

One-stop shopping for variety test results

This year marks the launch of a new canola variety testing program called Prairie Canola Variety Trials (PCVT). The new system replaces provincial variety testing programs, standardizes the testing protocol, and improves trial consistency and quality.

Now growers can look to a single source for information on how a canola variety performed in three different zones across western Canada.

The complete prairie-wide results have been released first in the *Canola Digest*. No other publication will contain the full results this year.

The following organizations contributed to the PCVT program: Advanta Seeds; Ag-Quest Inc.; Agricore United; Agriculture and Agri-Food Canada (Beaverlodge, AB and Saskatoon, SK); Battle River Research Group; Bayer CropScience; B.C. Grain Producers Association; Brett-Young Seeds; Canada-Saskatchewan Irrigation Development Centre; Canola Council of Canada; Cargill Specialty Canola Oils; Lakeland Applied Research Association; Manitoba Agriculture and Food; Monsanto Canada Seeds; North Peace Applied Research Association; Peace Pedigreed Seed; Pioneer Hi-Bred Production Ltd.; Saskatchewan Wheat Pool; Smoky Applied Research Demonstration Association; Svalof Weibull;

University of Alberta; and the Western Canada Canola/Rapeseed Recommending Committee.

Trials were conducted by seed companies, government researchers and independent contractors in three growing zones across the prairies—short season, mid season and long season. Two replicated tests were conducted at each site to group together varieties with similar maturity and to ensure that valid statistical comparisons could be made between varieties. The test plots were kept weed-free using conventional herbicides depending on the weeds at each site. Herbicide-tolerant varieties were not sprayed with their companion herbicide.

Each zone has been identified in the map on page 26. Variety characteristics appear in one table, and trial results have been laid out in three tables according to the three growing season zones. This information is invaluable to growers in choosing the right canola varieties for their farms.



B. rapa , left, and *B. napus* canola plants

How to choose a variety

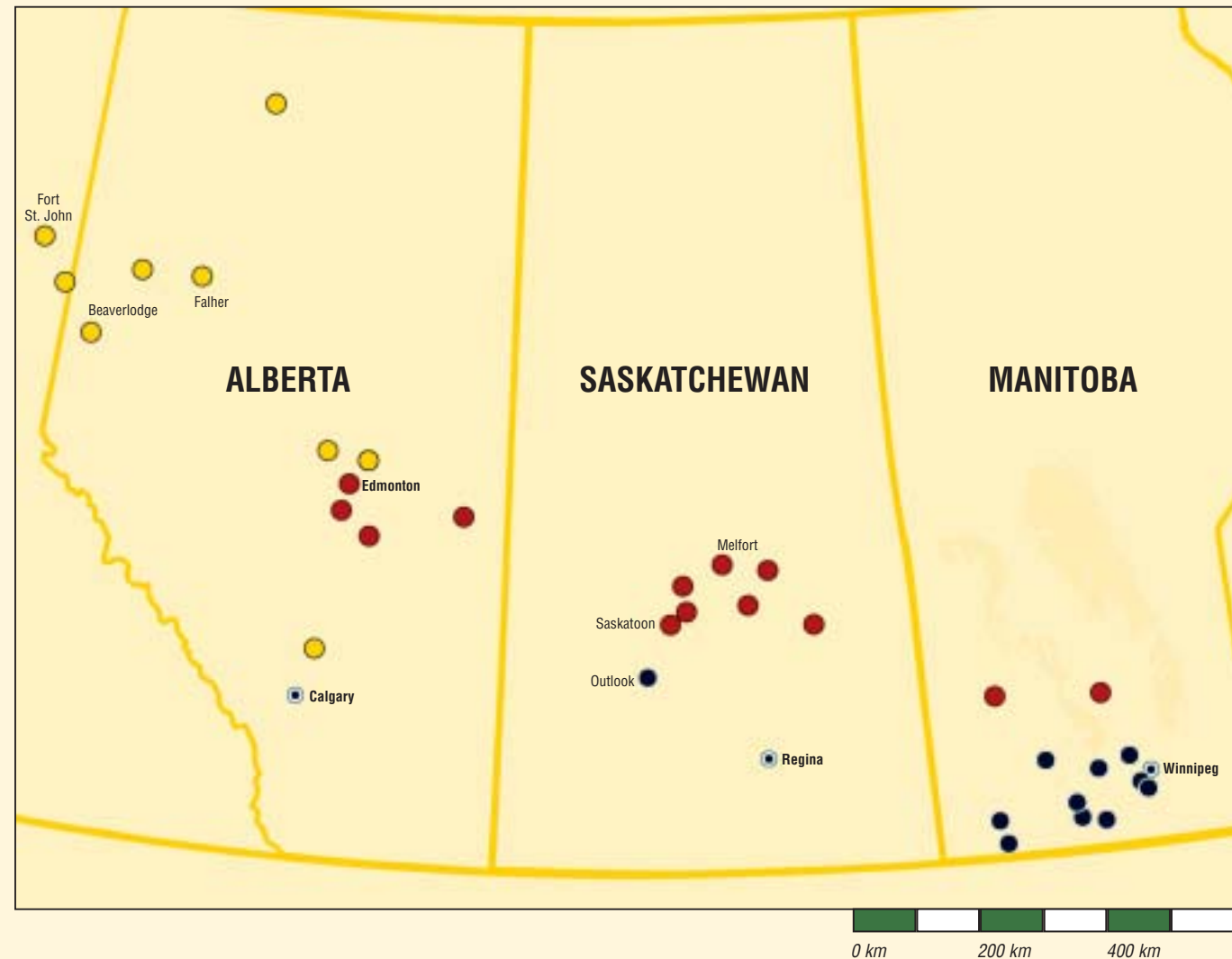
Here are some guidelines to aid in the selection of the right varieties:

