STANDARD CANOLA

Canola Performance Trial Data:

All canola testing sites are divided into long, mid, and short-season zones. Only mid- and long-season zones apply to Manitoba.

All variety yields compared as a percentage of the the check, 45CM39. To maintain trial consistency, and reduce risk of clubroot affecting yield trials, the check variety is now a clubroot-resistant hybrid.

Canola yield trials are split into two categories: Standard Canola for traditionally swathed canola varieties, and Straight-Cut Canola on page 56 for varieties marketed with pod-shatter tolerance.

Yields derived over two or more growing seasons are the best indicator of variety performance. For new varieties, "Zone Average Yield" over all sites is more reliable than data from a single location. Use single site year data with caution.

Comments:

Variety decriptions summarize the performance of varieties tested in the 2020 Canola Performance Trials (CPT). Data donated by the CPT Committee. For more information visit www.canolaperformancetrials.ca.

Most varieties in the table below have a resistant (R) rating for Blackleg. Lesions and yield loss can still occur, based on the level of incoulum, blackleg pathotype in the field, in combination with evironmental conditions conducive for disease development.

Clubroot is a long-lived disease in the soil that can impact canola performance. Using clubroot resistant varietes in Rural Municipalities where clubroot has been found is highly recommended as a risk mitigation tool. To know for sure if your own fields have clubroot, soil testing is the only way to find out, prior to finding galls in the fields. See page 59 for the map indicating clubroot distribution in Manitoba.

Variety Description

		LONG Season Zone (5 sites)				MID Season Zone (8 sites)[1]					
Distributor	Name	Yield (%45CM39)	Maturity (Days)	Lodging (1-5)	Height (inches)	Yield (%45CM39)	Maturity (Days)	Lodging (1-5)	Height (inches)	Disease[2] Tolerance	Pod-Shatter Resistance
	Clearfield										
BrettYoung	BY 5105CL	94	87	2.1	49	97	89	2.4	48	BL/CR	N
Pioneer Hi-Bred	P502CL	102	89	2.2	47	96	87	2.7	46	BL	N
	LSD (%)	***20***				***19***					
	Liberty Link										
BASF - InVigor	L234PC	106	89	1.9	44	99	92	2.6	44	BL/CR	Y
BASF - InVigor	L241C	106	91	1.3	45	96	92	1.8	46	BL/CR	N
BASF - InVigor	L352C	117	94	1.8	48	103	95	2.4	48	BL/CR	N
Pioneer Hi-Bred	P501L	114	90	1.8	46	102	91	2.5	46	BL/CR	N
Proven Seeds	PV 680 LC	114	94	1.2	49	96	95	1.9	50	BL/CR	N
Proven Seeds	PV 681 LC	108	90	2.0	45	100	90	2.6	46	BL/CR	N
	LSD (%)	***12***				***11***					
	Roundup Ready										
Brevant	1028RR*	102	92	1.8	44	96	94	2.4	47	BL/CR	N
Pioneer Hi-Bred	45CM39	100	92	2.3	46	100	94	2.6	46	BL/CR	Y
Pioneer Hi-Bred	45CS40	109	91	1.8	48	99	92	2.2	52	BL/CR/S	N
Pioneer Hi-Bred	45H37	103	90	2.1	47	91	91	2.8	48	BL/CR	N
BrettYoung	6076 CR	96	94	1.8	48	93	95	2.6	49	BL/CR	N
WinField United Canada	CP20R3C	102	96	1.6	49	92	97	2.0	51	BL/CR	N
CANTERRA SEEDS	CS2300	104	95	1.9	50	97	95	2.4	50	BL	N
Brevant	D3155C	101	92	2.0	47	91	93	2.8	51	BL/CR	N
	LSD (%)	***12***				***10***					
	TruFlex										
BrettYoung	BY 6204TF	107	93	1.8	46	99	93	2.3	48	BL/CR	N
DEKALB	DKTF 98 CR	102	90	2.1	42	99	92	2.8	46	BL/CR	N
	LSD (%)	***12***				***10***					
CHECK MEAN 45CM39 (bu/ac)		58				57					

* Indicates varieties with specialty oil profiles and premiums associated with pricing. Visit www.canolaperformancetrials.ca for more details.

1 Clearfield hybrids tested at 3 Manitoba sites only.

2 Indicated genetic disease resistance with an "R" or "MR" resistant rating to BL=Blackleg, CR=Clubroot, and "S" = improved tolerance to sclerotinia, as based on variety descriptions submitted to CFIA.

Data presented is based on harvest data received as of October 21, 2020.

STANDARD CANOLA *(continued)*

Yield Comparisons

		2020 Yield (% 45CM39)													
		LONG SEASON ZONE					MID SEASON ZONE								
Distributor	**Name**	**High Bluff, MB**	**La Salle, MB**	**Lethbridge, AB**	**Melita, MB**	**Souris, MB**	**Dauphin, MB**	**Hague, SK**	**Kamsack, SK**	**Neepawa, MB**	**North Battleford, SK**	**Swan River, MB**	**Swift Current, SK**	**Vegreville, AB**
	Clearfield													
BrettYoung	BY 5105CL	104	100	—	96	76	101	—	—	103	—	87	—	—
Pioneer Hi-Bred	P502CL	93	95	—	95	125	106	—	—	91	—	92	—	—
	LSD (%)	***14***	***15***	***—***	***6***	***26***	***22***			***26***		***9***		
	Liberty Link													
BASF - InVigor	L234PC	99	106	101	93	129	109	89	96	103	103	84	115	91
BASF - InVigor	L241C	100	105	109	95	122	109	80	109	90	100	78	87	113
BASF - InVigor	L352C	112	114	127	104	128	116	96	110	111	108	86	87	111
Pioneer Hi-Bred	P501L	103	104	114	101	151	124	87	104	102	95	100	96	112
Proven Seeds	PV 680 LC	105	117	126	96	128	111	85	106	81	97	97	80	108
Proven Seeds	PV 681 LC	100	109	111	98	122	116	88	98	82	95	93	109	117
	LSD (%)	***7***	***26***	***10***	***6***	***9***	***9***	***13***	***6***	***13***	***8***	***14***	***13***	***9***
	Roundup Ready													
Brevant	1028RR*	95	102	112	96	103	90	94	93	105	92	93	92	112
Pioneer Hi-Bred	45CM39	100	100	100	100	100	100	100	100	100	100	100	100	100
Pioneer Hi-Bred	45CS40	103	99	117	96	130	104	88	100	115	95	95	85	106
Pioneer Hi-Bred	45H37	90	105	106	91	125	94	88	94	97	87	85	88	97
BrettYoung	6076 CR	101	77	97	98	106	87	88	99	99	101	83	74	111
WinField United Canada	CP20R3C	106	74	108	100	122	94	81	106	100	102	82	56	118
CANTERRA SEEDS	CS2300	107	100	107	97	106	103	94	100	102	104	94	66	115
Brevant	D3155C	100	92	87	99	125	93	84	104	96	96	87	70	97
	LSD (%)	***8***	***23***	***14***	***6***	***10***	***8***	***11***	***4***	***17***	***6***	***12***	***10***	***8***
	TruFlex													
BrettYoung	BY 6204TF	98	112	128	97	101	116	95	106	100	102	80	85	105
DEKALB	DKTF 98 CR	93	114	99	92	113	116	88	101	84	100	98	97	109
	LSD (%)	***8***	***23***	***14***	***6***	***10***	***8***	***11***	***4***	***17***	***6***	***12***	***10***	***8***
CHECK MEAN 45CM39 (bu/ac)		59	44	70	57	59	58	57	43	54	64	74	31	76
GRAND MEAN (bu/ac)		60	45	76	58	67	61	50	44	53	63	66	27	82
CV%		5.1	11.1	8.4	4.1	6.5	5.6	9.7	3.5	11.0	4.5	9.3	12.4	6.1

* Indicates varieties with specialty oil profiles and premiums associated with pricing. Visit www.canolaperformancetrials.ca for more details.

