Agriculture and Agri-Food Canada | Agriculture et Agroalimentaire Canada

Bi-weekly Bulletin

September 12, 2003 Volume 16 Number 16

SUNFLOWER SEED: SITUATION AND OUTLOOK

Although Canadian production of oil sunflower seed is relatively low, Canada is a major producer of confectionary sunflower seed. Production, exports and processing increased significantly during the past four years and are expected to continue growing in 2003-2004 and over the longer term. The value of Canadian exports has been increasing and is estimated at $56 million for 2002-2003. Value added processing includes human food markets, snacks and kernels, as well as bird seed markets. It is expected to continue generating income and employment, especially in western Canada. For 2003-2004, Canadian production is forecast to increase from 2002-2003, with average prices increasing for the confectionary type and decreasing for the oilseed type.

WORLD

Production

Sunflower is native to North America where it was used in dyes, food preparation and medicines. It then spread throughout the world and developed as an oilseed crop in Russia during the late 1800s. World sunflower seed production has been variable during the past ten years, ranging from a low of 21.4 million tonnes (Mt) in 2001-2002 to a high of 27.3 Mt in 1999-2000, but there has been no upward or downward trend. There are two types of sunflower seed produced, oilseed and confectionary. About 95% of world production is the oilseed type and only 5% the confectionary type.

Utilization

The majority of the oil sunflower seeds are crushed after the hull is removed. The hull represents about 15% of the sunflower seed weight. Dehulled seed yields 45-50% oil and 50-55% meal. The oil is used for frying or to produce salad dressing, shortening and margarine. The mid and high oleic hybrids produce oil for specialized markets. The meal is used as a protein supplement in livestock feed and usually contains about 35% protein. The hulls are used mostly for livestock bedding, with some used as a source of fibre for cattle feed. In addition, the use of the oilseed type seed by the bird seed industry is growing.

Confectionary type sunflower seeds are used in the snack food industry as roasted sunflower seeds, and dehulled for use in snack food and baking. Sunflower seeds are high in protein, calcium, phosphorous, iron, potassium, and vitamin E. The sunflower seed snacks are usually lightly coated in salt or spices. Some confectionary sunflower seeds are also used for bird seed.

Some sunflower seeds are used for cattle feed. Usually damaged seed is used, but good quality seed is sometimes used in dairy cattle rations.

Trade

Sunflower seed exports have been variable, in line with variability in production, ranging from 1.82 to 2.84 Mt during the past four years. Exports are relatively dispersed, with the top 10 countries accounting for about 85% of exports. The European Union (EU) accounts for about 75% of imports, with Turkey, Pakistan, the US, and Morocco accounting for most of the balance. The US and Canada are the main exporters of confectionary sunflower seeds, with the EU, China and Mexico the main destinations, excluding Canada-US trade.

CANADA

Production

Sunflower grows best on loam, silty loam, and silty clay loam soils with good drainage. It has a low tolerance for saline conditions, therefore soils with moderate to high levels of salinity should be avoided. Sunflower has a deep tap root that can obtain water and nutrients 1.5-1.8 metres (5-6 feet) deep in the soil. These reserves of water and nutrients are unavailable to most other annual crops, making sunflower a good rotational crop. It should be seeded as early as possible, usually in the first half of May, since it requires 115-125 days to reach maturity.

Canadian sunflower seed production has been mainly the confectionary type since crushing ended. Oil sunflower seed has

been mainly the traditional hybrids, with only small production of sunola and sunwheat. Canadian producers have been slower in adapting NuSun hybrids because most of Canadian oil sunflower seed is used for bird seed.

Canadian sunflower seed production fell sharply in the mid-1990s when crushing ended in Canada. However, production has been trending upwards since 1998-1999 with most of the increase for the confectionary type. Manitoba accounted for 86% of the production in 2002-2003, followed by Saskatchewan at 11%, Alberta at 2.5%, with Ontario accounting for most of the remaining 0.5%. The main producing areas are south-central Manitoba, followed by south-western Manitoba and south-eastern Saskatchewan.

