

SUNFLOWER SECTOR

OVERVIEW OF THE SUNFLOWER SECTOR IN MANITOBA



- Sunflower is the only oilseed native to the northern Great Plains of North America and has been grown commercially in Manitoba since the early 1940s.
- In 2011, Manitoba reported 226 sunflower farms compared to 614 in 2006. This represents 5.0% of sunflower farms in Canada and Manitoba is the principle source of Canada's total sunflower production.
- Manitoba is the nation's largest producer of sunflower seed, producing both confectionery and oilseed varieties of sunflower seed, and a competitive partner in the growing international market for this special crop.
- Sunflower grows best on loam, silty loam, and silty clay loam soils with good drainage and low salinity. It has a deep tap root that can obtain water and nutrients from deep in the soil. Because of this root system, sunflowers are very adaptable and can be harvested even after an early snowfall, without reduction in quality. This adaptability makes them a viable alternative and rotational crop to traditional grains in southern parts of the province.
- Shorter season varieties of sunflowers have been developed for areas where traditional hybrid species cannot be grown. Sunflowers grown for oil are characterized by black hulls and they can be conventional hybrids, dwarf hybrids or open pollinated varieties. With oil-type sunflowers there are 3 different groupings: traditional, mid-oleic (NuSun), and high oleic. These groupings are based according to their specific oil profile. The mid-oleic varieties have an oil profile that is intermediate to the traditional and the high-oleic sunflower varieties.

Sunflowers	Manitoba	Manitoba	Canada	Canada
	2011	2006	2011	2006
Number of farms	226	614	456	905
Acres	63,380	190,230	77,788	211,034
Hectares	25,649	76,983	31,480	85,402

Source: Census of Agriculture 2011

PROCESSING SUNFLOWER SEEDS IN MANITOBA

- The hardy sunflower has a wide range of uses, from the confectionary and baking industries, to the birdseed industry, and the animal feed industry.
- Grade standards for both confection and oil type sunflowers are established by the Canadian Grain Commission. Confection standards are considerably higher than those for oil type sunflowers since they are used for direct human consumption.
- Sunflower seeds contain almost every vitamin (except Vitamin C) and substantial amounts of key minerals, including magnesium, iron, copper, and zinc. Given their high protein content, sunflower seeds can serve as a meat substitute.
- Non-oil or confectionery type sunflowers have striped hulls and can be roasted and salted or baked into bread products. Only the largest of confection type sunflowers are used for human consumption, with little tolerance for bird or insect damage.
- Confection-type sunflowers have a standard bushel weight of 25 lb/bushel as compared to 30 lb/bushel for oil- type sunflowers. Canadian Grain Commission minimum test weights for No. 1 Canada sunflowers are 155g/0.5L for confection-type sunflowers, 169g/0.5L for oil-type sunflowers
- Confectionery sunflower seeds fall into three categories: in shell, kernel, and birdseed. Larger sunflower seeds (in shell) are roasted, salted and packaged for human consumption and are classified as either large or jumbo. Medium-sized seeds (kernel) are de-hulled and primarily used for the bakery industry, as well as traded domestically and exported. Smaller seeds, known as "striped bird food," are sold in North American birdseed markets.
- The black-shelled oilseed variety is richer in oil and better suited for the production of sunflower oil. The oil in sunflower seed is very high in polyunsaturated fatty acids. NuSun hybrids, which are less prone to oxidation, do not need hydrogenation to produce stable products with zero trans fatty acids.
- The majority of oil sunflower seeds are crushed after the hull is removed. The oil is used for frying or to produce salad dressings, shortening, and margarine. The meal which usually contains about 35% protein, is used in livestock feed.
- The birdfood market is comprised of about 85% oilseed sunflowers, however some of the smaller confection seeds are also used for birdseed.
- Sunflower seeds provide high-energy feed for livestock due to their high fat content. Cattle producers can replace a part of barley grain/silage with sunflower seeds to enhance conjugated linoleic acids (CLA) content in milk and meat. Feeding whole sunflower seeds to dairy cattle as a way to increase the energy content of the diet of high-producing dairy cows may boost milk production by 3-5%. This can provide sunflower growers with an alternative market outlet for sunflower seeds, in times of low prices or damaged seeds.

Trade

- Canada is the world's 13th largest exporter and 25th largest grower of sunflower seeds, producing both confectionery and oilseed varieties.
- Over the past 10 years, production of Canadian sunflower seed has more than doubled to meet market demand for confectionery and oilseed varieties.
- Although a significant percentage of this market is domestic (North American), processors are increasingly accessing markets in Europe, the Middle East and Asia.
- Canada is highly competitive in the international market. Over half of sunflower seed production is shipped, and more than 80% goes to the United States.
- The birdseed trade is growing at an annual rate of 10% in North America. Canadian oil sunflower seeds are marketed primarily to the North American birdseed industry and include bulk shipments as well as cleaned and bagged products which are commonly referred to as "blacks".
- Since Manitoba does not have a large scale sunflower crushing facility, most oilseed sunflower production in Manitoba is either processed in Manitoba for the birdfood market or exported as raw a product to crushing facilities in the United States.
- Confectionery sunflower seeds are popular in Canada and in many countries in the western hemisphere. Manitoba has been recognized for consistent high quality of both the in-shell confectionery variety and the dehulled kernel for the baking sector.
- Dehulled confection type sunflowers are marketed both domestically and internationally. The European countries of Belgium, Germany and The Netherlands are large consumers of dehulled sunflowers as well as China.
- In-shell confection type sunflowers are also sold both domestically and into export markets. Within Manitoba there are several secondary processors that roast and flavour the in-shell seed.
- Export markets for roasted confectionery sunflower seeds include the United States, Germany, Holland, Belgium, Japan, Mexico, South America and the Middle East.
- There are no registered GMO sunflower hybrids grown in Canada. Other factors influencing demand for Canadian sunflower seed include consistently high overall quality, secure supply, and the food and beverage industry's excellent reputation in food safety and quality.
- Sunflower oil, which is one of the highest quality vegetable oils has growing demand from human consumption markets, specifically for the mid-oleic (NuSun) oil profile. As such, a growing percentage of oilseed acres are being planted of the NuSun type in Manitoba. Traditional oil varieties continue to be produced in Manitoba, however market demands for this oil are declining.

