	---	---	87	4/12	55	17 *	8	51.5 *	39.0
Sumner	2898	1832 *	----	100	91 *	---	90	4/11 e	51 s	0 *	6	50.5	39.1
KS8367	2875	1951 *	----	100	90 *	---	90	4/14	57	17 *	10	51.3 *	38.9
KS9198	2859	----	----	100	---	---	83	4/13	52	0 *	12	50.7	38.6
AR91022-59-L4	2843	1902 *	1984 *	100	68	78	87	4/14	56	7 *	7	50.9	38.5
Banjo	2774	1884 *	----	100	78	---	97 *	4/13	50 s	17 *	12	52.2 *	39.5
KS8037	2741	----	----	100	---	---	93 *	4/15	55	33	8	50.7	38.7
KS9012	2622	----	----	100	---	---	90	4/13	53	0 *	12	49.7	38.8
Casino	2550	1681	1983 *	100	93 *	95 *	90	4/17 l	55	0 *	11	51.4 *	38.0
G96036A.10	2514	----	----	100	---	---	80	4/15	51	10 *	12	50.7	39.7
GT-Abilene	2500	----	----	100	---	---	100 *	4/13	49 s	33	10	51.0	36.2
AR91016-41-L2	2494	1360	1684	100	53	68	97 *	4/13	52	30 *	10	51.5 *	37.8
Celsius	2409	1542	----	100	78	---	93 *	4/16	51 s	50	7	50.4	38.9
USI2002	2393	----	----	100	---	---	90	4/13	54	33	10	50.9	37.8
AR91019-50-E2	2380	----	----	100	---	---	93 *	4/14	53	23 *	18	50.9	35.7
AR90016-PR377	2127	1250	----	100	63	---	97 *	4/14	53	42	9	50.2	38.1
KS8285	2110	----	----	100	---	---	93 *	4/15	55	20 *	28	50.8	38.8
Mean	2967	1873	2023	100	73	82	91	4/14	54	12	9	50.9	38.4
LSD (0.05)	723	401	296	NS	14	9	8	1	4	32	NS	1.0	NS
CV %	15.1	26.8	22.9	0.0	18.6	12.4	5.7	0.7	4.1	158	77.8	1.3	3.3

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2000, 2002, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

MANHATTAN, KS

COOPERATOR: Charlie Rife,
Kansas State University

PREVIOUS CROP: wheat
PLANTING DATE: September 6, 2002
HARVEST DATE: June 26, 2003

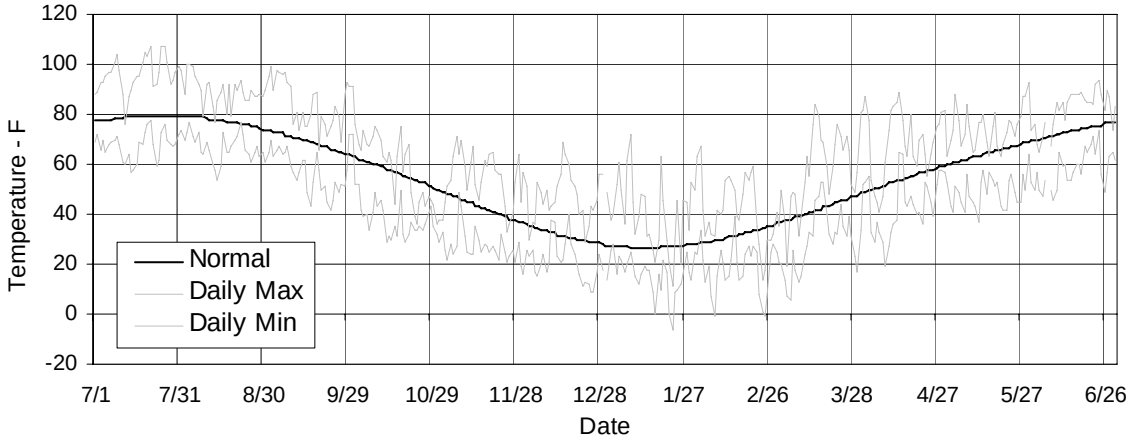
PESTICIDES:
Treflan, 2 pt/a, preplant

SOIL TEST
Not available

FERTILIZATION
Fall: 55–24–0
Spring: 50–0–0

SEEDING RATE: 5 lb/a
ROW SPACING: 9 in
IRRIGATION: none
SOIL TYPE: Smolan silt loam

ELEVATION: 1064 ft
LATITUDE: 39° 12' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 1857 lb/a



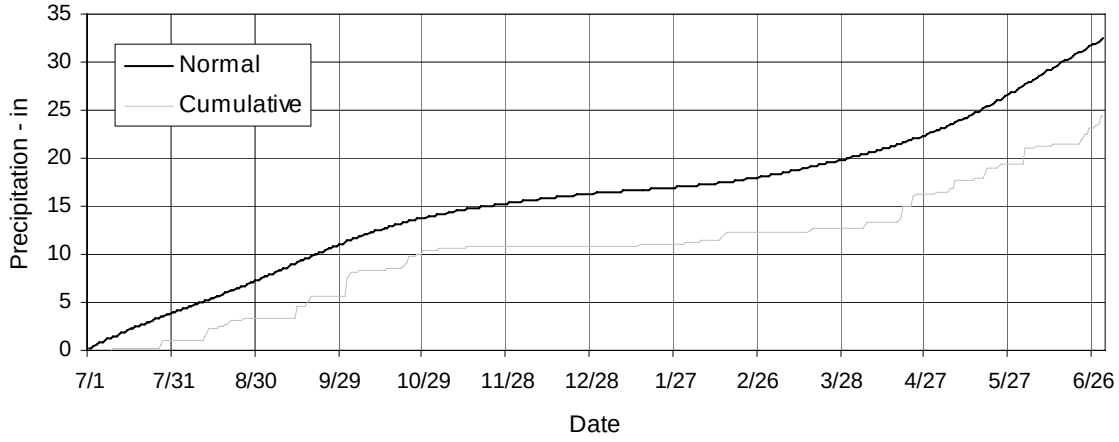


Table 20. Results from the 2003 National Winter Canola Variety Trial, Manhattan, KS.

	Yield			Winter Survival			Fall	50%	Plant	Test	Total
Line	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Bloom 3/	Height 4/	Weight	Oil
	lb/a			%			%	date	in	lb/bu	%
Jetton	3095 *	1625 *	1453 *	100	58	72	90 *	4/11 e	43 s	47.8	38.9
VSX-1	3078 *	1587 *	-----	100	62	----	90 *	4/11 e	43 s	49.0 *	40.3 *
KS8200	2643	1818 *	-----	100	96 *	----	93 *	4/13	49 t	49.1 *	40.5 *
Plainsman	2324	1318	1263 *	100	100 *	100 *	73	4/15 l	51 t	49.8 *	38.2
GT-Plainsman	2282	-----	-----	100	----	----	87	4/15 l	50 t	47.3	38.8
Wichita	2227	1230	1276 *	100	92 *	94 *	87	4/11 e	44 s	50.3 *	39.5 *
CWH 042	2134	-----	-----	100	----	----	77	4/12	43 s	51.4 *	37.2
G96036A.3	2113	-----	-----	100	----	----	77	4/13	43 s	48.5 *	39.2 *
KS7436	1989	1226	-----	100	95 *	----	87	4/12	47	50.6 *	39.5 *
KS8037	1936	-----	-----	100	----	----	87	4/14 l	47	50.0 *	39.2 *
Abilene	1932	1073	1197	100	95 *	97 *	80	4/12	45	48.7 *	39.0 *
Ceres	1912	1142	1180	100	72	81	67	4/15 l	47	50.8 *	39.1 *
AR91023-63-L5	1885	1072	-----	100	85	----	93 *	4/12	44 s	50.2 *	37.3
AR90016-PR377	1812	951	-----	100	82	----	93 *	4/12	47	48.6 *	39.7 *
GT-Abilene	1811	-----	-----	100	----	----	90 *	4/11 e	44 s	50.4 *	38.0
Explus	1770	-----	-----	100	----	----	87	4/12	43 s	48.3	36.0
KS8227	1767	1086	-----	100	88 *	----	97 *	4/13	47	47.7	40.2 *
GT-Wichita	1737	-----	-----	100	----	----	100 *	4/10 e	43 s	50.7 *	38.6
KS9012	1714	-----	-----	100	----	----	87	4/11 e	46	50.0 *	39.0
AR91019-50-E2	1664	-----	-----	100	----	----	87	4/12	45	48.7 *	39.3 *
Casino	1642	932	1125	100	93 *	96 *	87	4/14 l	46	50.8 *	38.9
AR91016-41-L2	1621	879	1159	100	68	78	87	4/12	43 s	48.7 *	38.6
Banjo	1590	911	-----	100	65	----	87	4/11 e	44 s	49.7 *	39.6 *
Sumner	1543	871	-----	100	89 *	----	87	4/11 e	42 s	46.6	38.4
Extra	1519	-----	-----	100	----	----	87	4/12	46	49.7 *	37.5
AR91022-59-L4	1457	816	1038	100	84	89	90 *	4/12	42 s	47.3	38.8
G96036A.10	1415	-----	-----	100	----	----	80	4/12	43 s	48.9 *	41.1 *
KS9198	1413	-----	-----	100	----	----	87	4/11 e	43 s	45.7	36.9
Celsius	1410	762	-----	100	77	----	83	4/15 l	45	48.2	39.6 *
KS8367	1348	841	-----	100	96 *	----	83	4/12	45	49.1 *	39.6 *
KS8285	1346	-----	-----	100	----	----	90 *	4/12	45	49.7 *	39.5 *
USI2002	1304	-----	-----	100	----	----	87	4/12	41 s	48.5 *	39.5 *
Mean	1857	1050	1091	100	80	86	86	4/12	45	49.1	38.9
LSD (0.05)	453	246	223	NS	14	9	11	1	4	3.0	0.0
CV %	15.0	33.3	30.1	----	28.6	15.4	7.9	0.6	5.4	3.8	2.7

