VARIETY SELECTION

Both oilseed and confection type sunflowers are grown in Manitoba. Oilseed sunflowers are characterized by black hulls, whereas non-oil sunflowers are characterized by striped hulls. Each year the National Sunflower Association of Canada conducts sunflower variety trials for which the data is available below. Considerations when selecting a sunflower variety should include: maturity, disease resistance, height, yield and oil content (if an oil-type) or seed size (if non-oil type). These trials provide regional, third-party performance data of various varieties. He hybrids tested are actively being pursued by sunflower breeding companies in Manitoba or may be in the experimental stage or registered under the Canadian Food Inspection Agency.

OIL-TYPE SUNFLOWERS

Oil-type sunflowers are typically shorter maturing than non-oil sunflowers. Within oil-type sunflowers there are 4 groupings: high linoleic (traditional), mid-oleic (NuSun) and high oleic/high stearic and high oleic. These groupings are based on the oil profile, and the relative amounts of oleic linoleic, stearic and palmitic oils. Oil type is an important consideration when picking an oilseed variety to target specific markets.

High linoleic – the traditional type of sunflower oil which has been produced for many years. Production has decreased because of its limitations in fried foods. It is only currently produced in small volumes.

NuSun/Mid-Oleic – Is currently the largest volume of sunflower oil produced in Canada and the U.S. It is now the 'standard' sunflower oil in North America. It has a good shelf life, and is a preferred frying oil with excellent stability and neutral taste profile.

High-Oleic – a number of firms are not producing high oleic sunflower oil, but it continues to be contract grown to insure identity preservation through the marketing system. The higher oleic oil content increases stability and improves the taste profile.

High Stearic/High Oleic – is the newest oil type and member to the sunflower family. The oil is called Nutrisun™. The benefit is functionality as a replacement for partially hydrogenated oils or tropical oils with a higher saturate level.

Table 1. 2012 Oilseed variety trial data.

Company	Variety	Herb Type	DMR	Oil Type	Yield (lbs/acre)	Harvest Moisture (%)	Days to Bloom	Days to Maturity	Height (inches)	% Oil	Resistance to :		
											Rust1	Verticillium Wilt	Downey2 Mildew
Pioneer Hi-Bred	63N82	NS	ExSun	Y	3082	12.9	78	133	76		S	MR	S
Seeds 2000	Defender Plus	NS	-	Y	3101	10.9	75	125	66		HS	MR	R
SYNGENTA Seed	IS 3433 NS/DM	NS	-	Y	3487	11.0	78	129	70		HS	MR	MR
Syngenta	7120 HO/DM	HO	-	N	3016	11.1	74	131	71		S	MR	MR
Syngenta	3495 NS/CL/DM	NS	CL	Y	3598	12.0	83	128	77		HS	MR	MR
Seeds 2000	X4219	NS	ExSun	N	3558	13.5	81	128	69		HS	MR	S
Experimental lines are being tested/proposed for registration in Canada													
Pioneer Hi-Bred	P63ME70	NS	ExSun	Y	3483	10.9	77	129	76		HS	MR	R
Pioneer Hi-Bred	P63ME80	NS	ExSun	Y	3280	12.7	78	133	78		HS	MR	R
Seeds 2000	X6822	HO	CL	Y	3327	11.6	77	131	75		-	-	-
Syngenta	SYN NX 24121	HO	CL	Y	2955	12.2	72	129	71		MR	MR	R
Overall Average (lbs/ac)					3289	11.9	77	130	73				
Site Years					3	2	2	3	1				

CONFECTION SUNFLOWERS

The non-oil or confection-type sunflowers have striped hulls and are primarily used for the human snack food market. Only the largest of the confection type sunflower are used for human consumption, and insect tolerance is very low. Due to this, final confection yields are closely tied to the seed quality. Confection sunflowers have a standard bushel weight of 25 lbs/bushel as compared to 30 lb/bushel for oil-type sunflowers.

Confection sunflower seeds are graded according to size and separated into groups. The largest size will go into the in-shell market, the medium-sized seeds are usually hulled for the kernel market and the smallest size will go into the bird and pet feeding market.

Table 2. 2012 confection sunflower variety testing data

Company	Variety	Herb Type	DMR	% Nutmeat1	Yield (lbs/acre)	Harvest Moisture (%)	Days to Bloom	Days to Maturity	Height (inches)	% over 20/64 inch	Disease Resistance to:		
											Rust1	Verticillium Wilt	Downy2 Mildew
Seeds 2000	6946	-	N		3573	11.4	71	126	78		S	MR	HS
Seeds 2000	6946 DMR	-	Y		3740	12.0	74	125	72		HS	MR	R
Seeds 2000	6950	-	N		3491	11.6	76	128	75		MR	MR	HS
Seeds 2000	Jaguar DMR	CL	Y		3541	11.0	73	127	77		-	-	-
Seeds 2000	Jaguar	CL	N		3506	10.9	76	129	78		MS	MR	HS
CHS Sunflower	RH400 CL	CL	N		3506	11.9	77	131	79		MR	MS	S
Seeds 2000	Sundance DMR	-	Y		3477	12.0	81	129	86		HS	MR	MR
Experimental lines are being tested/proposed for registration in Canada													
Seeds 2000	X9180 EX DMR	ExSun	Y		3479	12.2	76	129	78		HS	MS	MR
Overall Average (lbs/acre)					3539	11.6	75	128	78				
Site Year				1	3	2	2	3	1				