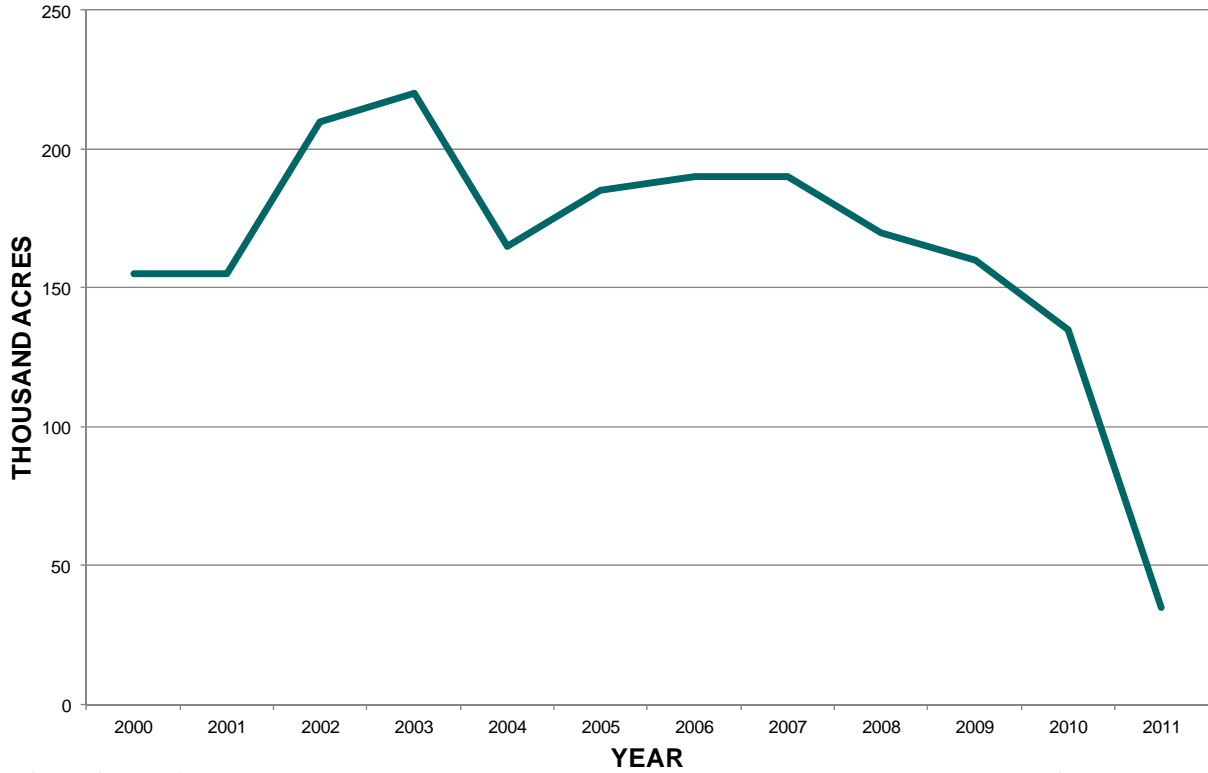
Sunflower Seed Outlook for Canada 2012-2013

- For 2012-13, the area seeded is expected to rise over 70% due higher expected returns relative to other crops and the excessive moisture conditions which reduced area in 2011-12.
- It is expected that area dedicated to confectionery and oilseed types will be similar this year.
- Total production is expected to increase but supply is expected to decrease due to low carry-in stocks.
- Exports of sunflower seed are forecast to decrease due to the limited supply. The US is forecast to remain the main market for Canadian sunflower seed, with smaller volumes going to the United Arab Emirates.
- The premium for confectionery types over oilseed is expected to be about C\$110/t, near the long term average.
- The average Canadian price for all types is forecast to fall from 2011-12, due to an increase in sunflower seed supply in the US and Canada.
- For 2012-13, US sunflower seed area is forecast by the USDA to increase by 17% due to attractive new crop prices compared to alternative crops. US sunflower seed production is expected to increase by 24% to 1.1 million tonnes.