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2000, 2002, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

OTTAWA, KS

COOPERATOR: Keith Janssen, East Central Exp. Field, Kansas State University

PREVIOUS CROP: wheat
PLANTING DATE: September 10, 2002
HARVEST DATE: June 25, 2003

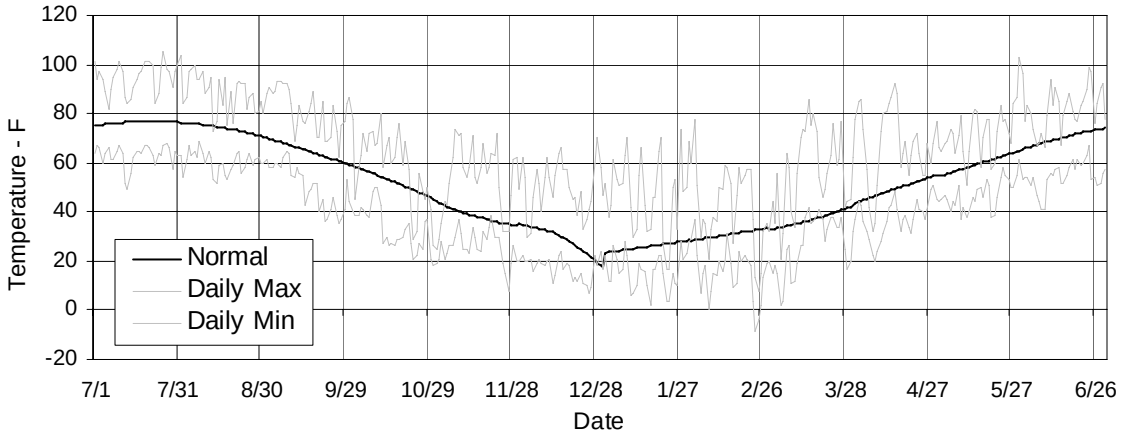
PESTICIDES:
Assure II, 10 oz/a, March 25

SOIL TEST
not available

FERTILIZATION:
Fall: 0–0–0
Spring: 88–0–0

SEEDING RATE: 5 lb/a
ROW SPACING: 6 in
IRRIGATION: none
SOIL TYPE: Woodson silt loam

ELEVATION: 899 ft
LATITUDE: 38° 37' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 1440 lb/a



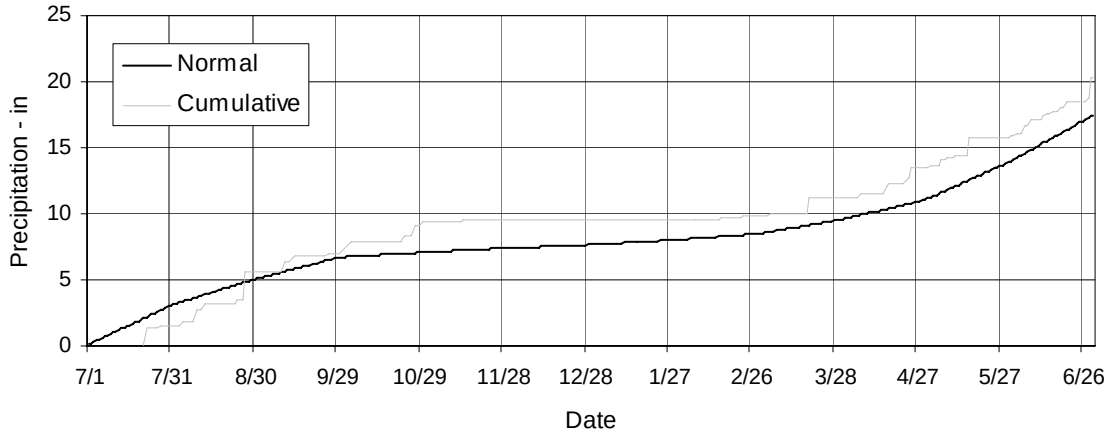


Table 21. Results from the 2003 National Winter Canola Variety Trial, Ottawa, KS.

Line	Yield			Winter Survival			Fall	50%	Plant	Lodg-	Shat-	Test	Total
	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 3/	Stand	Bloom 4/	Height 5/	ing	tering	Weight	Oil
	lb/a			%			%	date	in	%	%	lb/bu	%
Jetton	2453 *	1898 *	1619 *	100	100	100	100	4/10 e	32	0 *	2 *	48.6 *	39.1
VSX-1	2287 *	1694 *	-----	100	100	----	100	4/10 e	32	0 *	2 *	48.4 *	41.4 *
AR90016-PR377	2013 *	1610 *	-----	100	100	----	97	4/11	36 t	0 *	4 *	49.0 *	40.8 *
Banjo	1953 *	1772 *	-----	100	100	----	100	4/10 e	32	1 *	2 *	50.1 *	40.8 *
Abilene	1908 *	1397	-----	100	100	----	100	4/10 e	34	0 *	4 *	49.7 *	39.9 *
Wichita	1780	1513	1279	100	100	100	97	4/10	31 s	1 *	5	48.4 *	40.3 *
Ceres	1655	1358	1220	100	100	100	93	4/12	30 s	5 *	5	49.9 *	40.0 *
Sumner	1623	1230	-----	100	100	----	100	4/9 e	32	0 *	3 *	48.8 *	41.2 *
AR91019-50-E2	1573	-----	-----	100	----	----	100	4/11	33	28	8	48.6 *	40.3 *
GT-Wichita	1571	-----	-----	100	----	----	100	4/10	33	5 *	5	49.9 *	40.7 *
Casino	1541	1263	975	100	100	100	100	4/13	33	4 *	6	50.3 *	39.5 *
GT-Abilene	1531	-----	-----	100	----	----	97	4/10 e	34	2 *	3 *	50.0 *	40.2 *
KS7436	1511	1476	-----	100	100	----	100	4/10	34	6 *	5	49.8 *	41.6 *
AR91023-63-L5	1510	1436	-----	100	100	----	100	4/11	33	5 *	2 *	49.5 *	40.3 *
AR91016-41-L2	1485	1369	-----	100	100	100	100	4/11	34	9 *	4 *	47.4	40.6 *
Explus	1413	-----	-----	100	----	----	100	4/10 e	34	3 *	1 *	49.9 *	40.4 *
Celsius	1289	923	-----	100	100	----	100	4/14	31 s	10 *	8	47.9	39.1
AR91022-59-L4	1262	1287	-----	100	100	----	100	4/10 e	30 s	15 *	5	49.5 *	38.8
KS8200	1257	1184	-----	100	100	----	100	4/12	32	15 *	4 *	49.5 *	41.3 *
CWH 042	1250	-----	-----	100	----	----	97	4/10	33	4 *	1 *	50.4 *	39.1
KS9012	1247	-----	-----	100	----	----	97	4/11	31 s	8 *	8	49.7 *	39.1
KS8037	1113	-----	-----	100	----	----	100	4/13	34	8 *	5	47.3	39.6 *
GT-Plainsman	1082	-----	-----	100	----	----	93	4/16 l	37 t	0 *	10	48.3	37.7
KS8227	1080	1087	-----	100	100	----	100	4/12	33	53	8	48.8 *	41.7 *
Extra	1060	-----	-----	100	----	----	100	4/11	32	8 *	5	50.1 *	37.6
KS8285	1021	-----	-----	100	----	----	100	4/13	32	15 *	18	49.4 *	41.3 *
KS9198	987	-----	-----	100	----	----	97	4/10 e	32	13 *	4 *	47.5	39.5 *
Plainsman	985	1071	998	100	100	100	93	4/16 l	36 t	1 *	6	49.4 *	37.0
KS8367	957	1146	-----	100	100	----	97	4/12	31 s	23 *	8	49.7 *	39.9 *
USI2002	798	-----	-----	100	----	----	97	4/11	29 s	60	15	49.8 *	40.5 *
Mean	1440	1210	973	100	98	99	98	4/11	33	10	5	49.2	40.0
LSD (0.05)	638	367	255	NS	NS	NS	NS	16	9	2	4	11.3	0.0
CV %	27.0	26.0	26.4	----	----	----	4.0	0.8	0.3	52.5	5.1	2.5	3.1

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 1998, 2002, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

PARSONS, KS

COOPERATORS: James Long and Kelly Kusel, KSU Southeast Agric. Res. Center

PREVIOUS CROP: wheat
PLANTING DATE: September 9, 2002
HARVEST DATE: June 16, 2003

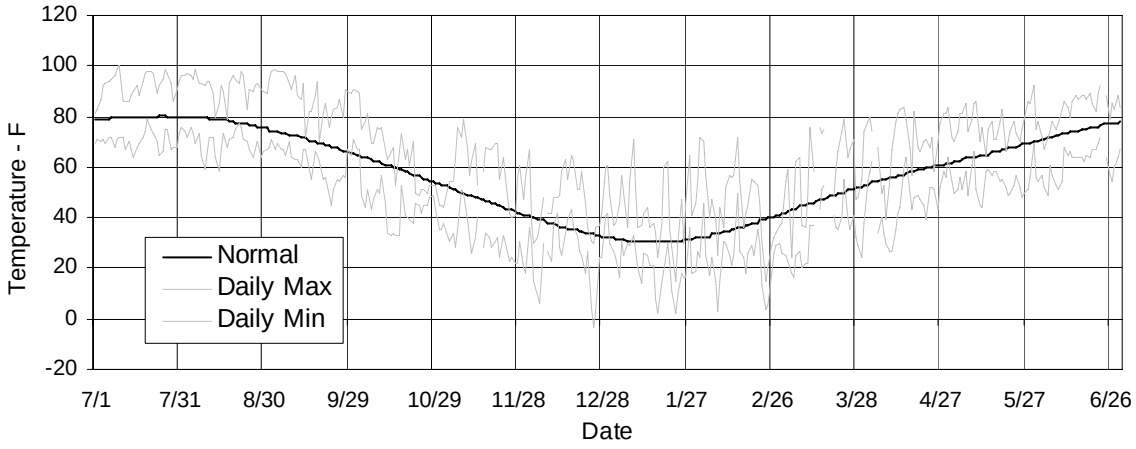
PESTICIDES:
Treflan, 1 qt

SOIL TEST
P = med.; K = med.