STRAIGHT-CUT CANOLA

Comments:

Variety decriptions summarize the performance of varieties tested in the 2020 Canola Performance Trials (CPT). Data donated by the CPT Committee. For more information visit www.canolaperformancetrials.ca.

Most varieties in the table below have a resistant (R) rating for Blackleg. Lesions and yield loss can still occur, based on the level of incoulum, blackleg pathotype in the field, in combination with evironmental conditions conducive for disease development.

Clubroot is a long-lived disease in the soil that can impact canola performance.Using clubroot resistant varietes in Rural Municipalities where clubroot has been found is highly recommended as a risk mitigation tool. To know for sure if your own fields have clubroot, soil testing is the only way to find out, prior to finding galls in the fields. See page 59 for the map indicating clubroot distribution in Manitoba.

No industry standard exists for pod-shatter tolerance ratings. Contact your seed distributor for details on how a specific variety performs.

Variety Description

		LONG Season Zone (6 sites)				MID Season Zone (9 sites)					
Distributor	Name	Yield (%45CM39)	Maturity (Days)	Lodging (1-5)	Height (inches)	Yield (%45CM39)	Maturity (Days)	Lodging (1-5)	Height (inches)	Disease[1] Tolerance	Pod-Shatter Resistance
	Liberty Link										
DEKALB	DKLL 82 SC	103	92	1.7	44	106	92	2.2	43	BL	Y
Brevant	B3010M	94	91	1.3	47	107	92	2.1	46	BL/CR	Y
BASF - InVigor	L233P	112	90	1.6	44	111	90	2.2	44	BL	Y
BASF - InVigor	L234PC	101	90	1.8	44	106	91	2.2	44	BL/CR	Y
BASF - InVigor	L255PC	107	93	1.2	46	114	94	1.7	45	BL/CR	Y
BASF - InVigor	L345PC	110	92	1.7	47	113	91	2.4	47	BL/CR	Y
	LSD (%)	***8***				***12***					
	Roundup Ready										
Pioneer Hi-Bred	45CM39	100	93	1.9	45	100	93	2.4	44	BL/CR	Y
BrettYoung	6090 RR	85	94	1.5	51	88	94	2.3	49	BL/CR	Y
DEKALB	75-65 RR	96	90	2.1	44	101	91	2.6	45	BL	Y
	LSD (%)	***9***				***13***					
	TruFlex										
CANTERRA SEEDS	CS2600 CR-T	98	90	2.6	44	104	92	3.0	44	BL/CR	Y
DEKALB	DKTF 96 SC	101	93	1.3	45	109	92	1.9	44	BL	Y
DEKALB	DKTFLL 21 SC*	103	92	2.0	43	109	91	2.6	43	BL	Y
Proven Seeds	PV 760 TM	99	90	1.8	45	108	91	2.3	45	BL	Y
Proven Seeds	PV 761 TM	103	93	1.4	48	106	93	2.1	49	BL	Y
	LSD (%)	***9***				***13***					
CHECK MEAN 45CM39 (bu/ac)			55				54				

* Indicates varieties with glyphosate and glufosinate herbicide tolerance. Visit www.canolaperformancetrials.ca for more details.

1 Indicated genetic disease resistance with an “R” or “MR” resistant rating to BL=Blackleg, CR=Clubroot, and “S” = improved tolerance to sclerotinia, as based on variety descriptions submitted to CFIA.

Yield Comparisons

		2020 Yield (% 45CM39)														
		LONG SEASON ZONE						MID SEASON ZONE								
Distributor	**Name**	**High Bluff, MB**	**La Salle, MB**	**Lethbridge, AB**	**Melita, MB**	**Scott, SK**	**Souris, MB**	**Dauphin, MB**	**Hague, SK**	**Kamsack, SK**	**Neepawa, MB**	**North Battleford, SK**	**St. Brieux, SK**	**Swan River, MB**	**Swift Current, SK**	**Vegreville, AB**
	Liberty Link															
DEKALB	DKLL 82 SC	96	88	114	98	121	100	108	97	95	127	94	105	119	120	94
Brevant	B3010M	97	80	107	100	101	77	114	108	100	124	97	103	111	100	100
BASF - InVigor	L233P	103	109	121	102	131	103	111	95	99	131	101	116	117	135	95
BASF - InVigor	L234PC	97	99	108	102	104	98	109	95	99	119	100	112	109	107	103
BASF - InVigor	L255PC	109	103	84	111	125	112	116	103	106	153	103	120	115	112	100
BASF - InVigor	L345PC	112	102	94	109	134	110	112	102	109	128	102	111	112	139	101
	LSD (%)	***5***	***10***	***11***	***7***	***6***	***6***	***5***	***10***	***4***	***18***	***4***	***20***	***15***	***21***	***9***
	Roundup Ready															
Pioneer Hi-Bred	45CM39	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
BrettYoung	6090 RR	92	46	101	96	102	75	87	88	99	73	98	87	98	63	98
DEKALB	75-65 RR	85	95	98	100	101	95	97	95	99	114	99	99	105	95	103
	LSD (%)	***6***	***11***	***12***	***7***	***11***	***6***	***5***	***16***	***4***	***15***	***5***	***18***	***14***	***35***	***8***
	TruFlex															
CANTERRA SEEDS	CS2600 CR-T	85	109	95	97	99	104	113	94	98	104	96	107	107	116	105
DEKALB	DKTF 96 SC	97	95	105	100	111	97	113	98	102	124	100	103	127	110	101
DEKALB	DKTFLL 21 SC*	89	104	101	99	116	109	111	100	97	132	98	108	115	115	102
Proven Seeds	PV 760 TM	86	100	113	100	96	97	110	108	98	116	100	105	115	120	102
Proven Seeds	PV 761 TM	97	95	114	95	115	99	111	100	97	132	98	108	115	108	107
	LSD (%)	***6***	***11***	***12***	***7***	***11***	***6***	***5***	***16***	***4***	***15***	***5***	***18***	***14***	***35***	***8***
CHECK MEAN 45CM39 (bu/ac)		62	47	56	61	32	70	55	41	48	48	70	40	66	27	89
GRAND MEAN (bu/ac)		60	45	59	61	35	68	60	40	48	57	69	42	73	30	89
CV%		4.1	8.1	10.7	5.1	3.9	5.5	3.2	9.7	2.6	9.6	3.8	12.2	9.0	11.8	6.0

* Indicates varieties with glufosinate and glyphosate herbicide tolerance. Visit www.canolaperformancetrials.ca for more details.

CLUBROOT RESISTANT CANOLA VARIETY LISTING — 2021

Comments:

No yield trials were conducted for the canola varieties in the following table. This listing is provided for your information only.

No industry standard exists for pod-shatter tolerance ratings. Contact your seed distributor for details on how a specific variety performs.

Clubroot:

Clubroot resistance is generally termed 1st or 2nd Generation, though labelling and terminology differs by seed distributor.
First-generation clubroot resistance confers resistance to clubroot pathotypes 2F 3H, 5I, 6M, and 8N, on the Canadian Clubroot Differential Set.