Outlook for Sunflower Seed	2010-2011	2011-2012p	2012-2013f
Area Seeded (kha)	55	14	24
Area Harvested (kha)	51	14	23
Yield (t/ha)	1.32	1.43	1.52
Production (kt)	68	20	35
Imports (kt)	33	30	27
Total Supply (kt)	142	79	67
Exports (kt)	46	35	30
Total Domestic Use (kt)	68	39	32
Carry-out Stocks (kt)	29	5	5
Stocks-to-use ration (%)	26	7	8
Average Price (\$/t)	630	700 to 730	695 to 725

Source: Statistics Canada and Agriculture and Agri-Food Canada, June 2012

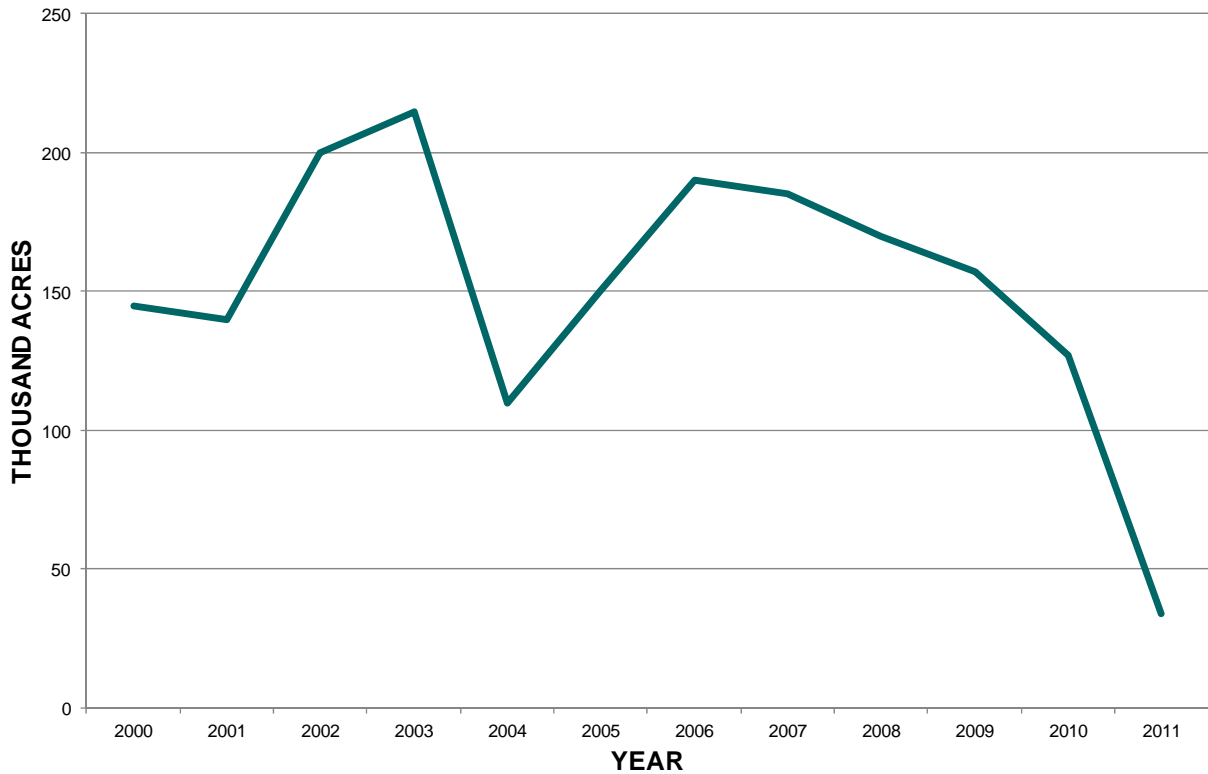
Sunflower Seed - Seeded Acres in Manitoba 2000 - 2011



Source: Statistics Canada

Industry Intelligence Section, MAFRI

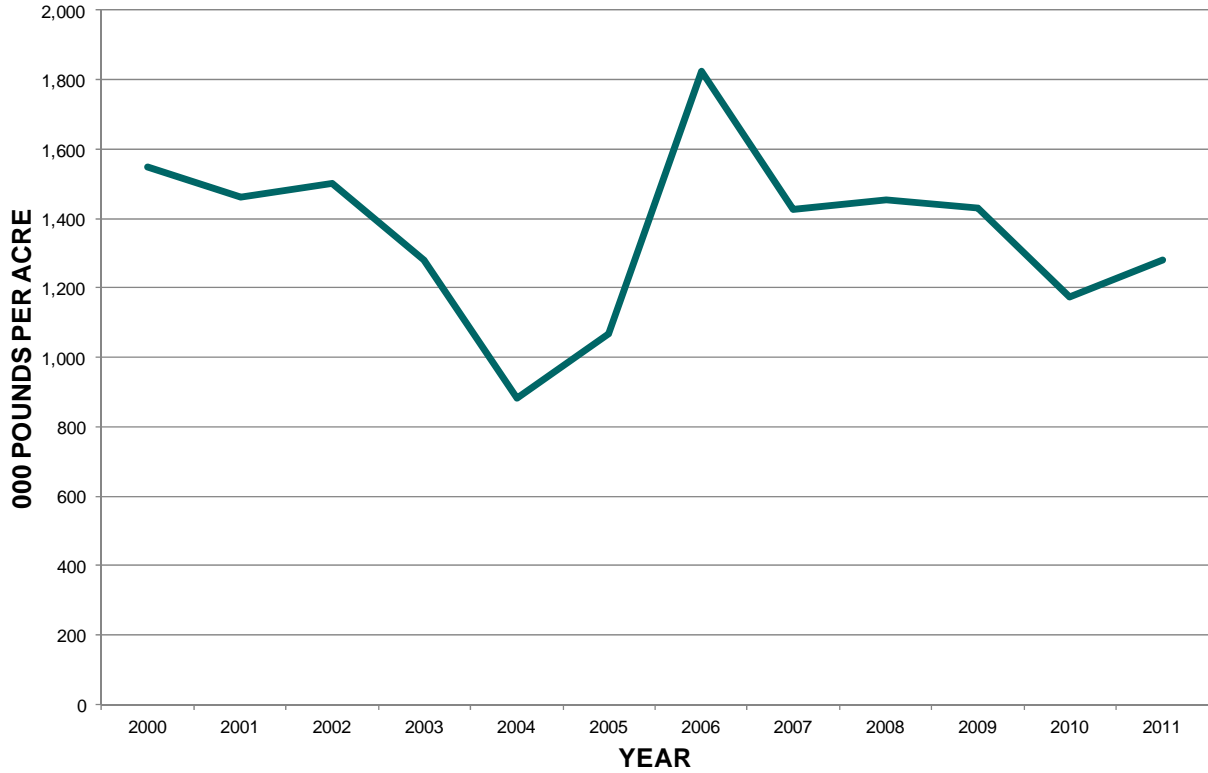
Sunflower Seed - Harvested Acres in Manitoba 2000 - 2011