FERTILIZATION:
Fall: 50–70–70 pre-plant
Spring: 60–0–0 on March 10

SEEDING RATE: 5 lb/a
ROW SPACING: 7 in
IRRIGATION: none
SOIL TYPE: Parson silt loam

ELEVATION: 900 ft
LATITUDE: 37° 21' N
AVG. WINTER SURVIVAL: 87%
AVERAGE YIELD: 2143 lb/a



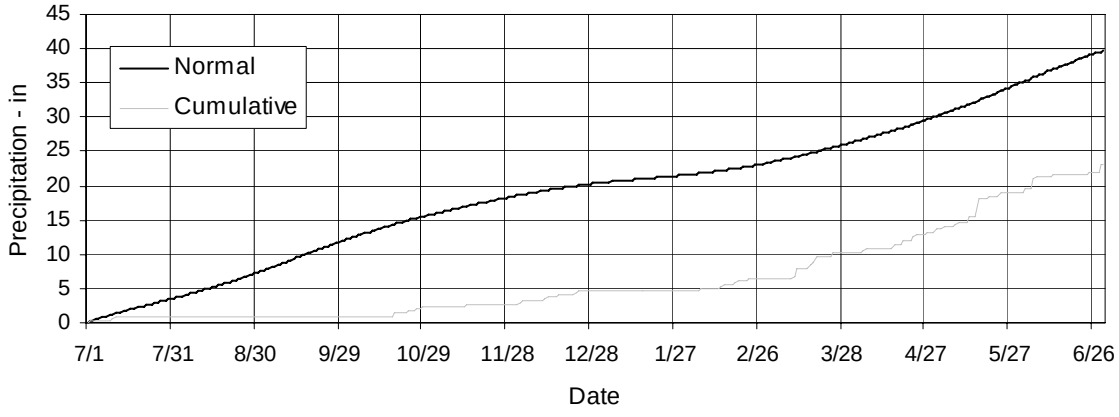


Table 22. Results from the 2003 National Winter Canola Variety Trial, Parsons, KS.

	Yield			Winter Survival			Fall	50%	Matur-	Plant	Test	Total
Line	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Bloom 3/	ity 3/	Height 4/	Weight	Oil
	----------lb/a----------			----------%----------			%	date	date	in	lb/bu	%
Banjo	2585 *	2165 *	---	90 *	87 *	---	100	4/5 e	6/6 l	46 t	52.5 *	36.4 *
AR91016-41-L2	2456 *	1861	1788 *	92 *	85 *	90 *	100	4/9 l	6/7 l	48 t	52.0 *	35.2
G02001	2368 *	---	---	87	---	---	100	4/5 e	6/7 l	46 t	51.6 *	37.5 *
KS8227	2365 *	2070 *	---	88 *	85 *	---	100	4/8 el	6/9 l	46 t	50.4	35.3
Jetton	2358 *	1942 *	---	83	81	---	100	4/8 el	6/8 l	45	49.9	36.2 *
GT-Wichita	2357 *	---	---	98 *	---	---	100	4/5 e	6/3 e	45	51.5 *	36.9 *
Plainsman	2336 *	1732	1584 *	78	81	87	100	4/12 l	6/8 l	49 t	45.7	36.0 *
KS7436	2334 *	2063 *	---	88 *	88 *	---	100	4/7 e	6/9 l	48 t	51.1	36.3 *
AR91019-50-E2	2318 *	---	---	93 *	---	---	100	4/9 l	6/9 l	48 t	51.3 *	36.4 *
KS8200	2301 *	2106 *	---	92 *	89 *	---	100	4/9 l	6/9 l	49 t	51.4 *	36.9 *
G96038A.3	2279 *	---	---	83	---	---	100	4/10 l	6/8 l	49 t	50.9	37.1 *
AR90016-PR377	2265 *	---	---	78	---	---	100	4/7 e	6/9 l	48 t	50.2	35.6
KS8073	2246 *	---	---	88 *	---	---	100	4/10 l	6/7 l	47 t	50.4	36.4 *
GT-Abilene	2237 *	---	---	90 *	---	---	97	4/11 l	6/4 e	48 t	51.7 *	35.1
GT-Plainsman	2211	---	---	87	---	---	100	4/6 e	6/9 l	49 t	49.2	34.3
KS9198	2149	---	---	90 *	---	---	100	4/8 el	6/7 l	47 t	50.5	36.1 *
AR91022-59-L4	2099	1553	1436	87	86 *	91 *	100	4/7 e	6/7 l	47 t	51.1	35.4
ARC1023-63-L5	2097	1611	---	90 *	84 *	---	97	4/7 e	6/7 l	47 t	51.4 *	35.1
Casino	2078	1596	1518	87	87 *	91 *	93	4/12 l	6/9 l	47 t	51.4 *	35.1
Wichita	2066	1681	1638 *	90 *	88 *	92 *	100	4/8 el	6/6 l	47 t	50.7	36.5 *
Celsius	2061	1912 *	---	92 *	88 *	---	93	4/10 l	6/8 l	45	50.6	37.5 *
Abilene	2053	1549	1508	87	84 *	89 *	100	4/7 e	6/6 l	47 t	51.1	35.1
G96202	2036	---	---	73	---	---	100	4/4 e	6/2 e	42 s	50.5	35.9 *
VSX-1	2029	1798	---	87	80	---	100	4/5 e	6/8 l	44 s	49.2	37.1 *
G96038A.10	2020	---	---	83	---	---	100	4/6 e	6/1 e	46 t	50.1	35.8 *
KS8367	1970	1727	---	87	88 *	---	100	4/9 l	6/8 l	47 t	52.0 *	35.5
KS9012	1965	---	---	88 *	---	---	100	4/6 e	6/7 l	47 t	51.4 *	35.5
Ceres	1955	1671	1437	85	83 *	89 *	97	4/7 e	6/6 l	47 t	51.1	35.1
Sumner	1876	1420	---	90 *	88 *	---	93	4/5 e	6/6 l	46 t	50.4	35.6
KS8285	1802	---	---	90 *	---	---	100	4/9 l	6/8 l	47 t	49.6	36.0 *
USI2002	1792	---	---	92 *	---	---	100	4/5 e	6/5	46 t	50.5	36.1 *
G96200E	1512	922	---	67	47	---	100	4/4 e	6/2 e	41 s	49.0	34.8
Mean	2143	1716	1534	87	84	89	99	4/7	6/6	47	50.6	35.9
LSD (0.05)	319	264	238	15	6	4	NS	0	0	0	0.0	1.8
CV %	10.5	15.3	19.2	7.5	6.6	4.4	3.7	2.8	1.5	4.9	1.7	2.4

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2000, 2002, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

LINCOLN, NE

COOPERATOR: Lenis Nelson,
University of Nebraska

PREVIOUS CROP: oat
PLANTING DATE: September 10, 2002
HARVEST DATE: July 10, 2003

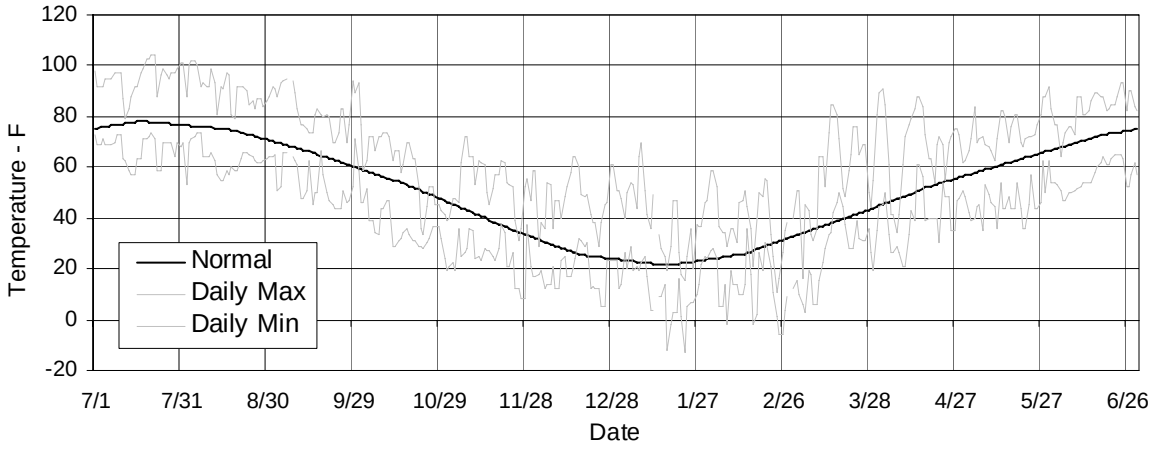
PESTICIDES:
Treflan

SOIL TEST
not available

FERTILIZATION
Fall: 60–0–0
Spring: 0–0–0

SEEDING RATE: 5 lb/a
ROW SPACING: 9 in
IRRIGATION: none
SOIL TYPE: Sharpsburg silt clay loam