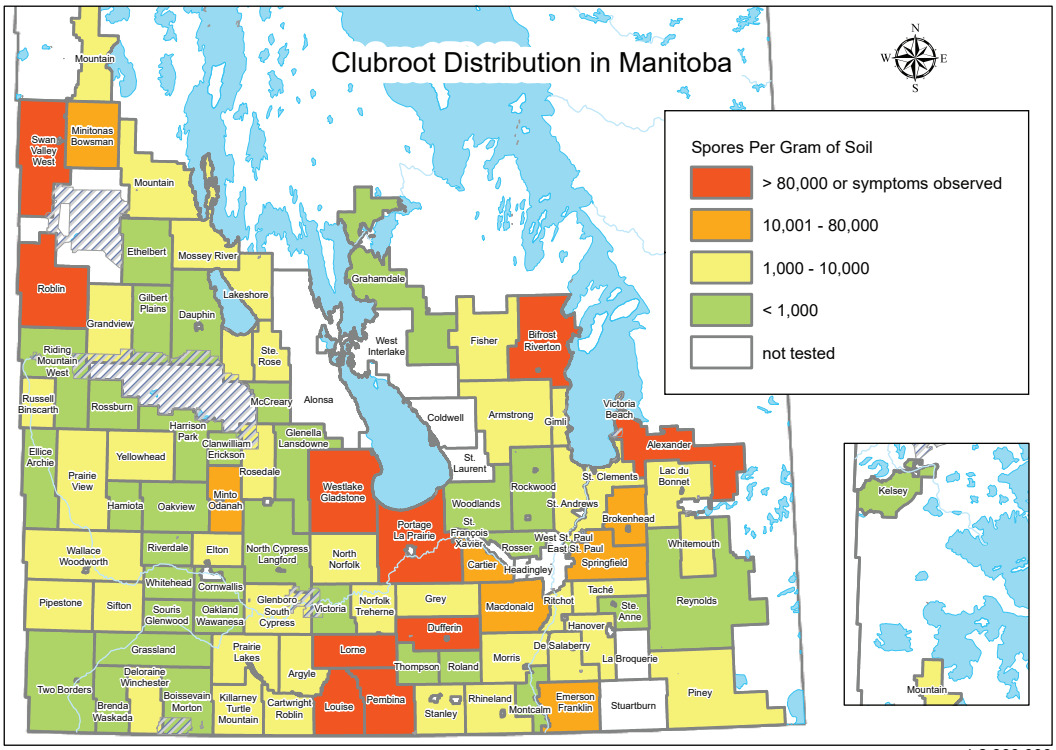
Second-generation resistance contains resistance to a varying set of pathotypes outside the original five first-generation pathotypes.

Blackleg:

All varieties listed here are resistant to blackleg (<30% infection of Westar check). Some seed distributors have chosen to provide backleg resistance grouping based on major-gene (qualitative) resistance within that variety. Quantitative resistance remains an important factor. Visit https://www.canolacouncil.org/canola-encyclopedia/diseases/blackleg/ for details on how resistance groups work.

			Clubroot Resistance		Blackleg Resistance		
Distributor	Hybrid	Herbicide Tolerance[1]	Resistance Rating	Resistance Generation[2]	Resistance Rating	Resistance Group	Pod Shatter Tolerance
BASF - InVigor	L241C	LL	R	1	R		
BASF - InVigor	L234PC	LL	R	1+2	R		Yes
BASF - InVigor	L255PC	LL	R	1	R		Yes
BASF - InVigor	L258HPC	LL	R	1	R		Yes
BASF - InVigor	L340PC	LL	R	1	R		Yes
BASF - InVigor	LR344PC	LL/TF	R	1	R		Yes
BASF - InVigor	L345PC	LL	R	1	R		Yes
BASF - InVigor	L352C	LL	R	1	R		
BrettYoung	6076 CR	RR	R	1+2	R	CE1	
BrettYoung	6090 RR	RR	R	1	R	CE1	Yes
BrettYoung	BY 5105CL	CL	R	1	R	C	
BrettYoung	BY 5125CL	CL	R	1	R	CE1	
BrettYoung	BY 6204TF	TF	R	1	R	CE1	
BREVANT seeds	1026 RR	RR	R	1	R		
BREVANT seeds	1028 RR	RR	R	1	R		
BREVANT seeds	2028 CL	CL	R	1	R		
BREVANT seeds	B3010M	LL	R	1+2	R		Yes
BREVANT seeds	B3011	LL	R	1	R		
BREVANT seeds	B2030MN	CL	R	1	R		Yes
BREVANT seeds	D3157C	RR	R	1	R		
BREVANT seeds	D3158CM	RR	R	1	R		Yes
Cargill - VICTORY	V14-1	RR	R	1	R	CE1	
Cargill - VICTORY	V24-1	RR	R	1	R	CE1	
Cargill - VICTORY	V25-3T	TF	R	1	R	BCE1	
Cargill - VICTORY	V25-5T	TF	R	1	R	BCE1	
CANTERRA SEEDS	CS2000	RR	R	1	R	CE1	
CANTERRA SEEDS	CS2600 CR-T	TF	R	1+2	R	C	Yes
CANTERRA SEEDS	CS2700 CL	CL	R	2	R	AE2	
DEKALB	75-42 CR	RR	R	1	R	AC	
DEKALB	DKTF 98 CR	TF	R	1	R	AC	
Pioneer Hi-Bred	44H44	RR	R	1			
Pioneer Hi-Bred	45CM39	RR	R	1+2	R		Yes
Pioneer Hi-Bred	45CS40	RR	R	1	R		
Pioneer Hi-Bred	45H33	RR	R	1	R		
Pioneer Hi-Bred	45H37	RR	R	1	R		
Pioneer Hi-Bred	P501L	LL	R	1	R		
Pioneer Hi-Bred	P505MSL	LL	R	1	R		yes
Pioneer Hi-Bred	P506ML	LL	R	1	R		Yes
Pioneer Hi-Bred	P607CL	CL	R	1	R		Yes
Nutrien Ag Solutions	PV 581 GC	RR	R	1	R		
Nutrien Ag Solutions	PV 585 GC	RR	R	1	R		
Nutrien Ag Solutions	PV 591 GCS	RR	R	1	R		
Nutrien Ag Solutions	PV 660 LCM	LL	R	1	R		Yes
Nutrien Ag Solutions	PV 680 LC	LL	R	1	R		
Nutrien Ag Solutions	PV 681 LC	LL	R	1	R		
Nutrien Ag Solutions	PV 780 TC	TF	R	1	R		
WinField United Canada	CP19R1C	RR	R	1	R	C	
WinField United Canada	CP20R3C	RR	R	1+2	R	CX	

1 Herbicide tolerance trait, LL = Liberty Link, RR = Roundup Ready, TF = TruFlex Roundup Ready, CL = Clearfield Herbicide System.
2 Second-generation (or next-generation) clubroot genetic resistance may demonstrate an enhanced resistance to certain clubroot pathotypes.



Author: Les Mitchell
Source: MB ARD Analysis
Date: November 9, 2020

Manitoba

CANADIAN AGRICULTURAL PARTNERSHIP | PARTENARIAT CANADIEN pour l'AGRICULTURE

Canada

1:2,300,000
0 25 50 100 Kilometers

FLAX

New for 2021

Variety	Code	Breeder	Distributor	Seed Availability
CDC Rowland	FP2513	Crop Development Centre	SeCan	2022
FP2573	FP2573	Crop Development Centre	SeCan	2023

Comments:

All variety descriptions other than yield are based on data from the Flax Cooperative Trials in the Prairie Provinces.

All varieties are immune to rust.

All varieties are susceptible to pasmo.

FP2573 is supported for registration by the Prairie Recommending Committee on Oilseeds (PRCO). It is recommended for producers to use the Canadian Food Inspection Agency's List of Registered Varieties (www.inspection.gc.ca) to determine registration status of varieties.