Source: Statistics Canada

Industry Intelligence Section, MAFRI

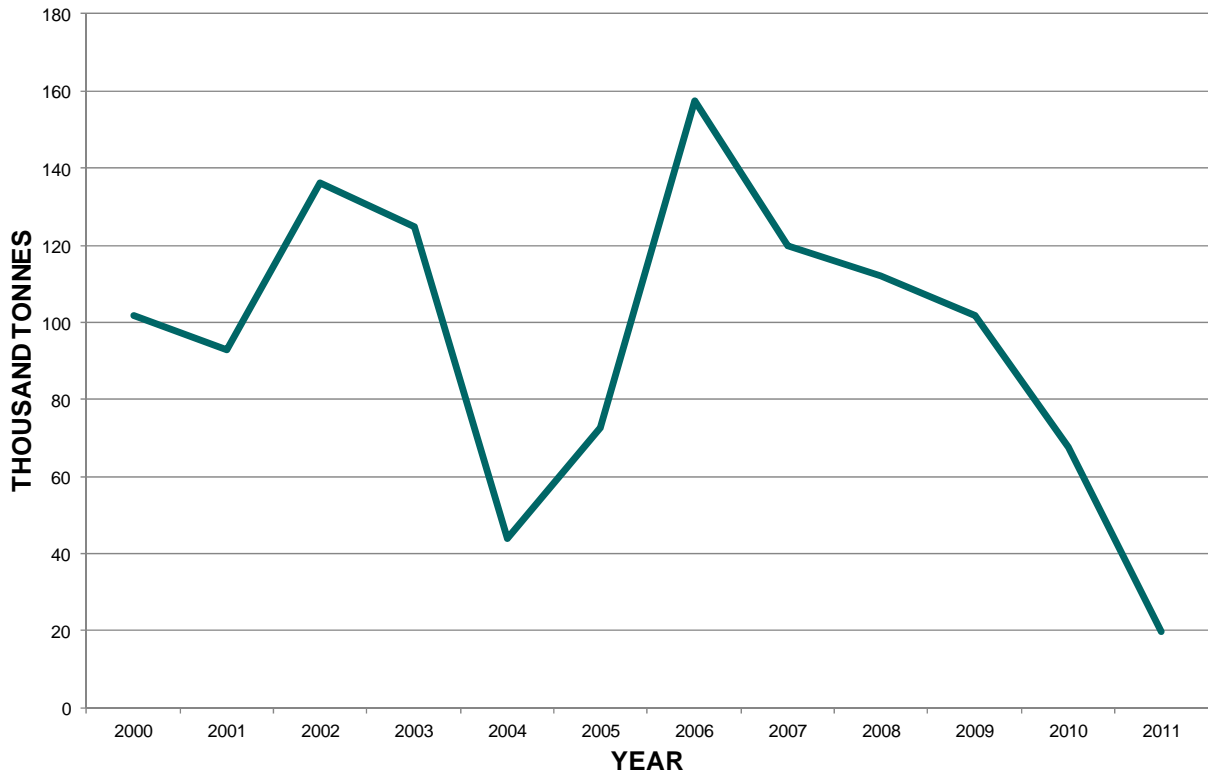
Sunflower Seed - Yield per Acre in Manitoba 2000 - 2011