Marketing

Sunflower seed is sold on the open market to dealers located mostly in Manitoba. Sunflower seed is shipped bulk in trucks or rail cars. Some sunflower seed is grown under production contracts which guarantee a price for part of the production.

Domestic Use

Canadian domestic use, which includes food, feed, seed, dockage and waste, has been growing in line with the growth in production and domestic processing. Since 1995, sunflower seeds have not been crushed in Canada, but the lower crush use has been replaced by increased processing of confectionary sunflowers and increased use for bird seed. The markets for in-shell snack food, dehulled snack food, baking and bird seed have increased significantly. Most of the oilseed type sunflower seeds are used by the bird seed industry, as are a portion of the confectionary type.

Exports

Nearly 60% of Canadian sunflower seed is exported, with the majority going to the US, and the balance going mostly to Europe, Latin America and the Middle East and northern Africa. Exports to the US are both oilseed and confectionary types, while exports to other parts of the world are mainly the confectionary type. In addition to the seed, prepackaged snack food, dehulled sunflower seed and bird seed are also exported.

WORLD: SUNFLOWER SEED SUPPLY AND DISPOSITION

	1999 -2000	2000 -2001	2001 -2002	2002 -2003p	2003 -2004f
Harvested Area (Mha)	23.59	20.31	18.83	20.37	23.09
Average Yields (t/ha)	1.16	1.14	1.14	1.18	1.16
	.....thousand tonnes.....				
Argentina	6,000	3,050	3,844	3,700	4,200
Russia	4,150	3,915	2,670	3,685	4,400
Ukraine	2,794	3,457	2,251	3,270	4,300
European Union	3,213	3,298	3,017	2,752	2,400
China	1,765	1,954	1,478	1,860	1,900
India	1,300	1,250	1,450	1,625	1,700
United States	1,969	1,608	1,551	1,133	1,399
Romania	1,300	717	744	890	1,000
South Africa	545	664	930	710	830
Turkey	800	575	520	820	750
Hungary	795	500	650	779	800
Canada*	**122**	**119**	**104**	**157**	**175**
Others	2,503	2,065	2,201	2,638	3,156
Total Production	**27,256**	**23,172**	**21,410**	**24,019**	**26,835**
Carry-in Stocks	1,423	1,772	948	580	728
Total Supply	**28,679**	**24,944**	**22,358**	**24,599**	**27,563**
Total Use	26,907	23,996	21,778	23,871	26,745
Carry-out Stocks	**1,772**	**948**	**580**	**728**	**818**
Stocks-to-use ratio (%)	7	4	3	3	3

p: preliminary, USDA, except *which is AAFC, September 2003
f: forecast, USDA, except *which is AAFC, September 2003
Source: USDA, except * which is Statistics Canada, September 2003

WORLD: SUNFLOWER SEED EXPORTS

	1999 -2000	2000 -2001	2001 -2002	2002 -2003p	2003 -2004f
	.....thousand tonnes.....				
Russia	855	730	50	200	700
Ukraine	450	1020	82	400	820
Bulgaria	200	70	140	180	253
Argentina	283	79	356	300	200
Hungary	150	200	150	245	245
United States	205	201	235	166	182
Romania	300	100	101	170	200
Uruguay	5	21	119	140	140
Canada*	**49**	**77**	**92**	**105**	**115**
Moldova	105	95	98	100	100
Other	241	222	399	333	368
Total	**2,843**	**2,815**	**1,822**	**2,339**	**3,323**

WORLD: SUNFLOWER SEED IMPORTS

	1999 -2000	2000 -2001	2001 -2002	2002 -2003p	2003 -2004f
	.....thousand tonnes.....				
European Union	2,227	1,989	1,278	1,658	2,400
Turkey	437	308	165	250	350
Pakistan	1	23	0	100	130
United States	41	66	77	93	103
Morocco	80	70	30	50	75
Other	118	104	73	155	59
Total	**2,904**	**2,560**	**1,623**	**2,306**	**3,117**