Variety Descriptions

Variety	Site Years Tested	Yield bu/acre	Maturity +/- 102 days	Height +/- 68 cm	Seed Color	Seed Size TSW	Oil Content	Oil Quality[1]: Iodine Number	Oil Quality[1]: ALA Content	Resistance Level: Lodging[2]	Resistance Level: Fusarium Wilt
AAC Bravo	30	34	1	0	brown	6.4	44.6	194.0	60.2	G	MR
AAC Bright	6	34	2	0	yellow	5.6	48.8	192.1	56.2	G	MR
AAC Marvelous	14	36	2	0	brown	5.8	47.1	192.1	55.8	G	MR
AAC Prairie Sunshine	16	34	3	3	brown	5.3	47.7	192.5	56.5	VG	MR
CDC Bethune	129	34	0	0	brown	5.8	45.6	188.6	54.7	G	MR
CDC Buryu	18	34	1	3	brown	5.9	45.3	189.9	54.6	G	MR
CDC Dorado	9	32	-1	-5	yellow	5.9	46.6	206.6	65.8	FG	MR
CDC Glas	27	36	1	3	brown	5.2	45.8	192.0	56.6	G	MR
CDC Neela	24	34	1	3	brown	5.7	45.5	194.4	59.1	G	MR
CDC Plava	21	34	-2	-3	brown	5.7	46.5	195.5	57.2	G	MR
CDC Rowland	14	37	4	0	brown	6.8	45.2	195.1	59.2	G	MR
CDC Sanctuary	27	35	3	2	brown	5.8	45.6	190.7	57.2	G	MR
CDC Sorrel	56	35	1	3	brown	6.4	45.1	192.7	57.8	F	MR
Hanley	70	33	-2	-5	brown	5.7	44.7	197.7	58.6	VG	R
Lightning	40	34	1	-5	brown	6.0	47.6	192.5	56.1	G	MR
Prairie Sapphire	35	35	2	-3	brown	5.8	48.1	193.1	57.2	G	MR
Topaz	12	33	0	0	brown	5.8	45.9	188.2	54.4	G	MR
VT50	23	34	4	-5	yellow	5.1	47.1	209.4	67.6	VG	MR
WestLin 60	13	32	-1	-5	brown	5.7	46.1	197.9	59.9	G	MR
WestLin 70	12	33	2	5	brown	6.4	45.8	194.5	61.9	G	MR
WestLin 71	15	34	2	-5	brown	5.6	47.5	198.1	61.2	G	MR
WestLin 72	24	34	3	-3	brown	5.4	47.0	192.8	57.0	VG	MR
Experimental lines that are being tested / proposed for registration in Canada											
FP2573	3	34	1	0	brown	6.5	45.4	191.6	57.3	VG	MR
GRAND MEAN (bu/ac)		34									
LSD (0.05)		1.7									

1 Oil quality of flax is based on the amount of linolenic acid measured in the seed or as measured by iodine value which is calculated from the fatty acid composition of the seed. A higher iodine value and/or higher ALA content indicates a higher overall oil quality in the seed.

2 E = Excellent; VG = Very Good; G = Good; FG = Fair to Good; F = Fair; PF = Poor to Fair; P = Poor.

Yield Comparisons

VARIETY		2020 Yield (bu/acre) Arborg	Boissevain	Roblin
AAC Marvelous		61	42	52
AAC Prairie Sunshine		58	32	48
CDC Dorado		50	28	42
CDC Glas		57	41	50
CDC Rowland		56	40	56
VT50		57	33	55
WestLin 72		46	36	50
Experimental lines that are being tested / proposed for registration in Canada				
FP2573		54	31	55
	SITE GRAND MEAN (bu/ac)	55	35	51
	CV%	11.7	7.6	8.0
	LSD (bu/ac)	—	5	7
	Sign Diff	No	Yes	Yes
	Seeding Date	13-May	01-Jun	12-May
	Harvest Date	08-Sep	14-Sep	14-Sep

SOYBEANS

NOTES FOR ALL SOYBEAN TABLES

Maturity Notes:

1 Soybean varieties have been organized into 4 maturity zones - very early, early, mid and long season areas.

2 Maturity grouping is a ranking of maturity provided by seed suppliers. Rankings are assigned to assist growers in selecting varieties suited for their area.

3 Relative days to maturity is the number of days from seeding to plant maturity (95% of the pods on plant are mature with seeds rattling in the pods when plant is shaken). Expressed as + or - days from the check. Caution needed when using only one year data to evaluate maturity and yield. Using multiple years will provide a better indication on how a variety will mature with different growing seasons. Actual days to maturity for the check is found in the grey characteristics check box at the bottom of the table.

General Notes:

1 Roundup Ready and Conventional soybean varieties are evaluated separately, meaning direct comparison of varieties between different tables is not possible. All trials are solid seeded at 210,000 seeds/acre.

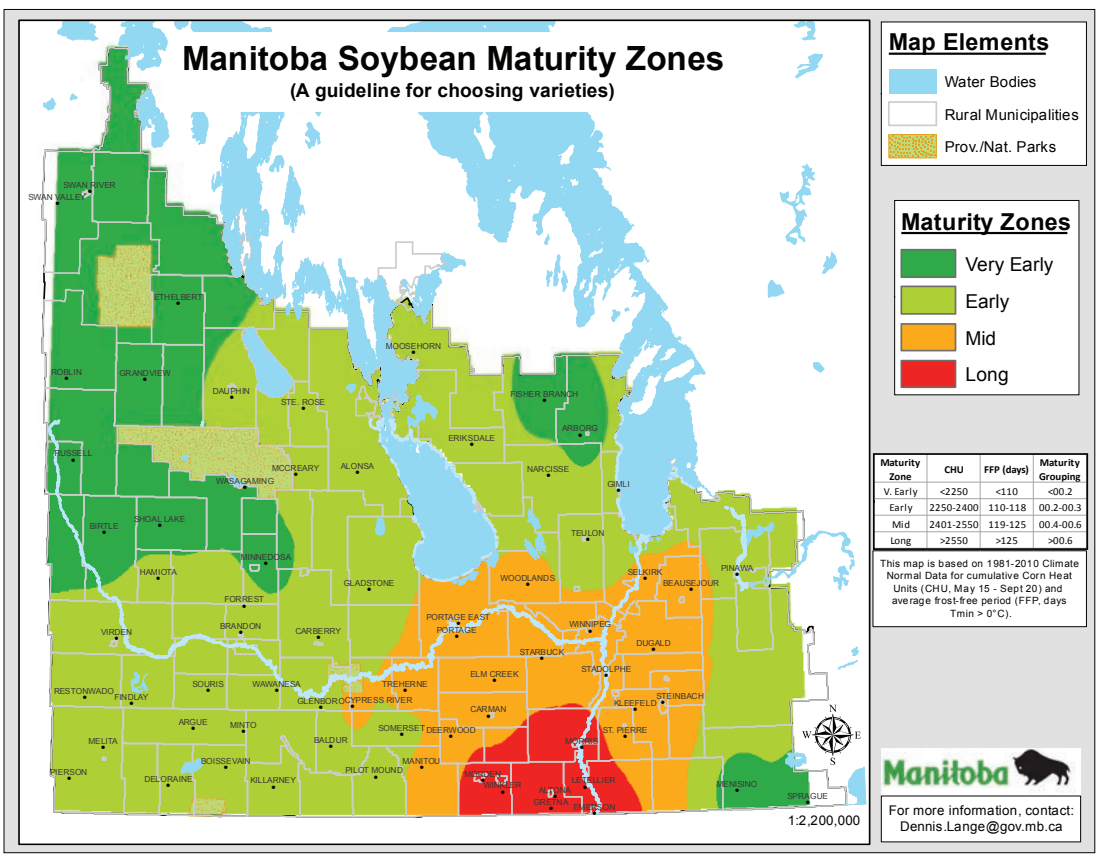
2 Hilum colour can range from Yellow (Y), Imperfect Yellow (IY), Grey (G), Brown (BR), Buff (BF), Tan(TN), Clear (CL), Imperfect Black (IB) or Black (BL) and is solely a marketing issue. The hilum is the point on the soybean seed where it attaches to the pod.