Source: Statistics Canada

Industry Intelligence Section, MAFRI

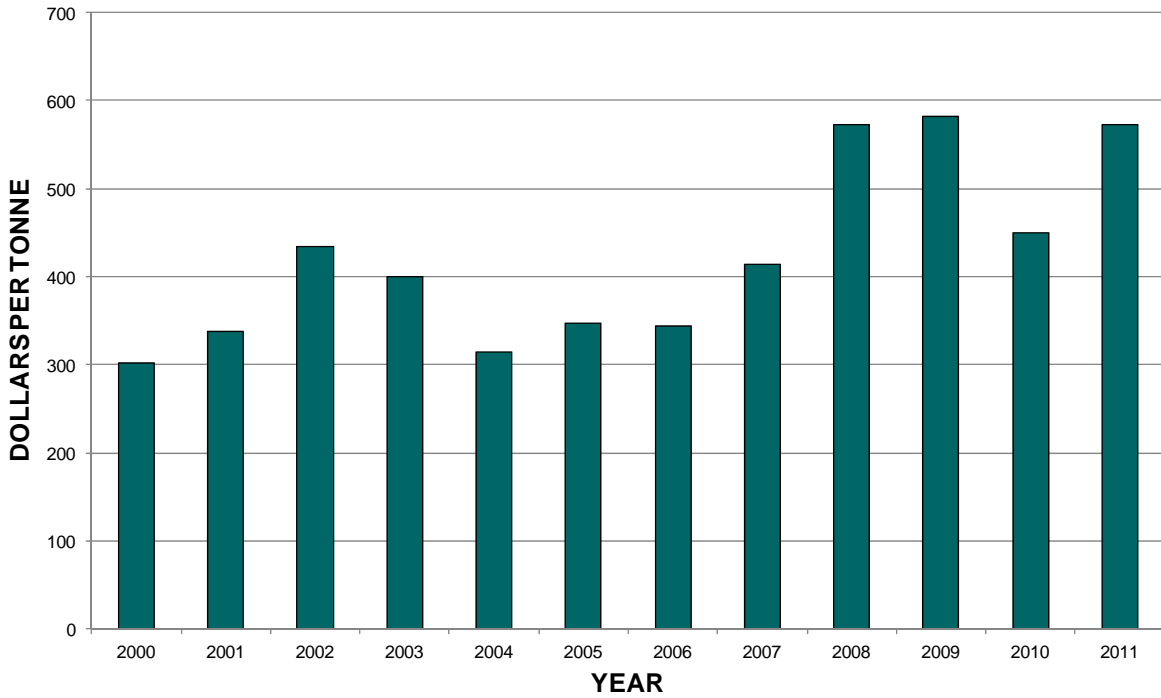
Sunflower Seed Production in Manitoba 2000 - 2011



Source: Statistics Canada

Industry Intelligence Section, MAFRI

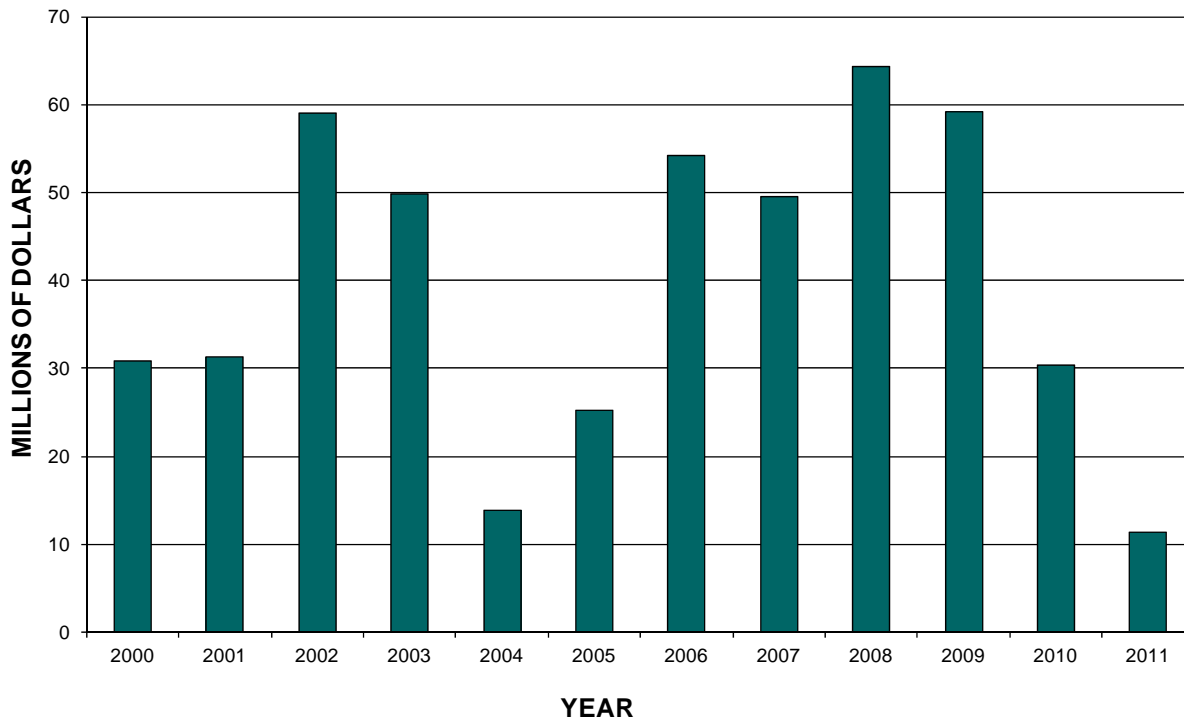
Sunflower Seed Prices in Manitoba 2000 - 2011