ELEVATION: 850 ft
LATITUDE: 40° 51' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 2926 lb/a



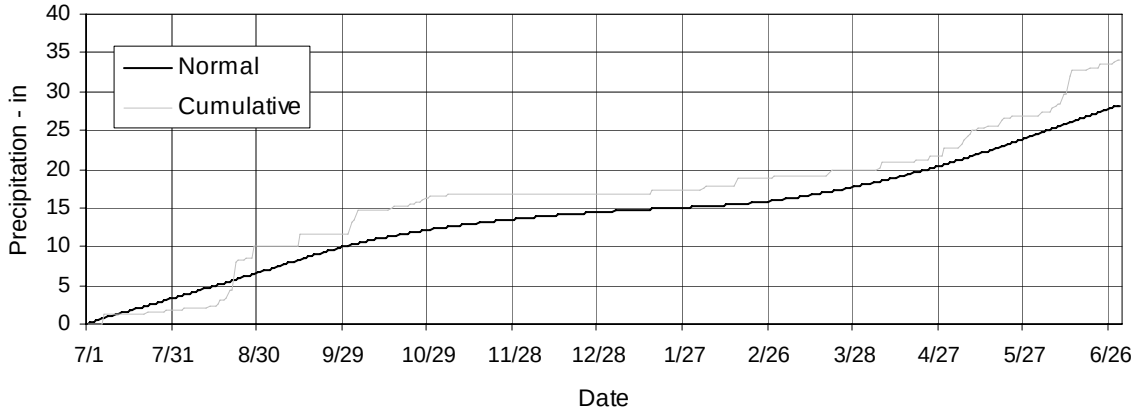


Table 23. Results from the 2003 National Winter Canola Variety Trial, Lincoln, NE.

Line	Yield 2003	Yield 2yr 1/	Yield 3yr 2/	Winter Survival 2003	Winter Survival 3yr 2/	Fall Stand	Plant Height 3/	Lodging	Shattering	Test Weight	Total Oil
	lb/a			%		%	in	%	%	lb/bu	%
VSX-1	3856 *	2383 *	-----	100	---	88 *	46 s	0	1 *	50.9	37.8 *
Jetton	3557 *	2519 *	2312 *	100	100	93 *	46 s	2	1 *	50.9	36.5
AR90016-PR377	3460 *	-----	-----	100	---	90 *	54 t	3	2 *	51.3	38.0 *
GT-Wichita	3453 *	-----	-----	100	---	82 *	50	2	2 *	52.2 *	37.8 *
KS7436	3308 *	2479 *	-----	100	---	87 *	53	4	5	52.6 *	38.1 *
AR91022-59-L4	3271 *	2800 *	2641 *	100	100	92 *	53	15	2 *	51.5	37.2
GT-Plainsman	3233 *	-----	-----	100	---	65	57 t	0	1 *	51.8	36.4
Celsius	3149	2298 *	-----	100	---	78	55 t	17	1 *	51.6	38.0 *
AR91019-50-E2	3117	-----	-----	100	---	83 *	54 t	10	2 *	51.5	39.0 *
AR91023-63-L5	3116	2541 *	-----	100	---	85 *	53	27	1 *	52.0 *	37.6 *
Ceres	3077	2187	2136	100	100	57	51	0	2 *	52.5 *	37.9 *
GT-Abilene	3028	-----	-----	100	---	62	51	7	1 *	51.9	36.9
Explus	2965	-----	-----	100	---	82 *	47 s	33	1 *	52.1 *	36.7
KS8200	2963	2031	-----	100	---	93 *	52	28	1 *	52.0 *	38.1 *
KS9198	2914	-----	-----	100	---	83 *	50	20	2 *	51.6	37.6 *
CWH 042	2911	-----	-----	100	---	65	44 s	2	1 *	52.1 *	38.1 *
AR91016-41-L2	2870	2133	2052	100	100	97 *	51	17	3 *	51.5	38.1 *
Wichita	2831	2340 *	2114	100	100	73	47 s	2	5	52.2 *	38.5 *
Extra	2825	-----	-----	100	---	90 *	53	23	1 *	52.3 *	36.9
Casino	2803	2152	2098	100	100	93 *	54 t	3	2 *	51.8	36.6
USI2002	2722	-----	-----	100	---	90 *	51	37	1 *	51.7	38.7 *
KS8367	2676	2052	-----	100	---	78	51	32	2 *	52.1 *	38.3 *
KS8073	2631	-----	-----	100	---	87 *	55 t	18	2 *	51.6	37.7 *
Abilene	2597	2115	2124	100	100	52	51	2	4	52.1 *	37.2
KS8227	2568	1967	-----	100	---	92 *	53	5	1 *	51.7	38.9 *
Sumner	2539	1847	-----	100	---	53	47 s	0	8	52.3 *	37.4
KS9012	2539	-----	-----	100	---	85 *	51	15	7	52.1 *	38.2 *
Plainsman	2344	1763	1600	100	100	35	53	8	1 *	51.5	36.5
Banjo	2254	1959	-----	100	---	88 *	49	47	2 *	52.0 *	36.7
KS8285	2210	-----	-----	100	---	77	55 t	17	4	51.8	38.6 *
Mean	2926	2148	2038	100	100	79	51	13	2	51.8	37.6
LSD (0.05)	678	503	366	NS	NS	17	4	NS	4	0.7	1.6
CV %	14.2	23.8	20.9	----	----	12.8	4.3	142	99.9	0.8	2.0

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2000, 2002, and 2003.

3/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

SIDNEY, NE

COOPERATOR: David Baltensperger, University of Nebraska

PREVIOUS CROP: wheat
PLANTING DATE: September 9, 2002
HARVEST DATE: July 25, 2003

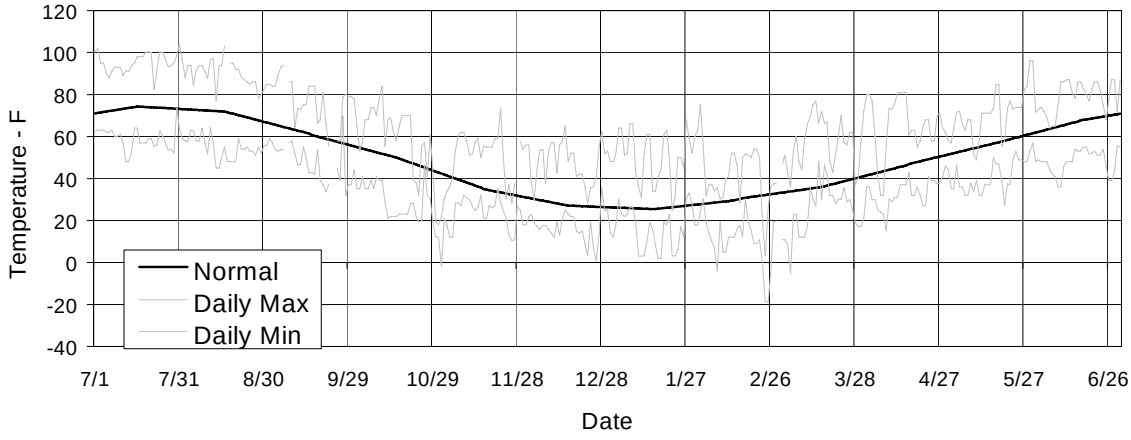
PESTICIDES:
Treflan, on September 8
Assure II on April 25
Capture on April 3 (cutworms)

SOIL TEST
not available

FERTILIZATION
Fall: 17–0–0–17 S
Spring: 27–0–0

SEEDING RATE: 5 lb/a
ROW SPACING: 12 in
IRRIGATION: none
SOIL TYPE: Pullman clay loam

ELEVATION: 4320 ft
LATITUDE: 41° 13' N
AVG. WINTER SURVIVAL: 53%
AVERAGE YIELD: 1625 lb/a



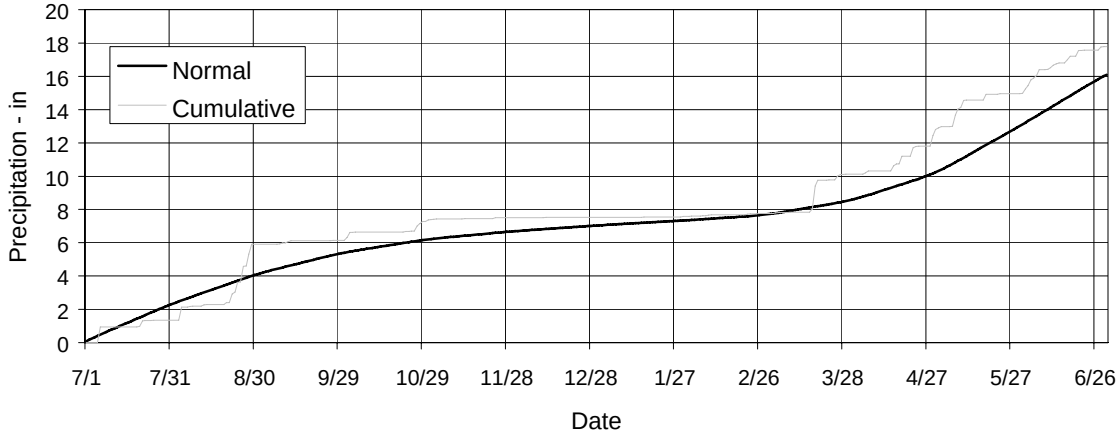


Table 24. Results from the 2003 National Winter Canola Variety Trial, Sidney, NE.

