



Bi-weekly Bulletin

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THE UNITED STATES CANOLA INDUSTRY: SITUATION AND OUTLOOK

Canola production in the United States (U.S.) has more than tripled during the past decade. However, the U.S. continues to be an important market for Canadian canola seed and its products. This issue of the *Bi-weekly Bulletin* examines the situation and outlook for the U.S. canola industry, with possible implications for Canada's canola industry.

Background

Canola/rapeseed is the second largest oilseed crop in the world. However, during the 2001-2002 and 2002-2003 crop years, it slipped into third place due to drought in the major canola producing regions of the world.

China, India, Canada and Australia, in that order, are the largest producers of canola/rapeseed. In terms of world trade, Canada and Australia are the major exporting countries while Japan and Mexico are the major importers of canola seed. World trade in canola seed alone is estimated to be worth CAN\$2 billion (G), of which well over CAN\$1G is of Canadian origin.

Canola was developed in Canada by selective breeding of rapeseed to reduce the levels of erucic acid in the oil and glucosinolates in the meal. In January 1985, the U.S. Food and Drug Administration approved the use of low erucic acid rapeseed, or canola, for human consumption. That year, consumption of canola oil in the U.S. nearly tripled from the previous year, and doubled the following year. Consumption of canola oil has increased rapidly because it has the distinction of having the lowest concentration of saturated fatty acids of all eight major vegetable oils. The recognized health benefits of canola oil in human diets continue to drive its consumption. To keep up with strong demand, world canola production has

more than doubled over the past decade, and crushing capacity has increased proportionately.

Accordingly, the U.S. canola industry has grown to keep up with the demand for canola products, namely the edible oil and protein meal used for animal feed. During the past decade, U.S. canola seed production has more than tripled and canola crushing has increased by more than 60%.

By increasing canola production, the U.S. has become more self-sufficient. Nevertheless, the U.S. continues to require imports of canola seed and its products. Currently, the U.S. is seventh largest in the world in terms of both canola production and processing, up from ninth and eighth standing one decade ago, respectively.

Seeding Decisions

Seeding decisions are largely based on expected commodity prices, costs of production, farm support programs, and rotational constraints. In the northern states, planting data for the past decade show a slight shift out of more traditional crops into minor crops such as canola. That shift may, in part, be due to the incidence of fusarium head blight, which has

WORLD: CANOLA/RAPSEED SUPPLY AND DISPOSITION			
June-May crop year	2001-2002	2002-2003	2003-2004
.....million tonnes.....			
Carry-in Stocks	2.66	2.70	1.84
Production	36.09	32.46	38.01
Imports	5.64	4.56	5.19
Total Supply	44.39	39.72	45.04
Crush	33.20	31.24	35.40
Exports	5.84	4.69	5.42
Other Use	2.65	1.95	2.47
Total Consumption	41.69	37.88	43.29
Carry-out Stocks	2.70	1.84	1.75

Source: USDA, FAS

affected average yields and the quality of North Dakota's wheat and barley crops during the past decade. Crops such as canola provide U.S. farmers with the opportunity to diversify and improve earnings, while minimizing some disease pressures.

U.S. Canola Production

North Dakota, predominantly in the north eastern part of the state, accounts for about 90% of total U.S. canola production, with smaller amounts grown in Minnesota and a few other states (e.g. Michigan). Canola can be grown in most soil types, but it is best suited to well-drained and non-crusting loam soils. The canola plant is susceptible to sclerotinia wilt, especially during periods of high humidity and reduced air movement, so crop rotations are an important consideration. Farmers typically grow a cereal crop following a year of canola production, but some farmers refrain from growing canola in the same field for up to four years in order to avoid disease pressures.

U.S. Farm Policy

The *Farm Security and Rural Investment Act* (FSRIA) of 2002 replaced the *Federal Agricultural Improvement and Reform Act* (FAIR) of 1996, but continues to provide the same planting flexibility, fixed payments, and marketing loan programs as its predecessor. A major difference is that the FSRIA has a counter-cyclical feature that is tied to market prices. This feature provides additional support during years of low prices instead of relying on emergency federal funding.

For minor oilseeds such as canola, the FSRIA increased the loan rate and, for the first time, oilseeds were included in the direct payment program. Direct payments are calculated as follows: base acres multiplied by 0.85; multiplied by the payment crop yield; multiplied by the direct payment rate for the commodity.

Counter-cyclical payment rates are calculated by subtracting the direct payment rate and the loan rate (or the national average marketing year price, if higher than the loan rate) from the target price. The counter-cyclical payment is then calculated as

follows: base acres multiplied by 0.85; multiplied by the payment crop yield; multiplied by the counter-cyclical payment rate for the commodity.

Under the FSRIA, the loan rate for minor oilseeds is scheduled to decrease from US\$0.096 per pound (/lb) for fiscal years 2002 and 2003, to US\$0.093/lb for 2004-2007. At the same time, the target price will increase from US\$0.098/lb, to US\$0.101/lb, increasing the potential for higher counter-cyclical payments during the upcoming 2004-2007 period.