- Weed control system
 - a. What are the weeds on the field chosen to grow canola?
 - b. What is the weed spectrum of the different herbicides in each weed control system (Roundup, Liberty, Clearfield or conventional)?
 - c. What is the current herbicide rotation? Remember to rotate herbicides between different groups to delay the development of weed resistance.
 - d. Is there potential herbicide carryover (especially Group 2) that would influence crop or variety choice?
- Blackleg resistance – Choose a variety that is MR (moderately resistant) or R (resistant to blackleg). A new strain of blackleg (PG3) has been confirmed in western Canada and not all varieties will have resistance to this new strain. Blackleg cankers from this new strain may develop on varieties rated as resistant.
- Yield potential – Check the PCVT results for information on yield. Look at locations across the growing zone and at the zone average. Ask a seed dealer for information on the varieties.
- Consider other information such as maturity, lodging resistance and cost.

Interpreting PCVT information

- Use the site map to identify the closest growing zone and the trial locations. But don't limit the analysis to the closest growing areas. Compare local results to other locations within the same zone.
- Zone tables show the actual yield of the check (*Brassica napus* – 46A65, *B. rapa* – AC Sunbeam) and other variety yields relative to the check. Two tests were conducted at each site. Compare each variety to the test variety—not to other varieties. Comparisons between varieties in different tests are not statistically valid, even if they were at the same location. Although variety trials are carefully conducted, small percentage differences in yield are usually meaningless.
- Check the Least Significant Difference (LSD) of the test. If the difference between the variety and the check is less than the LSD, then the variety is not considered different from the check. The Coefficient of Variation (CV) gives an indication of the random variability in the test. The smaller the CV, the better the test.
- The characteristics table includes information on maturity, resistance to lodging, blackleg resistance, varietal type (open pollinated, hybrid, synthetic) and herbicide tolerance. Use this information in addition to yield to choose a variety.

ZONES ● Long ● Mid ● Short



DESCRIPTION TABLES

Variety	Average Maturity in Days +/-			Lodging Resistance	Blackleg Resistance	Varietal Kind	Herbicide Tolerance	Organization
	S	M	L					
<i>B. napus</i>								
46A65	0	0	0	0	R	OP	CON	Pioneer Hi-Bred
Y0276	2	0	0	0	R	HYB	CON	Advanta Seeds
PR6450***	-	1	0	0	R	OP	CON	Monsanto Canada Seeds
46H02	1	0	1	0	R	HYB	CON	Pioneer Hi-Bred
99CH01	-	2	-	1	MR	OP	CON	Seed Direct Inc.
SW WIZZARD	-	1	0	1	R	OP	CON	Svalof Weibull
6045CL	1	-1	1	0	MR	OP	CL	Brett-Young Seeds
1604	-	2	3	1	MR	OP	CL	Canterra Seeds
46A76	5	2	2	1	R	OP	CL	Pioneer Hi-Bred
Cougar CL	2	1	-	0	R	OP	CL	SK Wheat Pool
5003	-7	-	-	0	R	HYB	LL	Bayer CropScience
5020	-2	-1	-1	0	R	HYB	LL	Bayer CropScience
5030	2	1	1	1	R	HYB	LL	Bayer CropScience
PHS01-401*	-	0	0	1	R	HYB	LL	Bayer CropScience
512 RR	2	1	1	0	R	HYB	RR	Advanta Seeds
LBD422RR	1	0	-1	0	R	OP	RR	Brett-Young Seeds
LBD588RR	3	1	1	1	R	OP	RR	Brett-Young Seeds
LBD644R	-1	-1	-1	0	R	OP	RR	Brett-Young Seeds
1812	-	2	2	0	MR	SYN	RR	Canterra Seeds
1841	3	1	2	1	R	HYB	RR	Canterra Seeds
1849	-	1	0	0	R	OP	RR	Canterra Seeds
1862	1	0	-	0	MR	OP	RR	Canterra Seeds
7979-00*	4	1	2	1	R	HYB	RR	Canterra Seeds
99RZ604***	6	3	4	1	-	OP	RR	Cargill Specialty Oils