Line	Yield 2003	Yield 2yr 1/	Yield 3yr 2/	Winter Survival 2003	Winter Survival 2yr 1/	Winter Survival 3yr 3/	Fall Stand	Total Oil
	lb/a			%			%	%
KS8367	2408 *	-----	-----	89 *	---	---	90 *	36.4 *
Banjo	2408 *	-----	-----	83 *	---	---	97 *	34.5 *
KS8200	2193 *	-----	-----	70 *	---	---	100 *	35.9 *
KS9012	2107 *	-----	-----	68 *	---	---	90 *	37.0 *
KS9198	2107 *	-----	-----	69 *	---	---	83	34.2
AR91022-59-L4	2064 *	1185 *	-----	53	50	34	100 *	35.9 *
KS8037	2021 *	-----	-----	74 *	---	---	93 *	34.1
AR91016-41-L2	1935 *	1145 *	-----	63 *	55 *	43	100 *	35.0 *
KS7436	1892 *	-----	-----	72 *	---	---	97 *	35.6 *
Sumner	1892 *	-----	-----	57	---	---	90 *	37.6 *
USI2002	1892 *	-----	-----	54	---	---	97 *	33.9
VSX-1	1892 *	-----	-----	95 *	---	---	83	33.6
Abilene	1849 *	1177 *	-----	48	54 *	---	90 *	34.2
GT-Wichita	1849 *	-----	-----	49	---	---	90 *	34.8 *
Celsius	1806 *	-----	-----	62 *	---	---	90 *	35.9 *
Jetton	1763 *	1018 *	682 *	82 *	70 *	76 *	93 *	32.1
KS8285	1763 *	-----	-----	43	---	---	90 *	36.8 *
Wichita	1720 *	1063 *	1064 *	44	51 *	68 *	83	33.2
GT-Abilene	1634 *	-----	-----	45	---	---	83	32.2
KS8227	1591 *	-----	-----	79 *	---	---	93 *	35.3 *
AR91019-50-E2	1548 *	-----	-----	54	---	---	97 *	34.0
AR90016-PR377	1462 *	-----	-----	48	---	---	93 *	33.6
Explus	1462 *	-----	-----	55	---	---	90 *	32.1
AR91023-63-L5	1290 *	-----	-----	31	---	---	93 *	34.9 *
Casino	1247	698 *	555	49	50	64	90 *	34.0
CWH 042	1118	-----	-----	22	---	---	80	31.5
Extra	946	-----	-----	26	---	---	93 *	32.8
Ceres	688	593	635	13	29	53	80	32.3
Plainsman	129	101	236	0	29	50	23	34.2
GT-Plainsman	86	-----	-----	0	---	---	77	35.6 *
Mean	1625	965	772	53	52	60	88	34.4
LSD (0.05)	1120	573	402	6	19	18	14	3.1
CV %	42.2	51.7	52.8	40.4	29.5	29.3	9.7	4.2

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2000 and 2003.

2/ 3yr means include data from 1997, 2000, and 2003.

3/ 3yr means include data from 1999, 2000, and 2003.

GOODWELL, OK

COOPERATOR: Rick Kochenower,
Oklahoma State University

PREVIOUS CROP: wheat
PLANTING DATE: September 17, 2002
HARVEST DATE: July 7, 2003

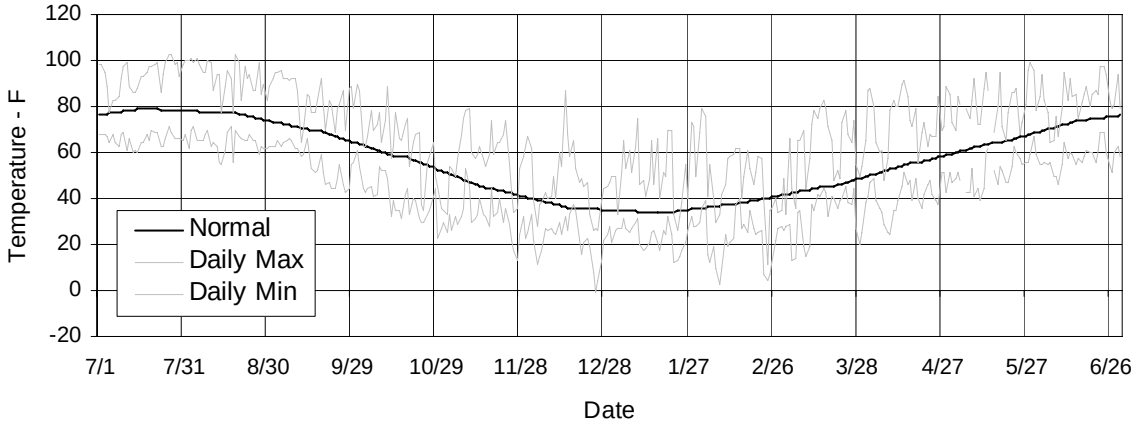
PESTICIDES:
None

SOIL TEST;
P = 25 ppm, K= 900 ppm, pH = 7.2

FERTILIZATION
Fall: 0–40–0
Spring: 0–0–0

SEEDING RATE: 5 lb/a
ROW SPACING: 7.5 in
IRRIGATION: 3 in., fall
6 in., spring
SOIL TYPE: Richfield clay loam

ELEVATION: 3293 ft
LATITUDE: 36° 36' N
AVG. WINTER SURVIVAL: 99%
AVERAGE YIELD: 1497 lb/a



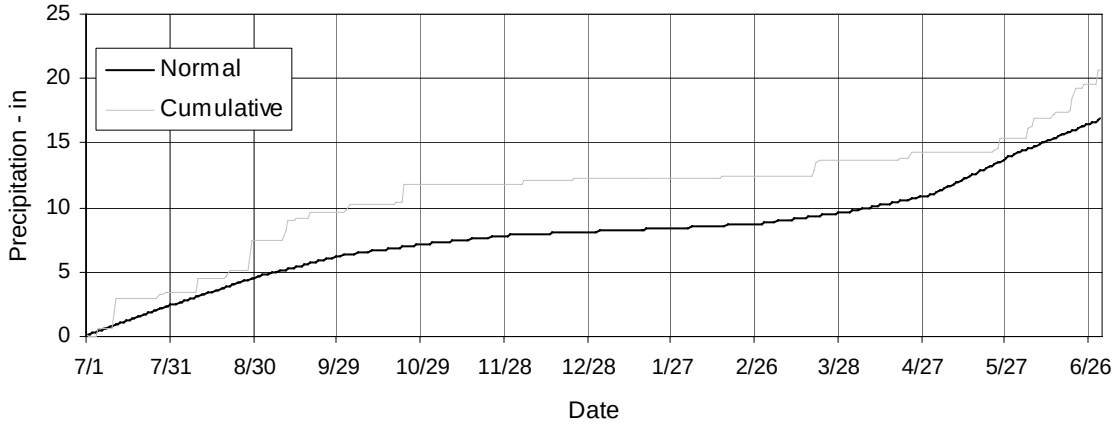


Table 25. Results from the 2003 National Winter Canola Variety Trial, Goodwell, OK.

Line	Yield 2003	Yield 2yr 1/	Winter Survival 2003	Winter Survival 2yr 1/	Fall Stand	Plant Height	Shatt-ering	Test Weight	Total Oil
	----------lb/a---------		----------%----------		%	in.	%	lb/bu	%
Explus	2303 *	-----	98	---	82 *	36	7 *	48.3 *	37.0 *
VSX-1	2011 *	1801 *	100	100	80 *	35	12 *	46.6 *	37.9 *
Jetton	1953 *	1713 *	98	98	80 *	34	12 *	44.6 *	37.7 *
Banjo	1948	1783 *	98	99	85 *	34	12 *	47.2 *	37.5 *
KS7436	1847	1491 *	100	100	90 *	37	42	46.7 *	37.7 *
GT-Wichita	1830	-----	100	---	77	36	28 *	44.2 *	38.0 *
KS9198	1827	-----	100	---	80 *	35	37	47.3 *	37.1 *
KS8200	1823	1759 *	100	100	85 *	36	45	45.8 *	37.3 *
AR91016-41-L2	1729	1364	100	93	88 *	35	50	47.1 *	37.7 *
Celsius	1645	1470	95	96	78	38	58	44.7 *	37.9 *
Wichita	1540	1363	100	100	70	33	33 *	44.9 *	37.3 *
AR90016-PR377	1489	-----	100	---	93 *	38	52	47.0 *	38.7 *
Sumner	1488	1273	98	99	63	32	37	46.0 *	36.6
KS8227	1473	1520 *	100	100	83 *	37	42	44.5 *	38.7 *
Casino	1469	1319	100	100	57	37	52	46.5 *	36.1
AR91019-50-E2	1443	-----	100	---	78	36	50	46.9 *	37.7 *
KS8367	1407	1339	100	100	78	34	67	43.9 *	37.5 *
GT-Abilene	1405	-----	97	---	68	34	42	43.7 *	37.2 *
CWH 042	1396	-----	97	---	67	33	3 *	45.4 *	37.2 *
AR91022-59-L4	1299	1038	100	97	83 *	34	50	43.0 *	36.2
Extra	1262	-----	97	---	72	33	37	43.3 *	36.3
Ceres	1226	1117	97	98	62	36	50	43.7 *	35.1
KS9012	1222	-----	97	---	73	35	65	41.4	35.9
KS8037	1188	-----	100	---	85 *	35	58	44.3 *	36.5
KS8285	1187	-----	97	---	75	36	68	45.4 *	37.8 *
Abilene	1177	1057	98	96	68	33	50	44.0 *	36.6
GT-Plainsman	1160	-----	100	---	57	38	50	41.1	34.4
USI2002	1148	-----	100	---	82 *	33	50	38.3	35.9
Plainsman	1008	900	97	98	37	35	45	35.5	33.8
AR91023-63-L5	1001	926	97	95	80 *	33	55	41.7	36.5
Mean	1497	1322	99	98	75	35	42	44.4	36.9
LSD (0.05)	440	335	NS	NS	14	NS	33	5.6	1.8
CV %	18.0	22.5	2.8	6.0	11.6	7.0	48.4	7.7	0.4