To date, about 90% of the 2003-2004 canola crop is under the Loan Deficiency Payment Program, averaging US\$0.52 per hundredweight.

U.S. Canola Crushing Industry

Oilseed crushing facilities are typically located close to the major growing regions in order to minimize transportation and handling costs. With canola production concentrated in the northernmost part of North Dakota, a crushing plant in Velva, North Dakota is similar in size to the one in Altona, Manitoba which crushes about 1,000 tonnes per day. In addition, there are multi-seed crushing plants located in West Fargo and Enderlin, North Dakota, and Culbertson, Montana.

The economics of canola crushing in North America are such that the bulk of this capacity is located outside the U.S. This is evident in a number of U.S.-owned crushing plants being located in Canada. There are distinct advantages to being located close to the largest available stocks of canola seed, and a favourable Canada/U.S. exchange rate has encouraged the use of Canadian crushing facilities to meet U. S. demand for canola oil.

U.S.: CANOLA SEED SUPPLY AND DISPOSITION				
June-May crop year	2001 -2002	2002 -2003	2003 -2004 ^f	2004 -2005 ^f
thousand tonnes.....			
Carry-in Stocks	39	68	72	65
Production	908	706	686	650
Imports	125	197	290	300
Total Supply	1,072	971	1,048	1,015
Crush	757	587	764	700
Exports	218	284	195	225
Other Use	29	28	24	30
Total Use	1,004	899	983	955
Carry-out Stocks	68	72	65	60
Area Seeded (kha)	605	612	454	450
Area Harvested (kha)	589	516	433	415
Yield (k/ha)	1.54	1.37	1.58	1.57
Average Farm Price (US\$/t)	193	234	279	255

f: forecast, AAFC, February 2004
Source: USDA, FAS, ERS

Trade Patterns

Canada is the largest exporter of canola seed, canola oil and canola meal to the U.S. For the past decade, the value of that trade has averaged CAN\$0.7G, peaking at nearly CAN\$1.0G in 1997-1998. Canola oil is the largest single component of this trade between Canada and the U.S. and it is estimated at CAN\$0.3G annually. At the same time, the U.S. imports about CAN\$0.2G worth of Canadian canola meal.

The U.S. imported about 0.2 million tonnes (Mt) of canola seed from Canada in 2002-2003. The U.S. imports about 0.4 Mt of canola oil from Canada. U.S. exports of canola oil, on the other hand, are relatively small, averaging about 0.1 Mt per year. The U.S. also imports about 1.0 Mt of canola meal annually, virtually all of it from Canada. U.S. exports of canola meal are negligible.

Next Generation Canola

High oleic canola, under development since the 1980s, yields an oil product that is more stable than conventional canola oil. Increased oleic fatty acid triples the frying life of conventional canola oil, avoiding the need for hydrogenation.

Hydrogenation is normally used to increase the stability of vegetable oils but it can change the molecular structure in such a way as to create trans-fatty acid. Trans-fatty acids are similar to saturated fatty acids in terms of stability but are considered undesirable for human consumption due to health risks.

High oleic canola is not expected to replace conventional canola oil in the salad oil market. It is, however, likely to see greater market acceptance in the frying and snack food markets due to its increased stability and because it helps individuals reduce levels of trans fatty acids in their diets.

High oleic canola, grown under contract for Cargill and Dow AgroSciences, is in the early stages of market development. However, in 2003-2004, it accounted for about 600,000 acres, or 5% of Canada's canola seeded area. The proportion of high oleic canola is expected to increase considerably in the next few years because of the large North American frying oil and snack food markets. The frying oil market is currently six to eight times the size of the salad oil market. The salad oil market, on the other hand, has not experienced much growth in recent years.

Nevertheless, conventional canola oil has done very well in the salad oil market due to the health benefits, relative to other vegetable oils. Canola oil has the lowest level of saturated fats and the highest levels of omega-3 fatty acid (linolenic) of the common vegetable oils. Linolenic acid in canola oil is recognized for lowering cholesterol, but its use is limited due to stability problems, particularly in frying applications.

U.S. SITUATION 2003-2004

In 2003-2004, the area seeded to canola in the U.S. decreased from 612,000 hectares (ha) in 2002-2003, to 454,000 ha. However, following a year of drought, yields improved sufficiently to partially offset the effects of a smaller seeded area. As a result, **canola seed** production is estimated at 686,000 tonnes (t), down from 706,000 t in 2002-2003. Canola supplies are higher for 2003-2004 and domestic crush is expected to increase by 30%, to 764,000 t. Exports are estimated at 195,000 t, down from 284,000 t in 2002-2003. Canada is the major market for U.S. canola exports. Carry-out stocks are estimated at 65,000 t, down marginally from the previous two years.

