



Feature

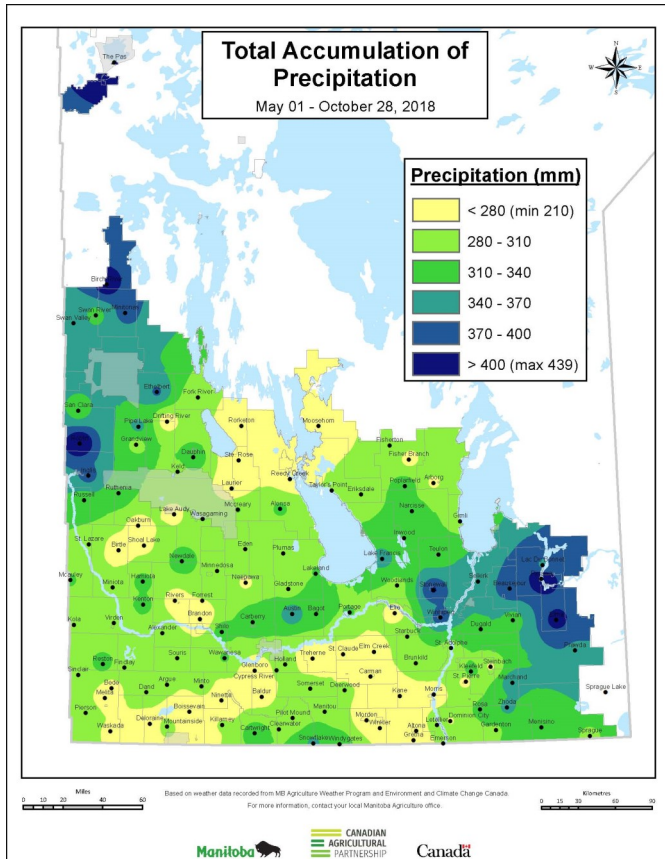
2018 Sunflower Variety Performance

The Manitoba Sunflower Variety Performance Trials (VPT) is organized and conducted by the National Sunflower Association of Canada (NSAC) in co-ordination with Manitoba Agriculture. This was the 12th year that the NSAC has coordinated the trials, which continue to serve as an important tool for sunflower growers with regional third-party performance data on various varieties. The hybrids tested in the trials are actively being pursued by sunflower breeding companies in Manitoba and may be in the experimental stage or registered under the Canadian Food Inspection Agency. In 2018, the NSAC coordinated the VPT in four locations across the province: Melita, Carberry, Marquette and Rossendale.

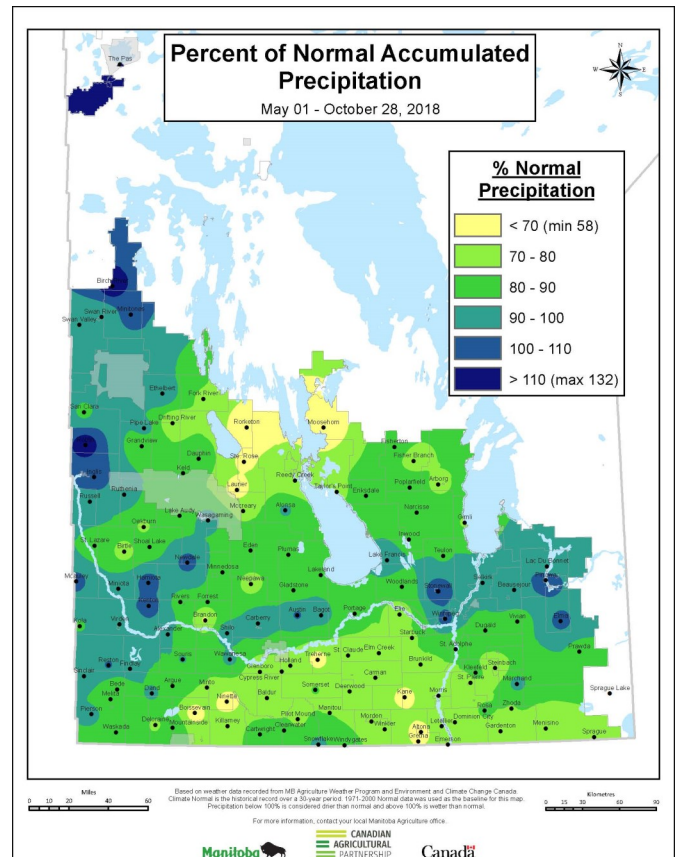
The 2018 growing season started off very dry resulting in delayed or difficult sunflower emergence. Dry conditions continued during July and August with below average rainfall. The dry and hot conditions affected head development and seed fill. Disease was lower than normal, a consequence of the drier conditions. Late moisture in September and October delayed harvest, however the majority of sunflower acres were harvested by the end of October. Sunflower yields ranged across the province, rainfall dependent, with yields between 1800-3200 lbs./acre reported with average to good quality.