Source: Statistics Canada

Industry Intelligence Section,

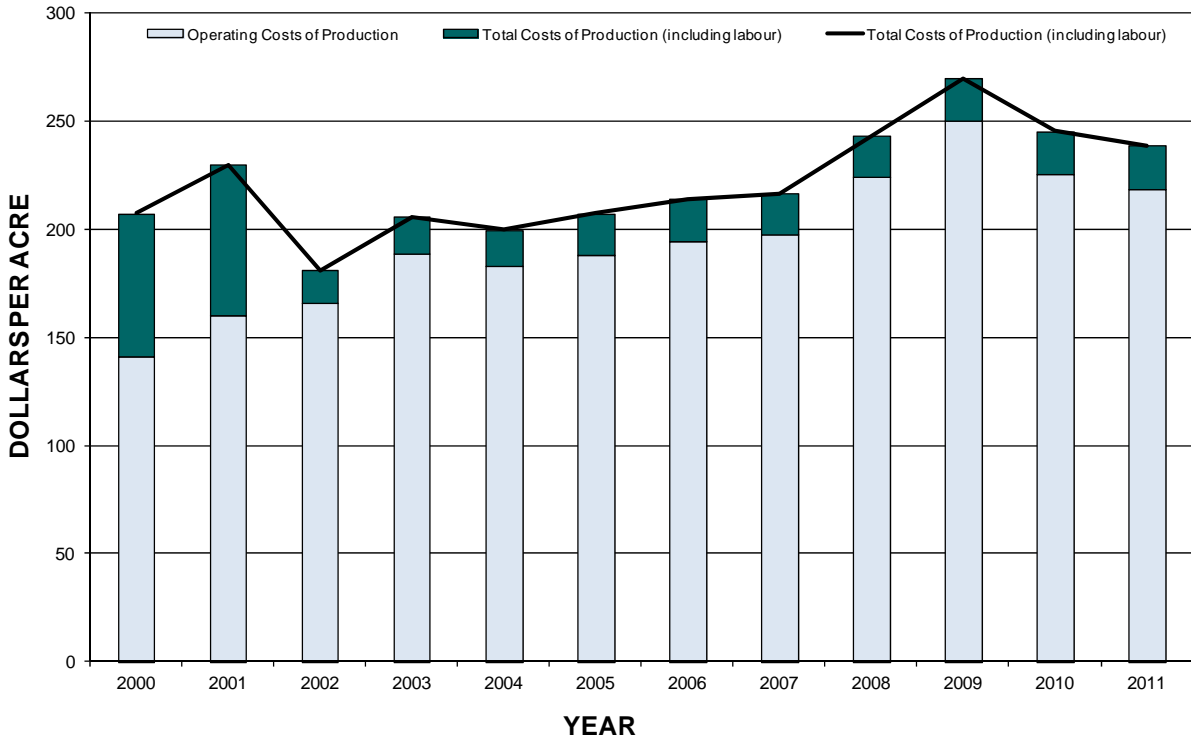
Value of Total Sunflower Seed Production in Manitoba 2000 - 2011



Source: STC, AAFC, MAFRI

Industry Intelligence Section, MAFRI

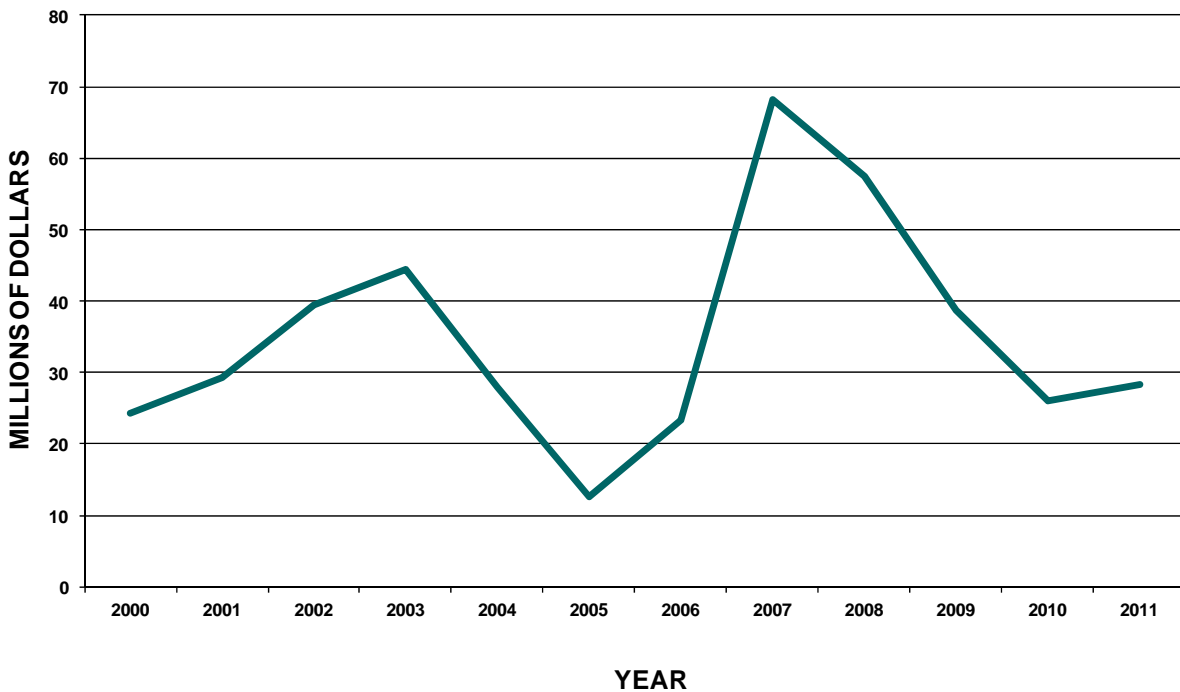
Cost of Sunflower Seed Production in Manitoba 2000 – 2011