Variety	Average Maturity Days +/-			Lodging Resistance	Blackleg Resistance	Varietal Kind	Herbicide Tolerance	Organization
	S	M	L					
Victory v1010**	4	1	1	0	MS	HYB	RR	Cargill Specialty Oils
IMC109RR**	2	1	0	0	MR	OP	RR	Cargill Specialty Oils
IMC208RR**	2	1	0	0	-	OP	RR	Cargill Specialty Oils
3235	1	-	-	0	MR	OP	RR	Monsanto Canada Seeds
34-55	4	1	1	0	MR	OP	RR	Monsanto Canada Seeds
35-85	-	-	2	0	R	OP	RR	Monsanto Canada Seeds
43A56	-7	-4	-	0	MR	OP	RR	Pioneer Hi-Bred
45H21	-1	0	0	0	R	HYB	RR	Pioneer Hi-Bred
46H23	2	0	0	0	R	HYB	RR	Pioneer Hi-Bred
Prairie 719RR	-1	0	-1	0	R	OP	RR	Prairie Seeds
Sw Hymark 3944 RR	-	-	2	1	MR	HYB	RR	ProMark Seed
SW Razor	-	0	1	0	MR	SYN	RR	ProMark Seed
9550	3	2	2	0	R	OP	RR	Proven Seed
SW Rider	2	0	-	1	MS	SYN	RR	Proven Seed
SW GladiatoRR	-	0	0	0	MR	SYN	RR	Quality Assured Seeds
SP Admirable RR	-	1	1	1	MR	SYN	RR	SK Wheat Pool
SP Banner	0	0	-1	0	R	OP	RR	SK Wheat Pool
SP CANWOOD	0	-	-	0	MR	OP	RR	SK Wheat Pool
SP CRAVEN**	-	1	-	0	R	OP	RR	SK Wheat Pool
FORTUNE RR	1	0	0	0	R	OP	RR	SECAN
<i>B. rapa</i>								
AC Sunbeam	0	0	-	-	-	OP	CON	AAFC
ACS-C7	1.94	2	-	-	-	SYN	CON	AAFC
SW SPIRIT RIVER	2.83	5	-	-	-	OP	CON	Peace Pedigreed Seed
SW E3255*	2.83	4	-	-	-	SYN	CON	Svalof Weibull

* Not yet registered. ** Low linolenic variety.

Average Maturity in Days +/-: S – short season zone; M – mid-season zone; and L – long season zone.

Lodging Resistance: += “better.”

Blackleg Resistance: S – susceptible; MS – moderately susceptible; MR – moderately resistant; and R – resistant.

Varietal Kind: OP – open pollinated; SYN – synthetic; and HYB – hybrid.

Herbicide Tolerance: CON – conventional; CL – Clearfield; LL – Liberty; and RR – Roundup.

Organization: AAFC – Agriculture and Agri-Food Canada.