These trials and results are made possible with your continued support through the sunflower check-off levy. NSAC would like to acknowledge the producers who allow for the trials to be tested on their land.

Precipitation Data for 2018 (mm)



Precipitation Data for 2018 (% of Normal)



SUNFLOWERS - NON-OIL TYPE

Comments:

These varieties were tested and data donated by the National Sunflower Association of Canada Inc. (NSAC)
 All sunflower 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)
NuSeed America	6946 DMR	DM	23	100	0	0
NuSeed America	Panther DMR	DM	31	99	1	-3
Experimental lines being tested/proposed for registration in Canada						
NuSeed America	NSKM53777	CL	6	92	6	-3
NSAC	EX 27441	ExSun	2	99	5	0
NSAC	EX 37444	ExSun	2	79	2	2
NSAC	EX 64588	ExSun	2	86	-1	4
CHECK CHARACTERISTICS						
	6946 DMR		23	3177	120	69
			site years	lb/ac	days	inches

¹ Genetic traits include CL = Clearfield tolerance; ExSun = Express tolerance; DM = Downy Mildew Resistance.

Site Comparisons

Hybrid	Marquette						Melita					
	Yield (lb/ac)	Maturity* (days to R9)	Test Wt (lb/bu A)	Seed Sizing (%)			Yield (lb/ac)	Maturity* (days to R9)	Test Wt (lb/bu A)	Seed Sizing (%)		
			>22/64	>20/64	>18/64				>22/64	>20/64	>18/64	
6946 DMR	1613	132	--	1	8	67	2582	119	24.9	13	33	45
Panther DMR	1648	134	--	15	29	47	3048	124	22.2	34	32	29
Experimental lines being tested/proposed for registration in Canada												
NSKM53777	1199	136	--	53	31	16	2000	133	18.3	73	16	8
EX 27441	1323	135	--	46	37	17	2819	125	21.6	48	30	17
EX 37444	1404	135	--	39	33	25	1909	119	21.2	49	30	17
EX 64588	1639	130	--	14	36	40	1985	119	21.5	12	43	37
Site Average	1471	134	--				2391	123	21.6			
CV (%)	10.8						11.7					
Sign Diff	Yes						Yes					
LSD (0.05)	290						525					
Planting Date	8-May						16-May					
Desiccation Date	12-Sep						25-Sep					
Harvest Date	12-Oct						22-Oct					

*Physiological maturity for sunflowers is R9, where the bracts on the head are almost completely brown.

At Carberry, heads were clipped and dried artificially for stationary combining.

At Melita, higher levels of basal stem rot present.

Loss of Rossendale and Carberry Trial Locations:

The loss of the confection trial in Carberry and Rossendale were related to the dry spring conditions. It has been shown that the larger seed size of confection sunflowers struggle to emerge, especially under dry soil conditions.

SUNFLOWERS - OIL TYPE

Comments:

These varieties were tested and data donated by the National Sunflower Association of Canada Inc. (NSAC)
 Oil Sunflower markets - include birdfood, oil crush and de-hull. Variety selection becomes more important when trying to capture de-hull markets. Choose varieties with better de-hull ratio, larger size and higher test weight. Environment will contribute greatly to final product.