3 Iron Deficiency Chlorosis (IDC) rating scores 1=green leaves, 2=yellowish leaves, 3=green veins with yellow leaves, 4=brown dead tissue between green veins, 5=severe chlorosis and a stunted growing point. Ratings were taken from a site prone to iron chlorosis over the last 3 years. IDC tolerant varieties are varieties with lower IDC Scores and perform better on soils prone to iron deficiency.

4 Iron Deficiency Chlorosis (IDC) grouping is used because varieties will have different visual rating scores from year to year. Numerical ratings which are close but are in different groupings will show similar symptoms. Both numerical ratings and groupings should be considered together when judging IDC. Tolerant=leaves stayed green, Semi Tolerant=leaves turn yellow then turn green, Susceptible= leaves went chlorotic and had dead patches on their leaves and were often stunted.

MANITOBA SOYBEAN MATURITY MAP

The Soybean Maturity Map outlines the longest maturity suggested for each production area but earlier varieties can also perform well. Use in conjunction with Soybean Variety Description table which outlines varieties according to maturity zones.



WESTERN MANITOBA HERBICIDE TOLERANT SOYBEANS

Comments:

The Western Manitoba Soybean Variety trial data was provided by the Manitoba Pulse & Soybean Growers

Variety Descriptions

Maturity Zone	Variety	Yield % Check	Site Years Tested	Maturity days +/- Check[1]	IDC[2] Rating/Group	Resistance SCN[3]	Resistance PRR[4]	2020 Yield % of Akras R2 Boissevain	Dauphin	Hamiota	Melita	Swan River
	B00071RX	85	7	-13	1.7 / T	—	1k	78	77	104	96	85
Very	Amirani R2	90	7	-9	1.8 / ST	—	1k	90	91	109	94	80
Early	DKB002-32	104	5	-7	1.9 / ST	Yes	1k	99	103	118	103	94
Season	Fresco R2X	92	7	-7	2.2 / ST	—	—	80	86	115	94	103
Zone	NSC Watson RR2Y	94	27	-6	2.1 / ST	—	6	100	91	126	102	105
	B0011RX	108	5	-6	1.7 / T	—	1k	112	88	134	96	108
	NSC Wynyard RR2X	95	5	-5	2.3 / S	—	1a	94	83	118	85	96
	NocomaR2	85	17	-5	2.0 / ST	—	1c	67	78	81	81	74
	S0009-M2	95	27	-5	2.0 / ST	—	6	104	94	122	96	104
	RX000918	96	12	-3	1.8 / ST	Yes	1c	111	94	127	105	78
	DKB0005-44	91	12	-3	1.9 / ST	Yes	1c	93	83	107	98	93
	Fisher R2X	97	7	-3	1.8 / ST	Yes	1k	106	97	126	103	72
	TH89004 R2X	101	7	-2	1.8 / ST	—	1c	114	95	115	96	96
	S001-D8X	108	5	-2	2.0 / ST	—	1c	106	97	116	101	124
	Torro R2	95	17	-1	2.2 / ST	—	—	107	90	116	101	95
	PV 15s0009 R2X	99	11	-1	2.1 / ST	Yes	1c	104	97	123	97	109
	P003A97X	98	7	-1	1.9 / ST	Yes	1k	90	100	120	97	88
	S003-Z4X	107	7	-1	1.9 / ST	—	1c	100	102	134	104	106
Early	P001A48X	100	7	-1	1.7 / T	—	1c	96	98	124	93	108
Season	Mahony R2	100	29	-1	2.9 / S	—	—	106	96	123	101	—
Zone	SI 001XTN	97	12	-1	1.7 / T	Yes	1k	85	104	116	106	79
	S007-Y4	102	30	-1	2.0 ST	—	1c	107	112	136	103	—
	Prince R2X	97	11	-1	1.8 / ST	—	1k	98	95	129	102	107
	Devo R2X	89	7	-1	1.8 / ST	—	—	84	80	112	93	78
	Renuka R2X	106	6	0	1.7 / T	—	1c	106	100	129	105	—
	TH 88005R2XN	95	9	0	1.8 / ST	Yes	1c	100	103	98	100	—
	P005A83X	106	7	0	1.8 / ST	Yes	1c	104	105	126	100	112
	NSC Redvers RR2X	97	10	0	1.9 / ST	Yes	1c	118	92	125	106	—
	Akras R2	100	31	0	1.7 / T	—	1c	100	100	100	100	100
	SI 000919XT	100	5	0	1.7 / T	—	—	91	89	122	104	89
	DKB0009-89	99	12	0	1.9 / ST	Yes	1c,1k	113	101	117	106	98
	NSC Newton RR2X	86	15	0	2.0 / ST	—	—	93	85	103	92	—
	Sunna R2X	102	10	1	1.7 / T	Yes	1c	98	104	135	106	—
	S005-C9X	112	4	1	2.3 / S	—	1c	112	98	130	106	—
	TH 87003 R2X	95	18	1	1.8 / ST	Yes	1c	84	86	96	99	74
Mid	B0030L1	94	7	2	1.9 / ST	—	—	88	93	111	95	83
Season	Bourke R2X	103	6	2	1.9 / ST	—	1k	104	107	116	101	—
Zone	P006A37X	108	11	2	1.8 / ST	—	1c	107	112	124	107	110
	PS 0068 XR	110	4	3	1.8 / ST	—	1c	114	94	120	108	—
	P005A27X	100	12	3	1.9 / ST	—	1c	85	98	111	103	102
	Merritt R2X	106	4	3	1.9 / ST	Yes	1c,1 k	91	103	120	108	—
	PV 16s004 R2X	99	10	3	1.8 / ST	Yes	1k	109	100	116	95	—
	Kudo R2X	102	6	3	1.7 / T	—	—	110	99	116	97	—
	CHECK CHARACTERISTICS						**Akras R2** (bu/ac)	48	45	55	66	44
	Akras R2	54	31	124			CV %	13.0	4.3	4.4	3.8	8.2
		bu/acre	site years	days			LSD %	21	7	8	6	13
							Sign Diff.	Yes	Yes	Yes	Yes	Yes
							Seeding Date	28-May	15-May	16-May	19-May	25-May
							Harvest Date	26-Sep	02-Oct	01-Oct	18-Sep	13-Oct

1 Relative days to maturity based on multiple year average. Due to the frost no maturity data from Hamiota was used.
2 Iron Deficiency Chlorosis (IDC) Groupings - These ratings determined at a separtate trial near Winnipeg that is prone to IDC T=Tolerant, ST=Semi-Tolerant, S=Suceptible.
3 SCN - Soybean Cyst Nematode Resistance.
4 PRR - Phytophthora Race Specific Resistant Genes.

EASTERN MANITOBA CONVENTIONAL SOYBEANS

Comments:

The Conventional Soybean variety trial data was donated by Manitoba Pulse & Soybean Growers.