Source: MAFRI

Industry Intelligence Section, MAFRI

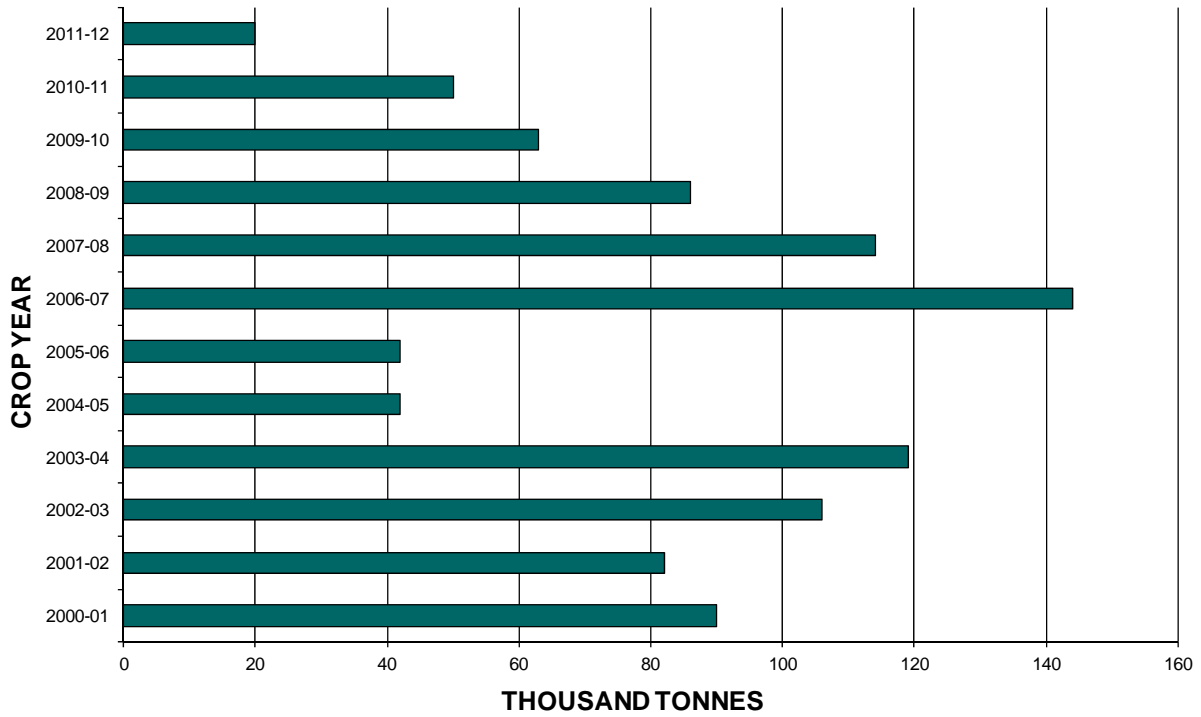
Farm Cash Receipts for Sunflower Seed in Manitoba 2000 – 2011



Source: Statistics Canada

Industry Intelligence Section, MAFRI

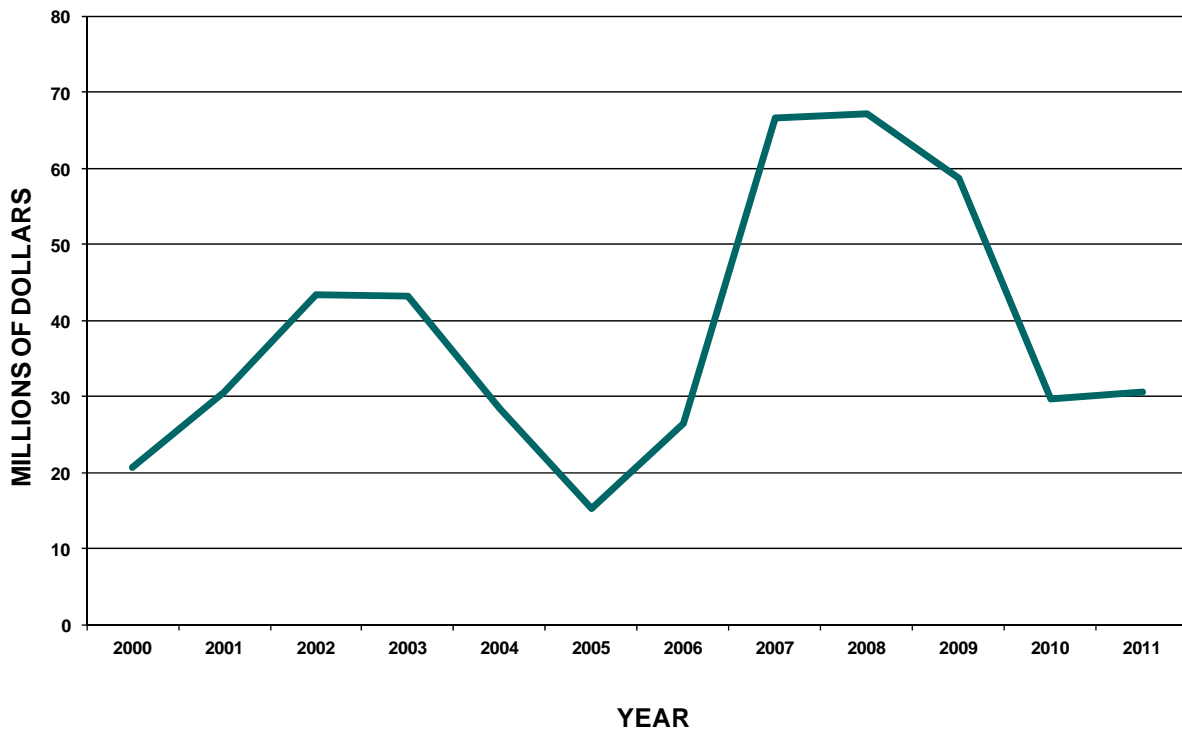
Marketings of Manitoba Sunflower Seed 2000 - 2011