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

MUNDAY, TX

COOPERATOR: David G. Bordovsky, Texas A&M University

PREVIOUS CROP: fallow
PLANTING DATE: September 23, 2003
HARVEST DATE: June 2, 3, 4, & 11

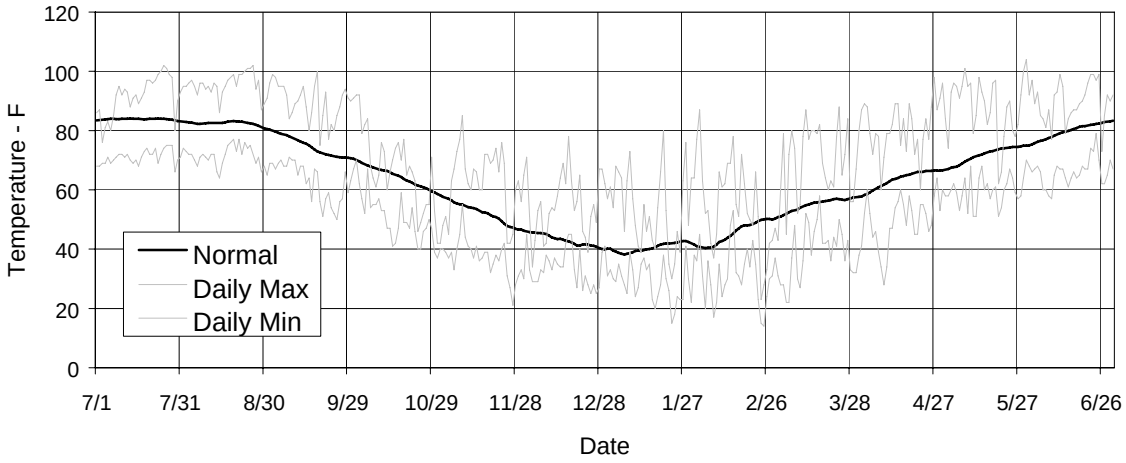
PESTICIDES:
Treflan, .75 pt/a on Aug. 30

SOIL TEST:
P = 52 ppm, K= 296 ppm, pH = 7.9

FERTILIZATION
Fall: 50–0–0 on September 17
Spring: 50–0–0 on March 3

SEEDING RATE: 5 lb/a
ROW SPACING: 10 in
IRRIGATION: 6 in. on March 11
SOIL TYPE: Miles fine sandy loam

ELEVATION: 1461 ft
LATITUDE: 33° 27' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 368 lb/a



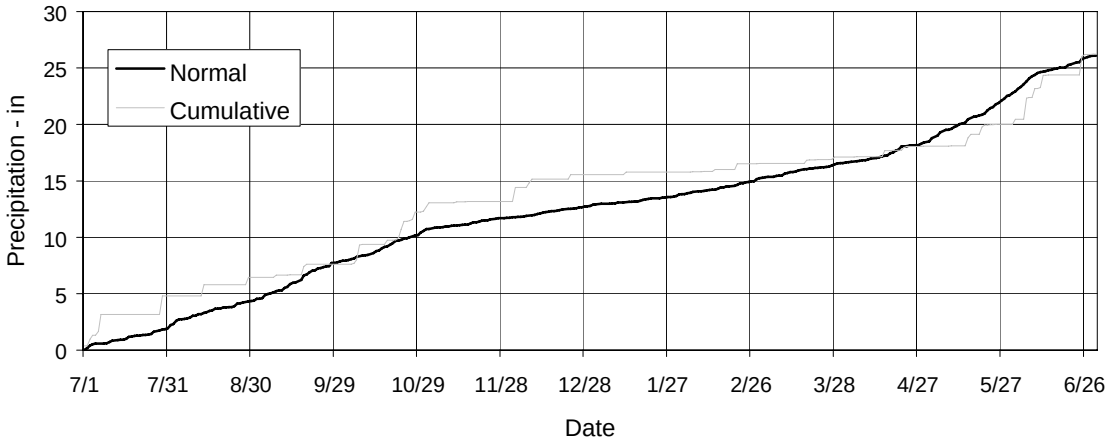


Table 26. Results from the 2003 National Winter Canola Variety Trial, Munday, TX.

Line	Yield			Winter Survival			Fall	50%	Plant	Lodg-	Shatt-	Test	Total
	2003	2yr 1/	3yr 2/	2003	2yr 1/	3yr 2/	Stand	Bloom 3/	Height 4/	ing	ering	Weight	Oil
	lb/ac			%			%	date	in.	%	%	lb/bu	%
G96200E	1060 *	766	771	100	55	70	75 *	3/5 e	42 s	8 *	20 *	46.3	34.0
GT-Abilene	687	-----	-----	100	---	---	65	3/19	53 t	0 *	63	50.8	32.8
G96202	604	-----	-----	100	---	---	67	3/11	40 s	3 *	28 *	44.5	32.9
AR90016-PR377	526	-----	-----	100	---	---	81 *	3/15	55 t	0 *	53	45.0	34.2
Abilene	487	1139	954	100	95 *	96 *	66	3/17	48	22 *	67	45.8	34.4
Banjo	473	1433 *	-----	100	95 *	---	84 *	3/19	50	13 *	63	40.6	31.3
G02001	464	-----	-----	100	---	---	72	3/15	45	0 *	50	46.1	33.2
G96038A.10	464	-----	-----	100	---	---	71	3/16	48	5 *	67	47.5	34.6
KS7436	453	1299 *	1078 *	100	95 *	97 *	64	3/16	49	0 *	50	46.9	33.3
GT-Wichita	439	-----	-----	100	---	---	77 *	3/18	48	0 *	38 *	50.0	30.5
VSX-1	434	1149	1041 *	100	93 *	96 *	88 *	3/14	43 s	33	30 *	47.9	33.0
KS9012	419	-----	-----	100	---	---	82 *	3/16	47	10 *	50	45.0	33.0
Jetton	398	1318 *	1179 *	100	93 *	95 *	80 *	3/17	42 s	0 *	42 *	44.3	33.5
Wichita	387	1211 *	1079 *	100	95 *	97 *	76 *	3/18	48	20 *	47	43.6	31.4
KS8367	372	1111	-----	100	95 *	---	81 *	3/18	51	0 *	63	43.9	33.2
KS8200	342	1145	-----	100	88	---	73	3/20	48	0 *	47	44.6	33.2
G96038A.3	333	-----	-----	100	---	---	70	3/16	49	8 *	48	47.0	31.0
AR91023-63-L5	309	1155	1018 *	100	93 *	96 *	80 *	3/17	49	0 *	67	44.3	33.6
KS9198	306	-----	-----	100	---	---	77 *	3/18	45	17 *	27 *	42.6	31.0
Sumner	294	996	891	100	95 *	97 *	65	3/17	43 s	0 *	50	42.8	32.4
AR91022-59-L4	291	1073	1002 *	100	95 *	96 *	82 *	3/16	52 t	28	75	45.0	32.9
USI2002	272	-----	-----	100	---	---	79 *	3/15	52 t	7 *	65	44.0	32.8
AR91019-50-E2	269	-----	-----	100	---	---	77 *	3/18	55 t	15 *	63	42.4	33.7
Casino	245	1013	880	100	82	88	90 *	3/24	50	0 *	65	49.0	33.4
Ceres	221	1131	972	100	93 *	96 *	70	3/18	49	0 *	67	47.6	30.7
AR91016-41-L2	217	1232 *	1095 *	100	90 *	93 *	77 *	3/17	52 t	5 *	63	43.4	32.4
KS8227	209	1204 *	-----	100	82	---	85 *	3/19	51	0 *	60	42.4	30.6
KS8073	193	-----	-----	100	---	---	81 *	3/22	48	0 *	63	46.7	33.4
Plainsman	178	967	830	100	73	82	36	3/27 l	51 t	0 *	67	46.2	34.6
Celsius	168	1018	-----	100	83	---	84 *	3/25 l	48	7 *	47	44.0	31.7
GT-Plainsman	140	-----	-----	100	---	---	40	3/28 l	53 t	0 *	73	45.4	32.9
KS8285	133	-----	-----	100	---	---	76 *	3/20	46	0 *	65	43.1	34.4
Mean	368	1077	930	100	87	91	74	3/18	48	6	54	45.3	32.8
LSD (0.05)	341	253	190	NS	8	5	15	3	4	23	22	NS	NS
CV %	56.6	34.7	31.3	---	9.4	5.1	12.7	2.7	5.7	227	25.1	7.5	5.3

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ 2yr means include data from 2002 and 2003.

2/ 3yr means include data from 2001, 2002, and 2003.

3/ Values marked "e" are not statistically different from the earliest value; those marked "l" are not statistically different from the latest.