Variety Descriptions

Maturity Zone	Variety	Yield % Check	Site Years Tested	Maturity (days)[1] +/- of Check	Hilum Colour	IDC[2] Rating/Group
	Norfolk	94	20	-6	IY	2.3 / S
Early	Fjord	95	12	-4	IY	1.9 / ST
Season	AAC Halli	101	39	-3	Y	2.1 / ST
Zone	Siberia	110	11	-2	IY	1.9 / ST
	OAC Prudence	100	136	0	Y	1.6 / T
	Maxus	99	18	0	IY	2.0 / ST
	Reynolds	107	17	2	IY	2.3 / S
	Liska	118	6	4	IY	2.3 / S
Mid	Kebek	100	17	6	Y	1.8 / ST
Season	Abaca	127	3	6	IY	1.8 / ST
Zone	DH863	96	25	6	IY	2.3 / S
	Experimental lines that are being tested / proposed for registration in Canada					
	SVX21T000S1	110	6	1	IY	2.1 / ST
	SVX21T00S2	108	6	3	IY	1.7 / T
	CER10-11.97	101	6	5	IY	1.9 / ST
	CER14-640	106	6	5	IY	2.1 / ST
	PR130167Z1-02	111	3	6	BR	1.8 / ST
	Meteor	100	17	7	IY	2.3 / S
	Aurelina	116	3	8	IY	1.9 / ST
Long	Maya	101	3	9	IY	1.7 / T
Season	Stanley	113	6	10	IY	2.1 / ST
Zone	Astor	114	12	12	Y	2.0 / ST
	Experimental lines that are being tested / proposed for registration in Canada					
	CER14-142	111	6	9	Y	2.1 / ST
	DL18.3004	117	6	11	Y	2.1 / ST
CHECK CHARACTERISTICS						
OAC Prudence		47 bu/acre	136 site years	112 days		

1 Maturity Ratings are averaged across Carman, Morris, Portage, St. Adolphe

2 Iron Deficiency Chlorosis (IDC) Groupings - These long term ratings determined at a separate trial near Winnipeg that is prone to IDC T=Tolerant, ST=Semi-Tolerant, S=Susceptible

Yield Comparisons

Maturity Zone	Variety	2020 Yield % of OAC Prudence					
		Early Sites			Core Sites		
		Arborg	Beausejour	Stonewall	Carman	Morris	Portage
Early Season Zone	Norfolk	84	63	85	97	95	106
	Fjord	92	87	87	111	100	92
	AAC Halli	90	89	113	100	98	103
	Siberia	106	97	95	121	116	115
	OAC Prudence	100	100	100	100	100	100
	Maxus	—	—	—	106	103	98
	Reynolds	94	94	109	107	107	100
	Liska	—	—	—	121	118	110
	Kebek	99	87	92	111	118	107
Mid Season Zone	Abaca	—	—	—	133	134	117
	DH863	—	—	—	99	99	87
	Experimental lines that are being tested / proposed for registration in Canada						
	SVX21T000S1	112	97	104	132	103	112
	SVX21T00S2	105	108	105	126	105	103
	CER10-11.97	104	103	99	99	108	91
	CER14-640	103	110	105	103	112	100
	PR130167Z1-02	—	—	—	124	110	103
Long Season Zone	Meteor	100	102	99	96	97	88
	Aurelina	—	—	—	127	117	108
	Maya	—	—	—	105	102	96
	Stanley	—	—	—	109	112	91
	Astor	—	—	—	104	110	97
	Experimental lines that are being tested / proposed for registration in Canada						
	CER14-142	110	116	116	110	121	95
	DL18.3004	—	—	—	114	112	99
Check Characteristics OAC Prudence (bu/acre)		44	52	32	40	51	52
	CV%	7	10	7	9	4	7
	LSD%	12	16	11	16	8	11
	Sign Diff.	Yes	Yes	Yes	Yes	Yes	Yes
	Seeding Date	15-May	20-May	23-May	26-May	22-May	03-Jun
	Harvest Date	29-Sep	07-Oct	24-Sep	01-Oct	29-Sep	06-Oct

WESTERN MANITOBA CONVENTIONAL SOYBEANS

Comments:

The Western Manitoba Conventionals data was provided by Manitoba Pulse & Soybean Growers

Variety Descriptions

Maturity Zone	Variety	Yield % Check	Site Years Tested	Hilum Colour	Maturity (days)[1] + / - of Check	2020 Yield % OAC Prudence Melita	2020 Yield % OAC Prudence Swan RIver
Early	Ambella	98	2	BR	-9	95	103
Season	AAC Halliⓘ	93	6	Y	-3	103	82
Zone	Fjord	95	6	IY	-3	95	105
	Siberia	103	4	IY	-2	102	109
	Liskaⓘ	111	2	IY	-1	100	112
Mid	OAC Prudence	100	9	Y	0	100	100
Season	Maxus	95	6	Y	0	93	100
Zone	Mayaⓘ	97	2	IY	4	88	89
	Experimental lines that are being tested / proposed for registration in Canada						
	PR130933Z-05	92	2	Y	-1	95	89
	PR130167Z1-02	90	2	BR	4	98	81
CHECK CHARACTERISTICS						**OAC Prudence** (bu/ac)	39	31
	OAC Prudence (bu/ac)	36 bu/acre	9 site years		118 days	CV%	4.1	9.2
						LSD%	7	15
						Sign Diff	Yes	Yes
						Seeding Date	21-May	04-Jun
						Harvest Date	17-Sep	13-Oct

1 Maturity Rating locations - Melita and Swan River. Actual maturity will depend on seasonal growing conditions.

EASTERN MANITOBA HERBICIDE TOLERANT SOYBEANS

The Eastern Manitoba Herbicide Tolerant soybean data was provided by Manitoba Pulse & Soybean Growers.

Variety Descriptions

Maturity Zone	Variety	Type[1]	Yield % Check	Site Years Tested	Maturity (days)[2] +/- of Check	Hilum Colour	IDC[3] Rating/Group	Resistance SCN[4]	Resistance PRR[5]
	Fresco R2X	R2X	79	6	-10	BL	2.2 / ST	—	—
Very	B0011RX	R2X	83	6	-9	TN	1.7 / T	—	1k
Early	NSC Wynyard RR2X	R2X	78	6	-9	BL	2.3 / S	—	1a
Season	S001-D8X	R2X	95	6	-6	IY	2.0 / ST	—	1c
Zone	Devo R2X	R2X	90	17	-6	BR	1.9 / ST	—	—
	SI 000919XT	R2X	89	6	-5	BL	1.7 / T	—	—
	Torro R2	R2Y	96	15	-5	BL	2.2 / ST	—	—
	RX000918	R2X	97	11	-5	BL	1.8 / ST	Yes	1c
	P001A48X	R2X	96	11	-4	TN	1.7 / T	—	1c
Early	NSC Culross RR2X	R2X	100	11	-4	BL	1.7 / T	—	1c
Season	NSC Redvers RR2X	R2X	94	11	-4	BL	1.9 / ST	Yes	1c
Zone	SI 001XTN	R2X	102	17	-3	BL	1.7 / T	Yes	1k
	Prince R2X	R2X	92	17	-3	BL	1.8 / ST	—	1k
	Akras R2	R2Y	102	21	-3	BL	1.7 / T	—	1c
	TH89004 R2X	R2X	89	11	-3	BR	1.8 / ST	—	1c
	S007-Y4	R2Y	105	21	-2	IY	2.0 / ST	—	1c
	S006-M4X	R2X	98	11	-2	IY	1.9 / ST	—	1c
	S003-Z4X	R2X	102	6	-2	BF	1.9 / ST	—	1c
	Renuka R2X	R2X	102	6	-2	LB	1.7 / T	Yes	1c
	P005A83X	R2X	100	11	-1	BL	1.8 / ST	Yes	1c
	S005-C9X	R2X	102	6	-1	BL	2.3 / S	—	1c
	RX Acron	R2X	107	8	-1	BL	1.8 / ST	Yes	—
	B0030L1	R2Y	95	11	-1	BR	1.9 / ST	—	—
	Sunna R2X	R2X	103	17	0	GR	1.7 / T	Yes	1c
Mid	Bourke R2X	R2X	103	17	0	BL	1.8 / ST	—	1k
Season	Merritt R2X	R2X	104	6	0	Bl	1.9 / ST	Yes	1c,1 k
Zone	Foote R2	R2X	96	21	0	IY	1.8 / ST	—	1c
	P005A27X	R2X	101	17	0	BR	1.9 / ST	—	1c
	P007A90R	RR1	100	22	0	BL	1.7 / T	Yes	1c
	PS 0068 XR	R2X	104	12	0	BL	1.8 / ST	—	1c
	NSC Sperling RR2Y	R2Y	107	17	0	IY	1.7 / T	—	1a, 3a
	P006A37X	R2X	109	17	0	BR	1.8 / ST	—	1c
	DKB003-29	R2X	98	21	0	BL	1.7 / T	Yes	—
	DKB002-32	R2X	103	6	0	BR	1.9 / ST	Yes	1k
	NSC Cartier RR2X	R2X	105	6	1	BL	2.0 / ST	—	3a
	B0040L1	R2Y	96	17	1	BR	1.7 / T	—	—
	Barker R2X	R2X	103	17	1	BL	1.8 / ST	Yes	1k
	TH 87003 R2X	R2X	96	21	1	BL	1.8 / ST	Yes	1c
	PV 16s004 R2X	R2X	101	17	1	BL	1.9 / ST	Yes	1k
	PV 19s006R2X	R2X	92	10	1	IB	2.0 / ST	Yes	1c
	DKB005-52	R2X	103	22	2	BL	1.8 / ST	Yes	1c
	S007-A2XS	R2X	110	6	2	GR	1.9 / ST	—	—
	Kudo R2X	R2X	105	4	2	BL	1.7 / T	—	—
	P007A08X	R2X	110	5	2	GR	1.8 / ST	—	1c
	B0066L1	R2Y	98	9	2	Y	1.9 / ST	Yes	1k
	Elmo E3	E3	107	4	2	BR	1.8 / ST	Yes	—
	RX00797	R2X	97	20	2	BL	1.7 / T	Yes	1c