PRAIRIE CANOLA VARIETY SHORT SEASON ZONE RESULTS

Test 1													
Variety	Beaverlodge, AB	Dawson Creek, B.C.	Didsbury, AB	Fairview, AB	Falher, AB	Fort St. John, B.C.	Thorhild, AB	Westlock, AB	Zone Average				
B. napus													
46A65 yield (bushels/acre)	58	46	25	-	58	69	52	47					
46A65%	100	100	100	-	100	100	100	100	100				
Clearfield													
6045CL	85	92	74	-	89	96	88	96	89				
Cougar CL	89	94	86	-	91	99	101	100	94				
Liberty													
5020	118	137	128	-	118	123	124	116	123				
Roundup													
LBD422RR	108	112	96	-	99	103	95	102	102				
LBD588RR	82	77	71	-	91	101	107	96	89				
1862	104	96	102	-	104	103	94	106	101				
IMC109RR**	91	90	84	-	103	82	90	92	90				
IMC208RR**	84	80	67	-	70	73	66	81	74				
3235	97	105	92	-	92	96	93	98	96				
43A56	76	97	112	-	93	101	94	98	96				
45H21	109	103	114	-	112	103	120	117	111				
Prairie 719RR	104	100	98	-	105	105	98	109	103				
SW Rider	104	89	94	-	93	96	103	101	97				
SP Banner	101	98	100	-	103	101	100	104	101				
SP CANWOOD	94	97	103	-	90	96	101	95	97				
CV	5	7	10	-	8	5	7	7					
LSD	7	9	11	-	11	6	8	8					
B. rapa													
AC Sunbeam yield (bu/ac)	38	32	18	25	-	48	-	35					
AC Sunbeam %	100	100	100	100	-	100	-	100	100				
ACS-C7	103	105	97	95	-	90	-	101	98				
SW SPIRIT RIVER	108	110	81	100	-	97	-	114	102				
SW E3255*	114	107	90	118	-	109	-	101	107				
CV	4	5	8	7	-	4	-	8					
LSD	5	6	10	9	-	6	-	11					

* Not yet registered. ** Low linolenic variety. Yields expressed as % of check (46A65 and AC Sunbeam).

Test 2													
Variety	Beaverlodge, AB	Dawson Creek, B.C.	Didsbury, AB	Fairview, AB	Falher, AB	Fort St. John, B.C.	Thorhild, AB	Westlock, AB	Zone Average				
B. napus													
46A65 yield (bushels/acre)	50	41	30	-	59	63	45	55					
46A65 %	100	100	100	-	100	100	100	100	100				
Conventional													
Y0276	101	92	102	-	111	108	113	102	104				
46H02	110	115	98	-	109	103	115	105	108				
Clearfield													
46A76	104	95	72	-	100	103	104	99	97				
Liberty													
5003	98	104	93	-	105	121	98	101	103				
5030	119	110	113	-	124	117	134	110	118				
Roundup													
512RR	98	100	89	-	116	111	105	89	101				
LBD644R	112	118	108	-	107	108	96	99	107				
1841	112	108	89	-	99	109	115	100	104				
7979-00*	-	98	79	-	89	100	105	82	92				
99RZ604***	72	85	63	-	94	84	100	70	81				
Victory v1010**	101	99	79	-	86	99	100	88	93				
34-55	110	99	83	-	96	99	97	90	96				
46H23	103	116	99	-	109	96	101	97	103				
9550	103	109	99	-	112	90	96	90	100				
FORTUNE RR	100	103	89	-	92	93	94	96	95				
CV	8	7	9	-	7	8	8	7					
LSD	10	9	10	-	8	10	11	8					

CV – Coefficient of Variation gives an indication of the random variability in the test. The smaller the CV, the better the test.

LSD – Least Significant Difference means that if the difference between two varieties is less than the LSD, the varieties are not considered different.