The difference between imports and exports is attributed to the timing of delivery.

p: preliminary, USDA except * which is AAFC, September 2003
f: forecast, USDA except * which is AAFC, September 2003
Source: USDA except * which is Statistics Canada, September 2003

Prices

In general, Canadian sunflower seed prices follow US prices adjusted by exchange rates. Oilseed sunflower prices are affected by the supply and demand factors for vegetable oil and protein meal. Confectionary sunflower seed prices depend on supply and demand conditions in the confectionary market. Bird seed sunflower prices mostly follow the prices of the oilseed type. Prices of both confectionary and oilseed types increased by about 25% in 2002-2003, as compared to 2001-2002, although prices were pressured by the significant appreciation of the Canadian dollar against the US dollar in the second half of the crop year.

OUTLOOK: 2003-2004

World

Total world sunflower seed production and supply are forecast to increase by 12% to 26.84 Mt and 27.56 Mt, respectively. Total use is expected to increase due to the higher supply and strong demand.

CANADA: SUNFLOWER SEED SUPPLY AND DISPOSITION

August-July crop year	**1999 -2000**	**2000 -2001**	**2001 -2002**	**2002 -2003p**	**2003 -2004f**
Seeded Area (000 ha)	85	75	73	100	119
Harvested Area (000 ha)	79	69	67	95	115
Yield (t/ha)	1.54	1.72	1.55	1.65	1.52
	.....thousand tonnes.....				
Carry-in stocks	4	41	46	22	35
Production:					
Oil	*55*	*30*	*24*	*47*	*80*
Confectionary	*67*	*89*	*80*	*110*	*95*
Total Production	**122**	**119**	**104**	**157**	**175**
Imports	19	18	29	21	15
Total Supply	145	178	179	199	225
Exports:					
United States	*38*	*60*	*77*	*91*	*97*
Europe	*3*	*3*	*5*	*3*	*5*
Middle East and Africa	*2*	*7*	*5*	*6*	*6*
Central and South America	*5*	*6*	*4*	*3*	*5*
Asia and Oceania	*1*	*1*	*1*	*2*	*2*
Total Exports	**49**	**77**	**92**	**105**	**115**
Total Domestic Use	55	55	65	60	70
Total Use	**104**	**132**	**157**	**165**	**185**
Carry-out Stocks	41	46	22	35	40
Stocks-to-Use-Ratio (%)	39	35	14	21	22
Harvested Area (000 ac)	195	170	166	235	284
Yield (lbs/ac.)	1,378	1,539	1,385	1,474	1,358
Production (Mlbs)	269	262	229	346	386
Average producer price*					
Oilseed $/t	220	209	342	419	309
$/lb	0.100	0.095	0.155	0.190	0.140
Confectionary $/t	386	364	364	463	485
$/lb	0.175	0.165	0.165	0.210	0.220

* Manitoba, No.1 Canada grade

p: preliminary, Agriculture and Agri-Food Canada, September 2003
f: forecast, Agriculture and Agri-Food Canada, September 2003
Source: Statistics Canada and Agriculture and Agri-Food Canada

Although carry-out stocks are expected to increase, the stocks-to-use ratio is expected to remain at 3%.

United States

US sunflower seed production is forecast to increase by 23% to 1.4 Mt and supply to increase by 19% to 1.475 Mt. Oil sunflower seed production is forecast to increase by 29% to 1.21 Mt and supply to increase by 28% to 1.27 Mt. Confectionary sunflower seed production is forecast to decrease by 4% to 185,000 t and supply to decrease by 19% to 205,000 t.

Canada

Canadian sunflower production is forecast to increase by 11% to 175,000 t due to a 20% higher seeded area, which is expected to be partly offset by lower yields. Most of the increase in seeded area was in Saskatchewan. Therefore, Manitoba's share of the production is expected to decrease to 77%, Saskatchewan's share increase to 20%, with Alberta's share remaining at about 2.5% and Ontario accounting for most of the remaining 0.5%. The sunflower seed harvest has started. Oilseed type production is forecast to increase by 70% to 80,000 t, while confectionary type production decreases by 14% to 95,000 t. Total supply is forecast to grow by 13% to 225,000 t. Exports and domestic use are expected to increase, due to higher supply and strong demand. Carry-out stocks are forecast to increase to 40,000 t, with a stocks-to-use ratio of 22%.