4/ Values marked "s" are not statistically different from the shortest value; those marked "t" are not statistically different from the tallest.

TORRINGTON, WY

COOPERATOR: Jim Krall,
University of Wyoming

PREVIOUS CROP: millet
PLANTING DATE: August 26, 2002
HARVEST DATE: July 21, 2003

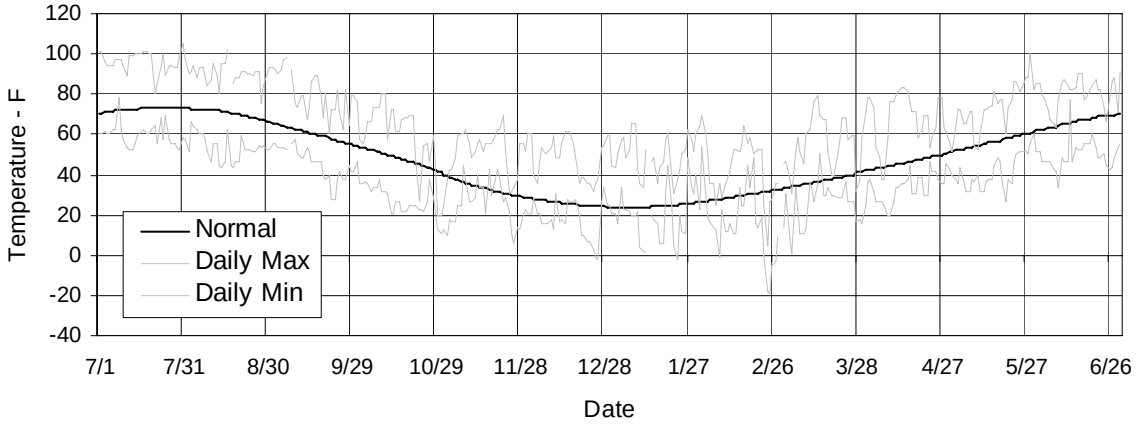
PESTICIDES:
Treflan, 1.5 pt/a on August 26

SOIL TEST:
not available

FERTILIZATION
Fall: 0–0–0
Spring: 0–0–0

SEEDING RATE: 5 lb/a
ROW SPACING: 14 in
IRRIGATION: yes
SOIL TYPE: sandy loam

ELEVATION: 4104 ft
LATITUDE: 42° 6' N
AVG. WINTER SURVIVAL: 100%
AVERAGE YIELD: 1761 lb/a



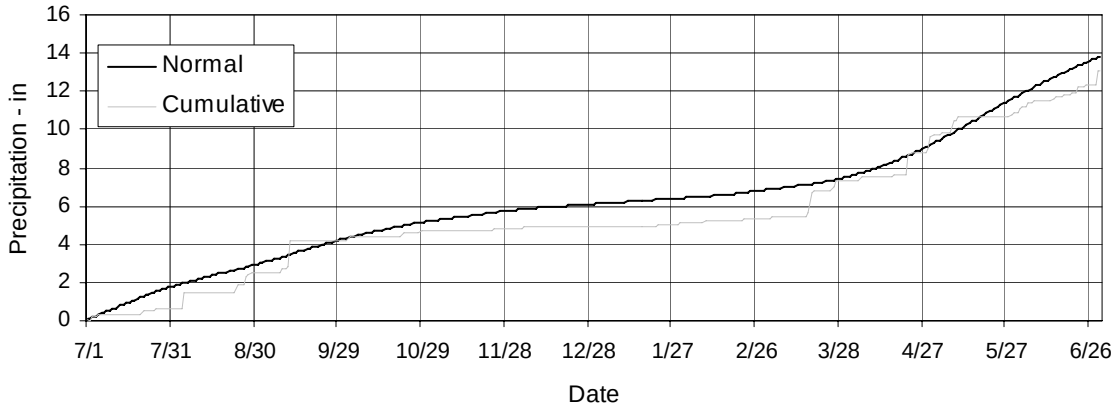
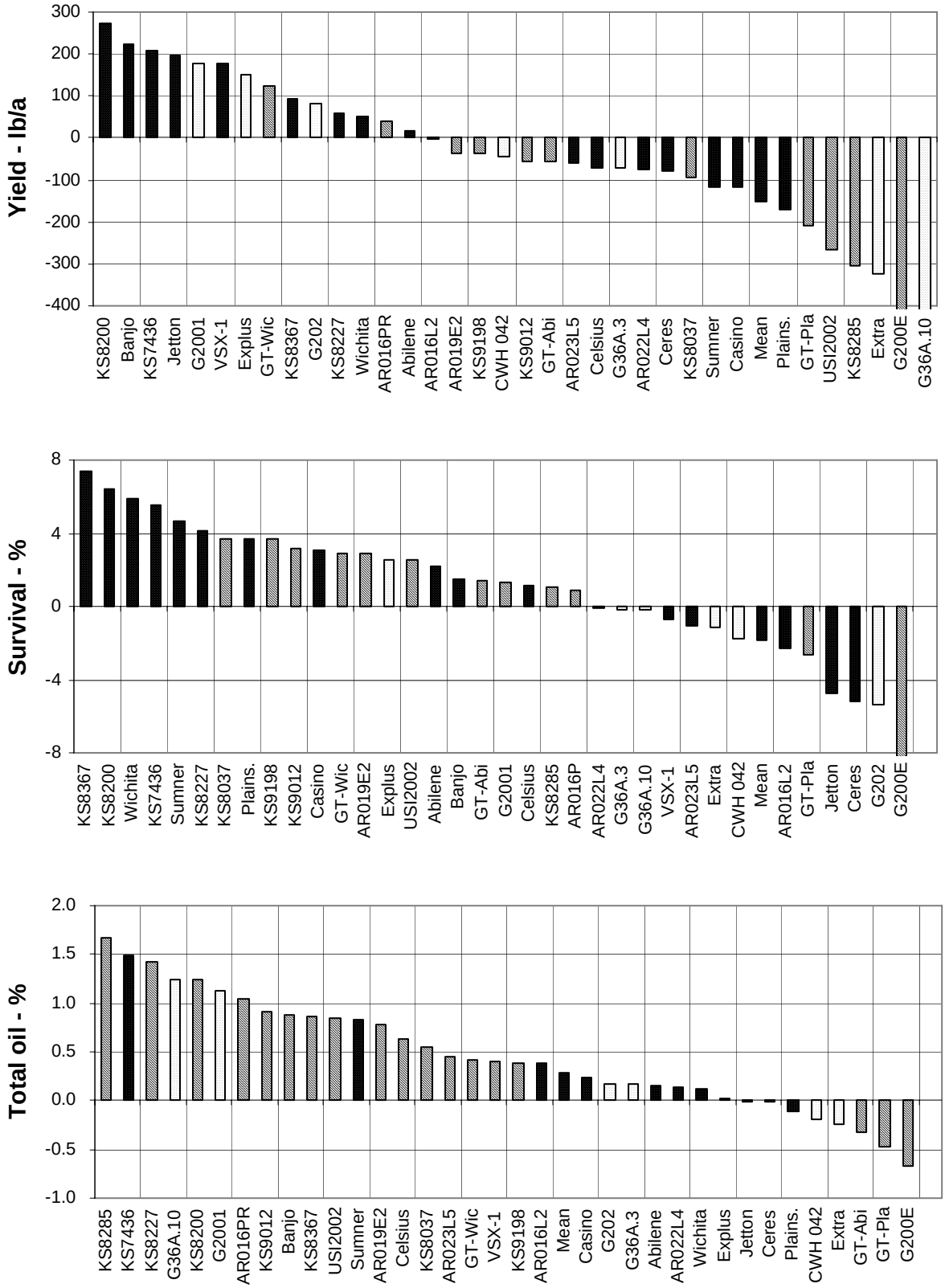


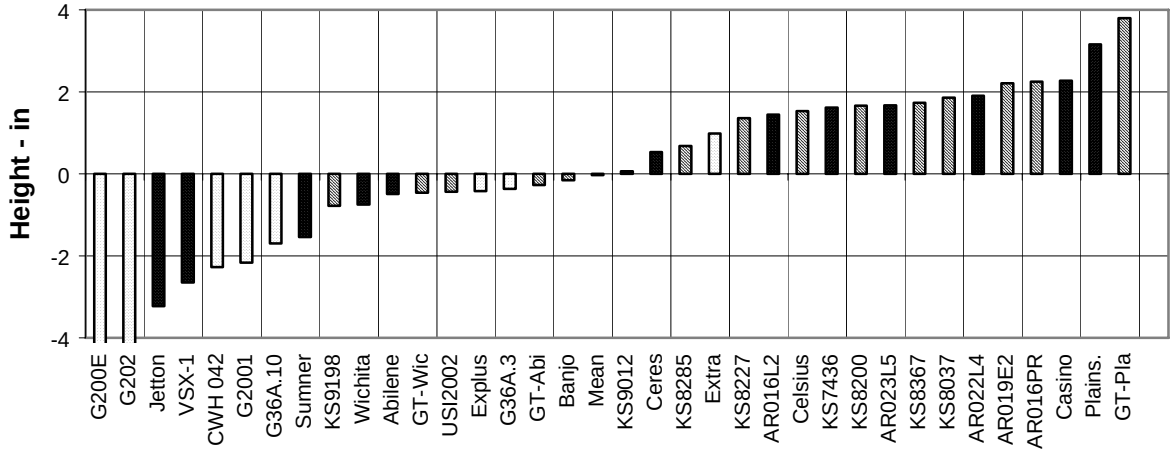
Table 27. Results from the 2003 National Winter Canola Variety Trial, Torrington, WY.