PRAIRIE CANOLA VARIETY MID SEASON ZONE RESULTS

Test 1														
Variety	Aberdeen, SK	Arborg, MB	Birch Hills, SK	Camrose, AB	Dauphin, MB	Edmonton, AB	Fort Saskatchewan, AB	Kelvington, SK	Lake Lenore, SK	Melfort, SK	Rosthern, SK	Saskatoon, SK	Vermilion, AB	Zone Average
B. napus														
46A65 yield (bu/ac)	65	19	36	58	46	40	81	43	44	28	42	-	35	
46A65 %	100	100	100	100	100	100	100	100	100	100	100	-	100	100
Conventional														
PR6450***	90	78	92	86	87	104	95	99	84	75	82	-	100	89
Clearfield														
6045CL	90	87	83	84	94	80	78	85	89	85	77	-	77	84
Cougar CL	93	110	98	90	113	89	91	111	99	74	90	-	90	96
Liberty														
5020	108	135	136	118	147	113	120	131	102	121	111	-	124	122
Roundup														
LBD422RR	97	108	100	91	103	104	92	89	93	102	91	-	101	98
LBD588RR	98	91	87	99	114	94	101	104	107	61	103	-	79	95
1862	103	111	102	102	106	94	90	105	84	93	98	-	102	99
IMC109RR**	97	76	100	82	106	92	92	97	83	72	76	-	83	88
IMC208RR**	77	81	84	81	72	73	72	75	78	60	67	-	72	74
43A56	92	109	91	90	92	101	88	108	90	103	84	-	109	97
45H21	110	150	116	99	156	119	115	134	101	115	111	-	109	120
Prairie 719RR	100	115	109	85	121	96	105	107	86	94	101	-	106	102
SW Razor	100	125	93	107	119	104	97	108	99	93	93	-	86	102
9550	100	117	91	99	127	99	104	114	97	103	91	-	102	104
SW Rider	105	119	96	87	116	106	92	106	94	85	95	-	81	98
SW GladiatoRR	105	141	109	92	131	103	106	118	106	113	102	-	98	110
SP Banner	93	113	100	91	126	99	102	107	96	109	98	-	101	103
SP CRAVEN**	89	64	84	89	106	88	99	96	85	68	78	-	90	86
FORTUNE RR	96	90	84	97	120	95	97	101	81	101	82	-	84	94
CV														
CV	4	11	4	8	15	6	10	9	6	7	10	-	13	
LSD														
LSD	5	14	14	18	12	11	8	9	17	14	14	-	9	
B. rapa														
AC Sunbeam yield (bu/ac)	-	-	-	-	-	22	-	-	25	27	-	29	-	
AC Sunbeam %	-	-	-	-	-	100	-	-	100	100	-	100	-	100
ACS-C7	-	-	-	-	-	115	-	-	110	103	-	105	-	102
SW SPIRIT RIVER	-	-	-	-	-	96	-	-	78	105	-	-	-	101
SW E3255*	-	-	-	-	-	125	-	-	114	99	-	111	-	109
CV														
CV	-	-	-	-	-	10	-	-	15	11	-	8	-	
LSD														
LSD	-	-	-	-	-	14	-	-	9	9	-	10	-	

* Not yet registered. ** Low linolenic variety. Yields expressed as % of check (46A65 and AC Sunbeam).

Test 2														
Variety	Aberdeen, SK	Arborg, MB	Birch Hills, SK	Camrose, AB	Dauphin, MB	Edmonton, AB	Fort Saskatchewan, AB	Kelvington, SK	Lake Lenore, SK	Melfort, SK	Rosthern, SK	Saskatoon, SK	Vermilion, AB	Zone Average
B. napus														
46A65 yield (bu/ac)	63	21	34	56	53	34	80	42	53	26	49	-	34	
46A65 %	100	100	100	100	100	100	100	100	100	100	100	-	100	100
Conventional														
Y0276	113	97	116	99	121	126	115	119	108	82	96	-	104	108
46H02	102	145	122	115	121	111	127	120	110	124	112	-	113	119
99CH01	100	120	90	85	101	83	88	110	88	98	97	-	66	94
SW WIZZARD	101	119	100	94	107	108	100	116	109	92	100	-	104	104
Clearfield														
1604	100	107	106	95	95	94	95	106	111	79	86	-	83	96
46A76	101	101	107	99	108	95	107	109	115	104	90	-	88	102
Liberty														
5030	113	166	129	125	144	136	134	137	124	131	122	-	109	131
PHS01-401*	117	159	127	125	154	122	129	130	109	131	115	-	110	127
Roundup														
512 RR	100	92	108	90	111	108	107	120	103	113	98	-	92	103
LBD644RR	98	134	95	84	98	115	105	100	94	115	93	-	103	103
1812	102	114	87	97	98	111	97	109	114	102	102	-	81	101
1841	118	163	111	103	128	119	119	124	119	116	110	-	99	119
1849	94	118	91	83	97	101	103	105	104	118	100	-	98	101
7979-00*	100	113	95	99	101	113	88	107	101	106	90	-	84	100
99RZ604***	108	56	99	85	89	104	89	94	105	77	83	-	67	88
Victory v1010**	101	130	104	106	122	107	87	107	101	90	89	-	73	101
34-55	94	98	95	90	99	95	98	102	111	107	91	-	86	97
46H23	111	152	110	110	134	121	104	115	110	118	104	-	107	116
SP Admirable RR	104	126	109	88	109	103	104	116	116	122	96	-	88	107
CV														
CV	6	12	12	14	8	9	6	21	6	6	7	-	8	
LSD														
LSD	7	21	11	20	8	14	11	9	9	14	10	-	8	

CV – Coefficient of Variation gives an indication of the random variability in the test. The smaller the CV, the better the test.