Source: STC, AAFC, MAFRI

Industry Intelligence Section, MAFRI

Manitoba Sunflower Seed Exports 2000 - 2011



Source: Statistics Canada

Industry Intelligence Section, MAFRI

Farm Supply and Disposition of Manitoba Sunflower Crop, 2000/01 to 2011/12

<i>000 tonnes</i>	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Opening Stocks Aug1	7	15	10	5	15	35	20
Production	73	157	120	112	102	68	20
Total Supply	80	172	130	117	117	103	40
Marketings	42	144	114	86	63	50	20
Seed	0	0	0	0	0	0	0
Carry-over	16	10	6	15	36	20	10
Feed/Waste/Dockage	22	18	10	16	18	33	10
Total Disposition	80	172	130	117	117	103	40

<i>000 pounds</i>	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Opening Stocks Aug1	15,432	33,069	22,046	11,023	33,069	77,162	44,092
Production	160,937	346,126	264,555	246,918	224,871	149,914	44,092
Total Supply	176,370	379,195	286,601	257,941	257,941	227,076	88,185
Marketings	92,594	317,466	251,327	189,597	138,891	110,231	44,092
Seed	0	882	882	882	661	220	220
Carry-over	35,274	21,164	12,346	32,187	78,705	43,872	21,826
Feed/Waste/Dockage	48,502	39,683	22,046	35,274	39,683	72,753	22,046
Total Disposition	176,370	379,195	286,601	257,941	257,941	227,076	88,185

- **SUNFLOWER SEED - Common Conversions**

1 metric tonne sunflower seed = 73.487 bushels.

There are 30 pounds in 1 bushel of oil- type sunflower seed, while confection-type sunflower seed are typically 25 pounds per bushel.

Production and Value of Manitoba Sunflower Seed

Year	Seeded Area (hectares)	Harvested Area (hectares)	Average Yield (kg per ha)	Production (tonnes)	Price/Tonne (\$/tonne)	Total Value (\$000)
1990	56,700	56,700	1,780	100,700	235	23,665
1991	73,800	73,800	1,684	124,300	229	28,465
1992	64,700	42,500	1,301	55,300	244	13,493
1993	50,600	44,500	1,061	47,200	329	15,529
1994	56,700	56,700	1,527	86,600	320	27,712
1995	30,400	26,300	1,654	43,500	350	15,225
1996	25,500	24,300	1,551	37,700	310	11,687
1997	34,400	34,400	1,380	47,600	350	16,660
1998	50,600	50,600	1,700	86,200	320	27,584
1999	56,700	50,600	1,640	82,900	300	24,870
2000	62,700	58,700	1,730	101,800	303	30,808
2001	62,700	56,700	1,640	92,900	338	31,373
2002	85,000	80,900	1,680	136,100	434	59,054
2003	89,000	87,000	1,430	124,700	400	49,823
2004	66,800	44,500	990	44,000	315	13,838
2005	74,900	60,700	1,200	72,700	348	25,265
2006	77,000	76,900	2,050	157,300	345	54,218
2007	76,900	74,900	1,600	119,800	413	49,509
2008	68,800	68,800	1,630	112,200	573	64,263
2009	64,700	63,500	1,600	101,900	581	59,213
2010	54,600	51,400	1,320	67,600	450	30,396
2011	14,200	13,800	1,430	19,800	572	11,332

Year	Seeded Area (acres)	Harvested Area (acres)	Average Yield (lb per acre)	Production (000 pounds)	Price per Bushel (\$/pound)	Total Value (\$000)
1990	140,000	140,000	1,586.0	222,000	0.107	23,665
1991	182,363	182,363	1,502.0	274,000	0.104	28,465
1992	160,000	105,000	1,162.0	122,000	0.111	13,493
1993	125,000	110,000	945.0	104,000	0.149	15,529
1994	140,000	140,000	1,364.0	191,000	0.145	27,712
1995	75,000	65,000	1,477.0	96,000	0.159	15,225
1996	63,000	60,000	1,387.0	83,200	0.140	11,687
1997	85,000	85,000	1,235.0	105,000	0.159	16,660
1998	125,000	125,000	1,520.0	190,000	0.145	27,584
1999	140,000	125,000	1,462.0	182,800	0.136	24,870
2000	155,000	145,000	1,548.0	224,500	0.137	30,808
2001	155,000	140,000	1,462.0	204,700	0.153	31,373
2002	210,000	200,000	1,500.0	300,000	0.197	59,054
2003	220,000	215,000	1,279.0	275,000	0.181	49,823
2004	165,000	110,000	882.0	97,000	0.143	13,838
2005	185,000	150,000	1,069.0	160,300	0.158	25,265
2006	190,230	190,000	1,825.0	346,800	0.156	54,218
2007	190,000	185,000	1,428.0	264,100	0.187	49,509
2008	170,000	170,000	1,455.0	247,300	0.260	64,263
2009	160,000	157,000	1,431.0	224,700	0.264	59,213
2010	135,000	127,000	1,173.0	149,000	0.204	30,396
2011	35,000	34,000	1,282.0	43,600	0.260	11,332

SOURCE: Statistics Canada; Agriculture and Agri-Food Canada; Manitoba Agriculture, Food and Rural Initiatives.