(continued) EASTERN MANITOBA HERBICIDE TOLERANT SOYBEANS

Maturity Zone	Variety	Type[1]	Yield % Check	Site Years Tested	Maturity (days)[2] +/- of Check	Hilum Colour	IDC[3] Rating/Group	Resistance SCN[4]	Resistance PRR[5]
	PS 0074 R2	R2Y	107	17	3	BR	1.7 / T	—	—
	TH 88007R2X	R2X	102	18	3	BL	1.9 / ST	—	1c
	PV 12s007 R2X	R2X	101	21	3	BL	1.9 / ST	—	—
Long	TH 88005R2XN	R2X	100	18	3	BL	1.8 / ST	Yes	1c
Season	P00A49X	R2X	105	12	4	BR	1.7 / T	Yes	1c
Zone	SI 007XTN	R2X	106	14	4	BL	1.8 / ST	Yes	1c
	DKB006-29	R2X	104	18	5	BL	1.7 / T	—	1k
	NSC Winkler RR2X	R2X	106	12	5	BL	1.8 / ST	Yes	1c
	PV 10s005 RR2	R2Y	107	15	5	BL	1.9 / ST	—	—
	NSC Aubigny RR2X	R2X	98	4	6	BL	1.6 / T	Yes	1k
	TH89009 R2XN	R2X	108	8	6	BL	1.6 / T	Yes	1k
	Astro R2	R2Y	110	8	7	BL	1.7 / T	—	1k
	Vidar R2X	R2X	104	14	8	BL	1.7 / T	Yes	1c
CHECK CHARACTERISTICS									
	P007A90R		43 bu/acre	22 site years	114 days				

1 R2X -Xtend technology, R2Y-Roundup-Ready 2 technology, RR1 - Roundup Ready 1 technology, E3 Enlist - 2-4D Tolerant.
2 Maturity Ratings are averaged across Carman, Morris, Portage, St. Adolphe sites over multiple years.
3 Iron Deficiency Chlorosis (IDC) Groupings -These ratings determined at a separate trial near Winnipeg that is prone to IDC T=Tolerant, ST=Semi-Tolerant, S=Susceptible.
4 SCN - Soybean Cyst Nematode Resistance.
5 PRR - Phytophthora Race Specific Resistant Genes.

EASTERN MANITOBA HERBICIDE TOLERANT SOYBEANS

Yield Comparisons

		2020 Yield: % of P007A90R					
		Early Site		Core Site			
Maturity Zone	Variety	Beausejour	Stonewall	Carman	Morris	Portage	St Adolphe
	Fresco R2X	78	83	94	74	71	75
Very	B0011RX	63	97	109	67	74	102
Early	NSC Wynyard RR2X	74	80	91	72	79	73
Season	S001-D8X	91	90	104	88	101	97
Zone	Devo R2X	86	87	96	77	89	90
	SI 000919XT	64	83	116	85	98	90
	RX000918	80	102	121	89	99	92
	P001A48X	91	99	107	92	88	103
Early	NSC Culross RR2X	94	99	101	102	104	113
Season	NSC Redvers RR2X	87	97	114	102	92	95
Zone	SI 001XTN	83	108	123	99	100	111
	Prince R2X	80	93	111	92	85	97
	Akras R2	89	94	99	72	96	110
	TH89004 R2X	72	92	108	89	91	82
	S007-Y4	87	115	122	106	109	122
	S003-Z4X	79	106	122	102	107	102
	Renuka R2X	91	102	118	98	108	96
	P005A83X	79	97	115	104	98	113
	S005-C9X	84	111	125	99	99	96
	RX Acron	—	—	110	103	104	112
	B0030L1	80	95	118	95	95	99
	Sunna R2X	84	107	113	104	112	103
	Bourke R2X	82	103	112	101	99	115
	Merritt R2X	98	108	109	98	102	118
	Foote R2	83	103	107	106	99	101
	P005A27X	106	88	100	95	99	107
Mid	P007A90R	100	100	100	100	100	100
Season	PS 0068 XR	—	—	112	111	87	93
Zone	NSC Sperling RR2Y	105	115	117	101	106	106
	P006A37X	109	122	123	113	117	112
	DKB003-29	97	95	115	94	94	103
	DKB002-32	93	104	106	107	99	110
	NSC Cartier RR2X	99	105	123	107	93	103
	B0040L1	88	97	124	103	107	111
	Barker R2X	—	—	122	109	96	114
	TH87003 R2X	86	90	98	88	87	99
	PV 16s004 R2X	86	105	109	105	104	111
	PV 19s006R2X	93	101	100	89	98	97
	DKB005-52	100	104	129	107	105	113
	S007-A2XS	103	112	119	97	117	120
	Kudo R2X	—	—	104	99	107	111
	B0066L1	—	—	110	101	94	102
	Elmo E3	—	—	107	102	114	106
	RX00797	78	95	108	91	93	99

(continued) EASTERN MANITOBA HERBICIDE TOLERANT SOYBEANS

Maturity Zone	Variety		2020 Yield: % of P007A90R					
			Early Site		Core Site			
			Beausejour	Stonewall	Carman	Morris	Portage	St Adolphe
Long Season Zone	PS 0074 R2		—	—	106	114	111	113
	TH 88007R2X		87	104	112	102	97	102
	PV 12S007 R2X		92	98	112	103	93	104
	TH 88005R2XN		95	99	122	104	92	92
	P00A49X		—	—	120	99	111	106
	SI 007XTN		81	98	131	104	91	103
	DKB006-29		—	—	127	103	108	107
	NSC Winkler RR2X		—	—	114	102	93	113
	TH89009 R2XN		—	—	105	95	105	109
	Vidar R2X		—	—	112	100	105	97
Check Characteristics		**P007A90R** (bu/ac)	55	43	48	58	54	32
		CV %	9.1	6.6	6.9	5.5	7.4	7.8
		LSD %	13	11	12	9	12	13
		Sign Diff	Yes	Yes	Yes	Yes	Yes	Yes
		Seeding Date	19-May	23-May	26-May	22-Oct	03-Jun	20-May
		Harvest Date	08-Oct	29-Sep	01-Oct	30-Sep	06-Oct	22-Sep

SUNFLOWERS - NON-OIL TYPE (CONFECTIONARY)

Comments:

These varieties were tested and data donated by the Manitoba Crop Alliance (MCA). More details on these trials can be found on the MCA webiste: www.mbcropalliance.ca.