LSD – Least Significant Difference means that if the difference between two varieties is less than the LSD, the varieties are not considered different.

PRAIRIE CANOLA VARIETY LONG SEASON ZONE RESULTS

Test 1													
Variety	Arden, MB	Boissevain, MB	Elgin, MB	High Bluff, MB	La Salle, MB	Letellier, MB	Outlook, SK	Rosebank, MB	Stonewall, MB	Swan Lake, MB	Treherne, MB	Zone Average	
B. napus													
46A65 yield (bushels/acre)	63	39	24	66	29	39	77	68	53	48	27		
46A65 %	100	100	100	100	100	100	100	100	100	100	100	100	
Conventional													
PR6450***	93	102	92	103	113	86	91	87	104	101	92	97	
46H02	118	125	130	117	111	120	116	114	105	110	125	117	
Clearfield													
6045CL	89	88	103	97	98	79	89	89	99	100	76	91	
Liberty													
5020	128	139	154	133	134	118	113	117	127	117	153	130	
Roundup													
LBD422RR	102	97	121	104	101	99	95	94	100	97	98	101	
LBD588RR	106	94	101	105	115	90	83	108	100	105	80	99	
7979-00*	101	98	129	109	112	76	98	113	102	93	107	104	
IMC109RR**	98	77	119	95	100	107	78	79	97	95	113	96	
IMC208RR**	77	65	109	76	67	61	61	50	79	68	64	71	
45H21	119	128	132	119	137	113	112	120	116	117	144	123	
Prairie 719RR	101	109	149	103	108	100	105	94	104	96	113	107	
Sw Hymark3944 RR	93	101	129	112	104	92	103	105	104	94	102	103	
SW Razor	104	103	112	112	123	101	96	108	104	103	122	108	
9550	103	96	120	104	113	91	97	100	98	93	112	102	
SW GladiatoRR	107	103	112	113	104	101	106	108	116	105	118	108	
SP Banner	110	109	120	102	100	91	92	93	91	101	106	101	
FORTUNE RR	102	95	115	107	93	84	104	85	105	100	87	98	
CV													
	6	9	9	6	7	13	9	7	8	8	12		
LSD													
	18	8	9	19	4	19	19	8	8	8	8		

* Not yet registered. ** Low linolenic variety. Yields expressed as % of check (46A65 and AC Sunbeam).

Test 2													
Variety	Arden, MB	Boissevain, MB	Elgin, MB	High Bluff, MB	La Salle, MB	Letellier, MB	Outlook, SK	Rosebank, MB	Stonewall, MB	Swan Lake, MB	Treherne, MB	Zone Average	
B. napus													
46A65 yield (bushels/acre)	60	35	28	67	30	41	68	64	57	48	33		
46A65 %	100	100	100	100	100	100	100	100	100	100	100	100	
Conventional													
Y0276	115	92	76	112	100	101	110	124	106	107	102	104	
SW WIZZARD	117	110	111	114	117	114	100	108	101	119	89	109	
Clearfield													
1604	99	86	99	97	93	82	87	99	105	102	81	94	
46A76	103	95	108	104	88	78	103	112	93	93	73	95	
Liberty													
5030	132	125	131	130	128	127	118	143	121	122	108	126	
PHS01-401	133	142	134	127	125	135	118	131	118	118	116	127	
Roundup													
512 RR	108	95	104	105	99	98	103	119	110	104	93	104	
LBD644R	108	115	117	104	95	99	118	94	105	104	81	104	
1812	109	84	105	105	95	93	104	107	93	97	73	97	
1841	108	104	128	114	100	106	123	119	115	115	104	112	
1849	103	103	106	108	93	90	104	101	101	102	78	99	
99RZ604***	103	59	80	98	80	94	80	101	78	90	77	86	
Victory v1010**	104	97	108	110	97	90	103	100	105	101	63	98	
34-55	105	93	116	106	91	94	108	97	102	94	76	98	
35-85	113	86	108	105	88	85	103	118	92	100	81	98	
46H23	116	129	113	114	107	88	114	110	109	115	97	110	
SP Admirable RR	108	111	118	107	98	101	105	114	113	98	90	106	
CV													
	7	10	6	6	12	12	9	6	11	10	14		
LSD													
	9	11	10	7	15	14	10	8	14	13	18		

CV – Coefficient of Variation gives an indication of the random variability in the test. The smaller the CV, the better the test.

LSD – Least Significant Difference means that if the difference between two varieties is less than the LSD, the varieties are not considered different.