Total Canada and United States

Oil sunflower seed production is forecast to increase by 31% to 1.29 Mt and supply to increase by 30% to 1.36 Mt. Confectionary sunflower seed production is forecast to decrease by 8% to 280,000 t and supply to decrease by 15% to 327,000 t.

Prices

For the oilseed type, the average Canadian price is forecast to decrease from 2002-2003 due to higher supply and a stronger Canadian dollar. For the confectionary type, the average price is forecast to increase, as pressure from the

stronger Canadian dollar is more than offset by support from lower supply.

OUTLOOK: CANADA LONGER TERM

Production of confectionary sunflower seed is expected to grow moderately in line with the growth in demand. Sunflower seed is considered to be healthy food and the industry has been developing new products such as spreads and snacks made from sunflower seed kernels, which are expected to increase demand.

Oil sunflower seed production is also expected to grow, but the rate of increase will depend on the price of vegetable oil as well as the growth in demand for bird seed. An additional factor is the growth in demand for NuSun. A continuing strong increase in demand for NuSun oil and attractive prices could result in a faster increase in Canadian oil sunflower seed production and possibly a return to sunflower seed crushing in Canada.

The demand for NuSun oil is expected to continue growing especially in the snack food market, and the fast food industry, as well as in the salad and home use markets. The trend to labelling regulations which list the amount of trans fatty acids will contribute to the growth in demand.

For periodic updates on the situation and outlook for sunflower seed, visit Market Analysis Division Online for "Canada: Pulse and Special Crops Situation and Outlook."

For more information, please contact:
Stan Skrypetz
Pulse and Special Crops Analyst
Phone: (204) 983-8972
E-mail: skrypetzs@agr.gc.ca

UNITED STATES AND CANADA: TOTAL OIL SUNFLOWER SEED SUPPLY AND DISPOSITION

	1999 -2000	2000 -2001	2001 -2002	2002 -2003p	2003 -2004f
	thousand tonnes				
Carry-in Stocks	198	168	90	51	63
Production:					
United States	*1,587*	*1,320*	*1,272*	*940*	*1,214*
Canada	*55*	*30*	*24*	*47*	*80*
Total Production	**1,642**	**1,350**	**1,296**	**987**	**1,294**
Total Supply	**1,840**	**1,518**	**1,386**	**1,038**	**1,357**
Total Use	**1,671**	**1,428**	**1,335**	**976**	**1,247**
Carry-out Stocks	168	90	51	63	110
Stocks-to-use ratio (%)	10	6	4	6	9

UNITED STATES AND CANADA: TOTAL CONFECTIONARY SUNFLOWER SEED SUPPLY AND DISPOSITION

	1999 -2000	2000 -2001	2001 -2002	2002 -2003p	2003 -2004f
	thousand tonnes				
Carry-in Stocks	37	104	112	80	47
Production:					
United States	*383*	*288*	*279*	*193*	*185*
Canada	*67*	*89*	*80*	*110*	*95*
Total Production	**450**	**377**	**359**	**303**	**280**
Total Supply	**487**	**481**	**471**	**383**	**327**
Total Use	**383**	**369**	**391**	**343**	**312**
Carry-out Stocks	104	112	80	47	15
Stocks-to-use ratio	27	30	20	14	5

Excludes imports as US imports are mainly from Canada and Canadian imports are mainly from the US.

p: preliminary, USDA and AAFC, September 2003
f: forecast, USDA and AAFC, September 2003
Source: USDA, Statistics Canada, and AAFC estimates

Electronic version available at www.agr.gc.ca/mad-dam/

ISSN 1207-621X
AAFC No. 2081/E

Bi-weekly Bulletin is published by the:
Market Analysis Division,
Marketing Policy Directorate,
Strategic Policy Branch,
Agriculture and Agri-Food Canada.
500-303 Main Street
Winnipeg, Manitoba, Canada R3C 3G7
Telephone: (204) 983-8473
Fax: (204) 983-5524

Director: Maggie Liu
Chief: Fred Oleson

Editor: Gordon MacMichael

To receive a free e-mail subscription to Bi-weekly Bulletin, please send your request to bulletin@agr.gc.ca.