All sunflowers varieties listed are susceptible to sclerotinia and sunflower rust strains present in Manitoba.

Genetic resistance to verticillium wilt is rated as moderately susceptible to moderately resistant for all sunflower varieties presented.

Variety Descriptions

Company	Hybrid	Genetic Traits[1]	Site Years	Yield % Check	Maturity (days to R9)	Height (inches)	2020 Seed Sizing (%)[2] >22/64	>20/64	<20/64
NuSeed America	6946 DMR	DM	27	100	0	0	19	36	45
NuSeed America	Panther DMR	DM	35	100	0	-3	69	23	8
Experimental lines tested/proposed for registration in Canada									
CHS	RH1121	Conventional	2	114	3	1	72	19	9
CHS	RH208-EX	ExSun	2	110	5	-2	63	24	13
MCA	EX 35957	ExSun	2	115	-4	2	72	20	8
MCA	EX 40057	ExSun	2	100	2	-1	69	22	9
MCA	EX 57101	ExSun	2	108	-1	1	73	20	7
	CHECK CHARACTERISTICS								
	6946 DMR		27 site years	3128 lbs/ac	122 days	67 inches			

1 Genetic traits include CL = Clearfield tolerance; ExSun = Express tolerance; DM = Downy Mildew Resistance.
2 Totals may not add to 100% due to rounding.

Site Comparisons

Hybrid	Elm Creek Yield (lb/ac)	Maturity[1] (days to R9)	2020 Seed Sizing (%)[2] >22/64	>20/64	<20/64	Test Wt (lb/bu A)	Rossendale Yield (lb/ac)	Maturity[1] (days to R9)	2020 Seed Sizing (%)[2] >22/64	>20/64	<20/64	Test Wt (lb/bu A)
6946 DMR	2106	119	4	31	66	23.7	2482	126	34	41	25	21.9
Panther DMR	2219	118	58	30	12	20.7	2471	119	80	15	5	21.9
Experimental lines being tested/proposed for registration in Canada												
EX 35957	2749	119	58	30	12	23.9	2525	119	86	10	4	20.5
EX 40057	2148	123	48	36	16	24.3	2438	125	91	7	2	20.8
EX 57101	2419	119	57	32	11	19.6	2521	124	89	8	4	17.8
RH1121	2325	124	55	31	15	22.3	2915	127	90	8	3	19.9
RH208-EX	2368	125	47	32	22	21.1	2683	130	79	17	5	18.7
Site Average	2333	121				22.2	2577	124				20.2
CV%	8.5						5.4					
Sign Diff	No						Yes					
LSD (0.05)	—						264					
Planting Date	21-May						22-May					
Desiccation Date	—						—					
Harvest Date	06-Oct						07-Oct					

1 Physiological maturity for sunflowers is R9, where the bracts on the head are almost completely brown.
2 Totals may not add to 100% due to rounding.

SUNFLOWERS - OIL TYPE

Comments:

These varieties were tested and data donated by the Manitoba Crop Alliance (MCA). More details on these trials can be found on the MCA website: www.mbcropalliance.ca.

Oil Sunflower markets - include birdfood, oil crush and de-hull. Variety selection become more important when trying to capture de-hul lmarkets. Choose varieties with better de-hull ratio, larger size and higher test weight. Environment will contribute greatly to final product.

Variety Descriptions

Company	Variety	Herbicide/Disease[1] Tolerance	Site Years	Yield % check	Maturity[2] (% check)	Height (inches)	% Oil	Oil[3] Type	Test[4] Weight
Corteva	P63HE60	ExSun / DM	14	96	-2	0	44.9	HO	32.5
Corteva	P63ME70	ExSun / DM	19	100	0	0	44.6	NS	30.1
Corteva	P63ME80	ExSun / DM	17	95	1	0	48.4	NS	31.6
NuSeed Americas	N4HE302 E	ExSun	8	88	-3	1	44.4	HO	29.5
NuSeed Americas	N4HM354	CL / DM	14	104	-1	-4	47.6	NS	33.7
NuSeed Americas	Talon	ExSun	17	97	-3	-4	42.5	NS	28.9
Experimental lines tested/proposed for registration in Canada									
Corteva	PH_experimental	ExSun	2	105	-1	4	43.8	HO	27.1
CHS	8D310CL	CL	2	106	2	2	39.6	CO	25.0
NuSeed Americas	N5LM307	CL	4	103	-2	-7	41.8	CO	27.6
WinField United	CP432E	ExSun	2	107	-3	0	43.1	NS	27.5
WinField United	CP455E	ExSun	2	112	2	1	44.1	HO	26.9
WinField United	CP4909E	ExSun	2	98	-1	-3	44.9	HO	29.4
	CHECK CHARACTERISTICS								
	P63ME70		19 site years	3236 lb/ac	124 days	69 inches			

1 Genetic traits include CL = Clearfield tolerance; ExSun = Express tolerance; DM = Downy Mildew Resistance.
2 Physiological maturity for sunflowers is R9, where the bracts on the head are almost completely brown.
3 Oil Type include NS=NuSun; HO=High Oleic; CO = ConOil.
4 Test weights reported in lbs per Avery (Canadian) bushel.

Site Comparisons

	Elm Creek					Rossendale				
Hybrid	Yield (lb/ac)	Moisture (%)	Maturity[1] (days to R9)	Test Wt (lb/bu)	Oil (%)	Yield (lb/ac)	Moisture (%)	Maturity[1] (days to R9)	Test Wt[2] (lb/bu)	Oil (%)
N4HE302 E	2293	8.4	119	28.1	44.9	1923	10.8	119	23.1	43.9
N4HM354	2540	7.0	118	31.5	48.7	2595	13.5	126	28.3	46.4
Talon	2518	7.3	119	27.9	44.7	1990	12.9	119	20.5	40.3
P63HE60	2133	7.1	123	28.8	45.0	2136	12.9	123	27.2	44.8
P63ME70	2275	9.6	125	26.9	46.0	2361	10.2	126	23.2	43.2
P63ME80	2223	6.9	119	29.2	47.7	2404	14.1	128	26.6	49.0
Experimental lines being tested/proposed for registration in Canada										
8D310CL	2450	8.8	126	26.4	39.6	2454	12.4	128	23.5	39.6
PH_experimental	2286	6.7	123	29.4	43.8	2603	10.9	126	24.8	43.7
N5LM307	2633	9.2	117	27.3	41.3	2456	14.2	126	21.7	42.3
CP432E	2309	6.9	119	29.0	42.5	2655	11.1	126	26.0	43.7
CP455E	2424	8.6	125	28.7	44.2	2776	13.9	130	25.1	43.9
CP4909E	2388	7.3	123	31.2	45.2	2178	14.0	126	27.6	44.6
Site Average	2380	7.8	121	28.7	44.5	2377	12.5	125	24.8	43.8
CV%	6.2					5.5				
Sign Diff	Yes					Yes				
LSD (0.05)	250					294				
Planting Date	21-May					22-May				
Desiccation Date	—					—				
Harvest Date	06-Oct					07-Oct				

1 Physiological maturity for sunflowers is R9, where the bracts on the head are almost completely brown.
2 Test weights reported in lbs per Avery (Canadian) bushel.