U.S.: CANOLA OIL SUPPLY AND DISPOSITION				
<i>June-May crop year</i>	2001	2002	2003	2004
	-2002	-2003	-2004	2005f
.....thousand tonnes.....				
Carry-in Stocks	51	24	38	25
Production	266	246	299	270
Imports	<u>503</u>	<u>445</u>	<u>600</u>	<u>600</u>
Total Supply	820	715	937	895
Food Use	665	589	822	750
Exports	116	73	75	100
Other Use	<u>15</u>	<u>15</u>	<u>15</u>	<u>15</u>
Total Use	796	677	912	865
Carry-out Stocks	24	38	25	30

f: forecast, AAFC, February 2004
Source: USDA, FAS

U.S.: CANOLA MEAL SUPPLY AND DISPOSITION				
<i>June-May crop year</i>	2001	2002	2003	2004
	-2002	-2003	-2004	2005f
.....thousand tonnes.....				
Carry-in Stocks	5	5	5	5
Production	420	388	472	425
Imports	<u>836</u>	<u>919</u>	<u>1,155</u>	<u>1,100</u>
Total Supply	1,261	1,312	1,632	1,530
Feed Use	1,249	1,276	1,616	1,500
Exports	7	31	11	25
Other Use	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Use	1,256	1,307	1,627	1,525
Carry-out Stocks	5	5	5	5

f: forecast, AAFC, February 2004
Source: USDA, FAS

Canola oil production is estimated at 299,000 t, up from 246,000 t for 2002-2003, due largely to the increased availability of canola seed for crushing. Imports are estimated at a record 600,000 t due to a 40% increase in domestic consumption, estimated at 822,000 t.

U.S. consumption of **canola meal** increased steadily during the 1990s, peaking at 1.6 Mt in 1999-2000 when a near record 1.1 Mt of canola meal were imported from Canada. The U.S. continues to import more canola meal than it produces, primarily for use in the dairy sector. For 2003-2004, U.S. canola meal imports are estimated at 1.16 Mt, up from 0.92 Mt in 2002-2003.

2003-2004 Price Outlook

U.S. prices for canola seed, oil and meal are determined by several factors including demand, exchange rates of the major trading countries, weather conditions in the major rapeseed/canola growing regions of the world, and world prices for the major vegoils such as palm oil and soyoil. The latter, in turn, are determined by what happens in palm oil producing countries such as Malaysia and Indonesia, and major soybean producing countries such as the U.S., Brazil, and Argentina.

For 2003-2004, Agriculture and Agri-Food Canada's (AAFC) WCE cash price forecast for No.1 Canada canola is CAN\$375/t (I/S Vancouver), down from CAN\$415/t in 2002-2003. This is based on a projected U.S. soybean oil price of US\$0.29/lb, and an exchange rate of CAN\$1.30 = US\$1.00. Soybean product prices have been supported by the 12% decline in U.S. soybean production in 2003-2004 due to poor growing conditions.

OUTLOOK 2004-2005

For 2004-2005, area seeded to canola is projected at 450,000 ha, down marginally from 2003-2004. As a result, U.S. **canola seed** production for 2004-2005 is forecast at 650,000 t, down from 686,000 t in 2003-2004. Canola supplies are forecast to decrease marginally and meet demand for canola seed for crushing, which is forecast at 700,000 t. Imports, primarily from Canada, are projected at 300,000 t, up from 290,000 t in 2003-2004.

The issue of trans-fatty acids in human diets is expected to sustain good demand for **canola oil** for 2004-2005. Canola oil production is forecast at 270,000 t, down from 299,000 t in 2003-2004. To maintain adequate supplies of canola oil for the year, imports, primarily from Canada, are forecast at 600,000 t.

Canola meal production is forecast at 425,000 t, down from the record 472,000 t in 2003-2004, and feed use is forecast at a near-record 1.5 Mt.

Price Forecast

For 2004-2005, AAFC's price forecast for No.1 Canada canola is CAN\$325-365/t (I/S Vancouver), down from CAN\$375/t expected for 2003-2004. This is based on a projected U.S. soybean oil price of US\$0.26/lb and an exchange rate of CAN\$1.275 = US\$1.00. Although influenced by soybean prices, canola seed prices are largely dependent on world vegetable oil prices as canola contains about 40% oil, versus 20% for soybeans.

**For more information
please contact:
Stan Spak,
Market Analyst
Phone: (204) 983-8467
E-mail: spaks@agr.gc.ca**

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**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

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CANADA: CANOLA EXPORTS TO THE U.S.			
<i>August-July crop year</i>	2001 -2002	2002 -2003	2003 -2004f
thousand tonnes.....		
Canola Meal	791.7	826.6	1,200.0
Canola Oil	506.5	446.0	600.0
Canola Seed	87.6	194.8	250.0
f: forecast, AAFC, February 2004 Source: Statistics Canada			

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