Issued also in French under title:
Le Bulletin bimensuel
ISSN 1207-6228
AAFC No. 2081/F

While the Market Analysis Division assumes responsibility for all information contained in this bulletin, we wish to gratefully acknowledge input from the following:
Canadian Special Crops Association, Market and Industry Services Branch (AAFC)

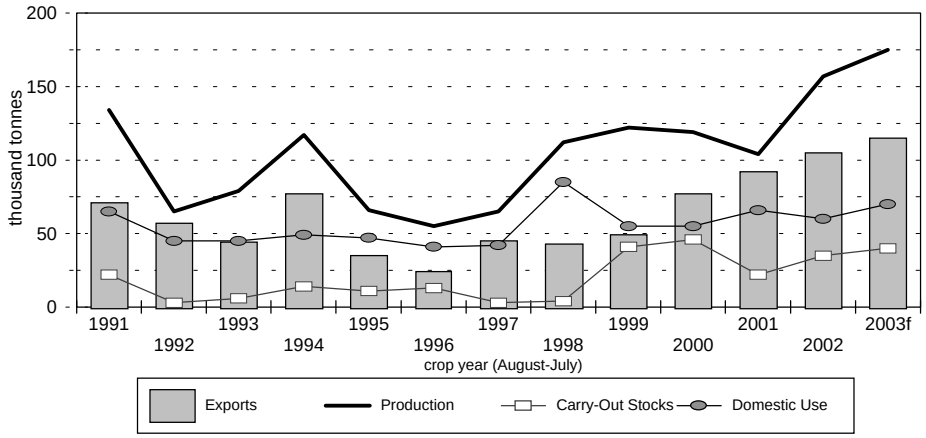
SUNFLOWER SEED: SITUATION AND OUTLOOK

US FARM SECURITY AND RURAL INVESTMENT ACT OF 2002 (FSRIA)

Under the 1996 Federal Agricultural Improvement and Reform Act, the national **loan rate** for both types of sunflower seed was US$0.093 per pound (/lb). Under the FSRIA, separate loan rates of US$0.0915/lb for the oilseed type and US$0.121/lb for the confectionary type were introduced for 2002-2003, but revert to a single loan rate for 2003-2004 at US$0.096/lb. For crop years 2004-2007, the loan rate is expected to fall slightly to US$0.093/lb. These rates are for the top grade and there are discounts for lower quality seed. The loan rate varies by county and in North Dakota, the largest producing state, the 2003-2004 loan rate ranges from US$0.0913-0.10/lb. The loan rate provides a floor return because if the price is lower than the loan rate, the producer is eligible for a loan deficiency payment. Average prices in North Dakota for the oilseed type were about US$0.115, 0.10, 0.0675, and 0.07/lb for 2002-2003, 2001-2002, 2000-2001 and 1999-2000, respectively. The prices were above the 2003-2004 loan rate for the two most recent years, but below the loan rate for the previous two years. For the confectionary type, average prices were about US$0.145, 0.115, 0.1175, and 0.1225/lb for 2002-2003, 2001-2002, 2000-2001 and 1999-2000, respectively. Since the loan deficiency payment for the confectionary type is the same as for the oilseed type, the confectionary type prices are not used in determining the loan deficiency payments. The current producer price in North Dakota for the oilseed type is about US$0.10/lb, higher than the loan rate. Sunflower seed is eligible for the minor oilseeds **direct payment** of US$0.008/lb. However, this is based on historical seeded area and yields and is theoretically decoupled from the area seeded during the year of the payout. Sunflower seed is eligible for the minor oilseeds **counter-cyclical** support based on the target price of US$0.098/lb for crop years 2002 and 2003, and US$0.101/lb for crop years 2004 to 2007. However, in calculating a counter-cyclical payment, the direct payment is first deducted from the target price. Therefore, since the target price minus the direct payment is less or equal to the loan rate or market price, no counter cyclical payment is expected for sunflower seed.