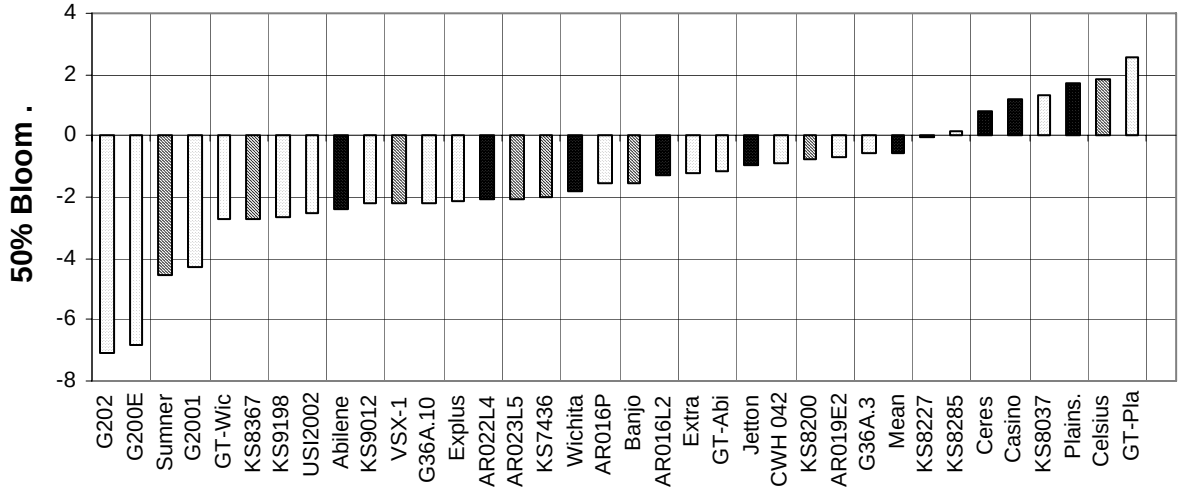
	Yield		Winter Survival		Fall	Total
Line	2003	2yr 1/	2003	2yr 1/	Stand	Oil
	----------lb/a---------		---------%----------		%	%
KS8367	2427 *	2237 *	100	98 *	43	36.6 *
KS7436	2326 *	1983 *	100	90 *	54 *	36.4 *
KS8200	2322 *	1933 *	100	95 *	60 *	35.9 *
Banjo	2251 *	-----	100	---	39	35.2
Jetton	2164 *	1952 *	100	95 *	77 *	33.8
KS9012	2161 *	-----	100	---	63 *	36.7 *
KS8073	2051 *	-----	98	---	49	36.0 *
Celsius	1947 *	-----	100	---	42	35.8 *
VSX-1	1755	-----	100	---	40	34.7
KS8285	1752	-----	100	---	32	37.0 *
KS8227	1664	1604	100	95 *	45	36.1 *
USI2002	1655	-----	100	---	34	36.5 *
Casino	1589	1488	98	97 *	32	35.4
Wichita	1560	1435	100	99 *	35	35.9 *
Abilene	1489	1501	98	96 *	30	35.7 *
Ceres	1406	1152	100	76	17	34.6
KS9198	1360	-----	100	---	21	35.6 *
Sumner	1286	1519	100	95 *	29	35.5 *
Plainsman	293	724	98	91 *	9	34.3
Mean	1761	1556	100	91	40	35.6
LSD	639	447	NS	11	23	1.5
CV %	22.1	25.3	1.3	9.3	34.8	2.1

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.
1/ 2yr means include data from 2000 and 2003.

Figure 3. Great Plains Winter Canola Summary, 1996-2003.







Note: Values are averages of the differences between each cultivar and the mean of Jetton, Ceres, Plainsman, and Wichita for yield (lb/a), winter survival (%), total oil content (%), plant height (inches), and 50% bloom date (days). The number of observations for each trait is represented by the different colors of the bars (as shown at the right).

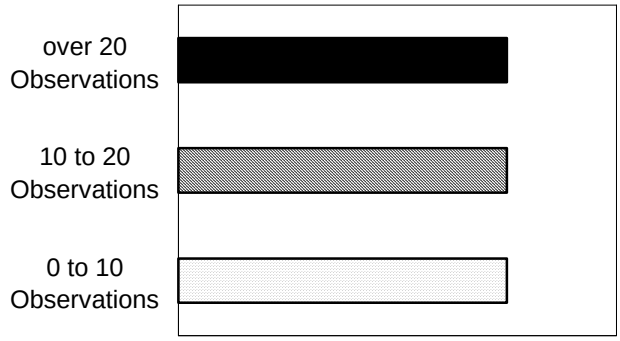


Table 28. Sources for Seed and Blackleg Ratings for Entries of the National Winter Canola Variety Trial.

		Blackleg Rating 1/		
		2003		
Seed Source	Line	Griffin, GA	2yr 2/	3yr 3/
Monsanto SAS	CWH 042	----	----	----
Boissay	Explus	----	----	----
28 310 Toury, FRANCE	Extra	----	----	----
Kansas State University	Abilene	17 *	17	17
Department of Agronomy	Plainsman	33	18	15
Throckmorton Hall	Sumner	17 *	17	----
Manhattan, KS 66506-5501	Wichita	10 *	15	14
	GT-Abilene	47	----	----
	GT-Plainsman	20	----	----
	GT-Wichita	23	----	----
	KS7436	13 *	10	----
	KS8037	13 *	----	----
	KS8200	17 *	----	----
	KS8227	17 *	----	----
	KS8285	20	----	----
	KS8367	17 *	----	----
	KS9012	17 *	----	----
	KS9198	17 *	----	----
Norddeutsche Pflanzenzucht	Ceres	3 *	10	10
Hans-Georg Lembke KG	Jetton	13 *	15	16
Hohenlieth, D-24363 Holtsee, GERMANY				
Svalöv Weibull	Casino	13 *	12	13
SE-268 81 Svalöv	Banjo	20	----	----
SWEDEN	Celsius	30	----	----
University of Arkansas	AR90016-PR377	23	----	----
Department of Plant Science	AR91016-41-L2	----	----	----
Fayetteville, AR 72701	AR91019-50-E2	13 *	----	----
	AR91022-59-L4	20	22	19
	AR91023-63-L5	17 *	19	----
University of Georgia	G00012.G2	13 *	----	----
Department of Crop & Soil Science	G02001	17 *	----	----
Georgia Station, Griffin, GA 30223-1797	G02002	17 *	----	----
	G96038A.10	17 *	----	----
	G96038A.3	13 *	----	----
	G96200E	10 *	10	9
	G96202	20	27	25
Southern Illinois University	USI2002	17 *	----	----
Plant, Soil, and General Agriculture Dept.				
Carbondale, IL 62901-4415				
Virginia State University	VSX-1	20	14	----
BOX 9152				
Petersburg, VA 23806				
	Mean	21	21	20
	LSD (0.10)	14	11	8

* Upper LSD group - Differences among those marked with an asterisk are not statistically significant.

1/ Blackleg rated as total percentage of plants killed by blackleg or having severe basal stem canker.

Data collected at Griffin, GA, by D.V. Phillips, and D. Spradlin. Nurseries were located on, or adjacent to, fields infected with Phoma blackleg the previous season. Disease severity was increased further by spreading infected stubble over the nurseries shortly after planting.

2/ 2yr means include data from 2001 and 2003.

3/ 3yr means include data from 2000, 2001, and 2003.

Senior Author

Charlie Rife, Dept. of Agronomy, Kansas State Univ., Manhattan

Other Contributors

Robert Aiken, KSU Northwest Research-Extension Center, Colby
Richard Auld, Texas Tech University, Lubbock
Robert Bacon, University of Arkansas, Fayetteville
David Baltensperger, University of Nebraska, Scottsbluff
Udai Bishnoi, Alabama A&M University, Normal
Harbans Bhardwaj, Virginia State University, Petersburg
David Bordovsky, Texas A&M University, Vernon
E. Cebert, Alabama A&M University, Normal
Ellsworth Christmas, Purdue University, West Lafayette, IN
Shawn Conley, University of Missouri, Columbia
Pat Evans, KSU Northwest Research-Extension Center, Colby
Russ Freed, Michigan State University, East Lansing
William Heer, KSU South Central Experiment Field, Hutchinson
Keith Janssen, KSU East Central Experiment Field, Ottawa
Jerry Johnson, Colorado State University, Ft. Collins
Joe Johnson, Mississippi State University, Holly Springs
John Kelly, University of Arkansas, Fayetteville
Jim Klein, Southern Illinois University, Carbondale
Rick Kochenower, Oklahoma State University, Goodwell
Jim Krall, University of Wyoming, Torrington
Kelly Kusel, KSU Southeast Agricultural Research Center, Parsons
Kevin Larson, Colorado State University, Walsh
James Long, KSU Southeast Agricultural Research Center, Parsons
Lloyd Murdock, University of Kentucky, Princeton
Lenis Nelson, University of Nebraska, Lincoln
Paul Raymer, University of Georgia, Griffin
Tim Reinbolt, University of Missouri, Columbia
Paul Rose, University of Georgia, Griffin
Michael Schmidt, Southern Illinois University, Carbondale
Greg Schwab, University of Kentucky, Lexington
Randy Smoot, University of Missouri, Novelty
David Starner, Virginia Tech University, Orange
Merle Witt, KSU Southwest Research-Extension Center, Garden City

Kansas State University Agricultural Experiment Station and Cooperative Extension Service, Manhattan 66506

SRP 924 February 2004