Variety Descriptions

Company	Variety	Genetic Traits ¹	Site Years	YIELD % check	Maturity (days to R9)	Height (inches)	% Oil	Oil Type	Test Weight
Dow Seed	8H270CL	CL	7	91	-1	-6	44.9	HO	33.6
Dow Seed	8H288CLDM	CL / DM	10	93	2	-5	47.1	HO	31.4
NuSeed America	N4HM354 DMR	CL / DM	10	105	-1	-2	45.9	NS	34.3
NuSeed America	Talon	ExSun	13	96	-1	-4	43.3	NS	29.5
Pioneer Hi-Bred	P63HE60	ExSun / DM	10	94	-2	0	43.9	HO	33.2
Pioneer Hi-Bred	P63ME70	ExSun / DM	15	100	0	0	45.6	NS	31.0
Pioneer Hi-Bred	P63ME80	ExSun / DM	15	94	1	0	45.5	NS	32.4
Experimental lines being tested/proposed for registration in Canada									
Dow Seed	8H131CL	CL	13	92	-5	-10	--	HO	32.5
NuSeed America	N4HE302	ExSun	4	82	-4	3	44.0	HO	30.2
CHECK CHARACTERISTICS									
			15	3364	124	69			
			site years	lb/ac	days	inches			

1 Genetic traits include CL = Clearfield tolerance; ExSun = Express tolerance; DM = Downy Mildew Resistance.

2 Oil Type include NS=NuSun; HO=High Oleic

Site Comparisons

Hybrid	Carberry				Rossendale			
	Yield (lb/ac)	Maturity* (days to R9)	Test Wt (lb/bu A)	Oil (%)	Yield (lb/ac)	Maturity* (days to R9)	Test Wt (lb/bu A)	Oil (%)
8H270CL	3429	125	28.1	45.9	1847	129	35.2	45.8
8H288CLDM	3582	129	28.1	47.8	1958	131	34.4	49.7
N4HM354 DMR	4058	125	29.3	45.4	1860	131	37.9	47.5
Talon	4309	128	27.6	45.9	2049	130	31.4	44.9
P63HE60	3585	125	30.2	44.3	2072	129	38.2	45.7
P63ME70	4126	127	27.1	46.8	1980	128	34.8	47.1
P63ME80	3813	128	27.7	47.6	2006	130	36.7	48.2
Experimental lines being tested/proposed for registration in Canada								
8H131CL	3131	103	27.4	46.0	2002	129	35.3	48.2
N4HE302	4099	127	26.5	45.1	1975	130	32.8	46.5
Site Average	3792	124	28.0	46.1	1972	130	35.2	47.1
CV (%)	8.7				5.7			
Sign Diff	Yes				No			
LSD (0.05)	577				--			
Planting Date	10-May				12-May			
Desiccation Date	--				18-Sep			
Harvest Date	--				17-Oct			

*Physiological maturity for sunflowers is R9, where the bracts on the head are almost completely brown.

At Carberry, heads were clipped and dried artificially for stationary combining.

Hybrid	Marquette				Melita			
	Yield (lb/ac)	Maturity* (days to R9)	Test Wt (lb/bu A)	Oil (%)	Yield (lb/ac)	Maturity* (days to R9)	Test Wt (lb/bu A)	Oil (%)
8H270CL	1307	127	35.9	42.9	3678	134	31.4	45.1
8H288CLDM	1327	131	35.0	45.9	3231	141	28.1	44.8
N4HM354 DMR	1410	128	35.9	45.7	3787	132	30.7	45.1
Talon	1503	132	32.7	43.6	2886	126	26.8	38.7
P63HE60	1248	130	34.1	43.1	3438	131	29.6	42.4
P63ME70	1379	130	32.0	44.1	3864	136	28.0	44.3
P63ME80	1303	131	35.0	44.9	2864	130	28.6	41.3
Experimental lines being tested/proposed for registration in Canada								
8H131CL	1277	125	35.0	45.3	3539	125	32.4	46.9
N4HE302	1462	131	24.1	43.8	1727	119	26.9	40.4
Site Average	1357	129	33.3	44.4	3224	130	29.2	43.2
CV (%)	5.9				12.2			
Sign Diff	Yes				Yes			
LSD (0.05)	139				689			
Planting Date	8-May				16-May			
Desiccation Date	12-Sep				25-Sep			
Harvest Date	12-Oct				22-Oct			

At Melita, higher levels of basal stem rot present.