Program payments under the FSRIA are expected to support sunflower seed planting , especially in years when prices of alternative crops are low. Therefore, production will be higher than without the program payments, which will pressure Canadian prices.

CANADA: SUNFLOWER SEED SUPPLY AND DISPOSITION



f: forecast, AAFC (September 2003)
Source: Statistics Canada

SUNFLOWER SEED: SITUATION AND OUTLOOK

NuSun

NuSun is a mid-oleic (monounsaturated fatty acid) sunflower, developed by the United States Department of Agriculture (USDA), which has a low saturated fat profile. The oleic acid content of NuSun oil is about 65% compared to 16% for traditional sunflower oil, 61% for canola oil and 23% for soybean oil. Oil produced from NuSun hybrids contains about 65% monounsaturated fat, 26% polyunsaturated fat and 9% saturated fat, which is considered to be the optimum fat balance under current dietary fat recommendations. The 72% linoleic acid content of oil from traditional hybrids has been reduced to 26%, which means that hydrogenation, bubbling hydrogen into the oil, is not necessary for NuSun hybrids. Since there is no hydrogenation, there is no formation of trans fatty acids. The US National Academy of Sciences recommends limiting trans fat in the diet as much as possible. The high oleic acid and low saturated fat profile is believed to lower cholesterol and the risk of coronary heart disease.

There are several advantages to NuSun oil. First, the costs of hydrogenation are avoided since it holds up longer in frying vats without flavour deterioration. Second, trans fatty acids are not present because there is no hydrogenation. Third, processing costs are lower since it is not necessary to replace the oil as frequently during frying as with other vegetable oils. Finally, at frying temperatures, NuSun oil produces more flavour-stable snack food.

Commercial production of NuSun hybrids started in the US in 1998 and has increased significantly since then to meet market demand. The producers of NuSun receive a premium of about US$11 per tonne (/t) (CAN$15/t) over traditional oilseed hybrids. The development of NuSun has shifted sunflower oil use in the US to domestic markets from export markets.

Sunola and Sunwheat

Shorter season varieties have been developed for areas where the traditional hybrids cannot be grown. They have the further advantage of being able to be sown and harvested with the same equipment as cereal grains or canola, whereas the traditional hybrids require specialized equipment. **Sunola** is a miniature, open pollinated sunflower developed at the Agriculture and Agri-Food Canada (AAFC) Research Centre at Saskatoon. It requires 99-103 days to maturity. The oil content is equal to the best sunflower hybrids. **Sunwheat** is a dwarf hybrid sunflower and requires 100-110 days to maturity. Its oil content is slightly lower than Sunola. It is more suited to the arid areas and able to withstand periods of summer heat better than some other crops. Both Sunola and Sunwheat have lower yields than traditional hybrids.

National Sunflower Association of Canada (NSAC)

The NSAC (www.canadasunflower.com) is a producer controlled organization dedicated “to ensure the profitability and long term growth of the sunflower crop through industry wide leadership”. Buyers, exporters, processors, seed dealers, pesticide manufacturers and pesticide dealers can also become members of NSAC.

Canadian Special Crops Association (CSCA)

The CSCA (www.specialcrops.mb.ca) establishes trade rules and serves as a forum for exporters, dealers and brokers involved in the industry of trading Canada’s pulse and special crops, including sunflower seed.

Canadian Grain Commission (CGC)

The CGC administers quality control standards for sunflower seed. There are two grades for each type of sunflower seed. In addition, sunflower seed can be graded “Sample” if it does not meet the specifications for the two grades. For further information, or to access the Official Grain Grading Guide, please visit the CGC website: www.grainscanada.gc.ca