B R I E F I N G

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Canola and Rapeseed

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Background

Edible and inedible varieties of rapeseed are produced throughout the world. Rapeseed is a member of the mustard family and production of rapeseed in the United States began during World War II for principle use as a lubricant. Canola, *Brassica napus*, is an edible variety of rapeseed. Canola was given its name by Canadian producers in 1979 to describe a variety of rapeseed that contained low amounts of erutic acid along with other desirable characteristics. In 1985, the United States Food and Drug Administration recognized the separate identities of rapeseed and canola by establishing rapeseed as a crop for use in industry and canola for use in products for human consumption.

Production

World [1]*:* Only pooled data on global canola and rapeseed production, consumption, and trade are available. Canola and rapeseed production occurs in about 50 countries worldwide. In 2004, China, Canada, and several European countries dominated canola and rapeseed production (Figure 1). China produced 28 percent of total world output, Canada 17 percent, India 15 percent, Germany 11 percent, and France 9 percent. The United States only produced 1 percent of canola worldwide.

[1] Data on world production of canola/rapeseed were obtained from the FAOSTAT database of the Food and Agriculture Organization of the United Nations, which is compiled on a calendar year-basis. Marketing year and crop year information may yield somewhat different numerical results.

Figure 5: Percent of World Canola and Rapeseed Imports by Country: 2003

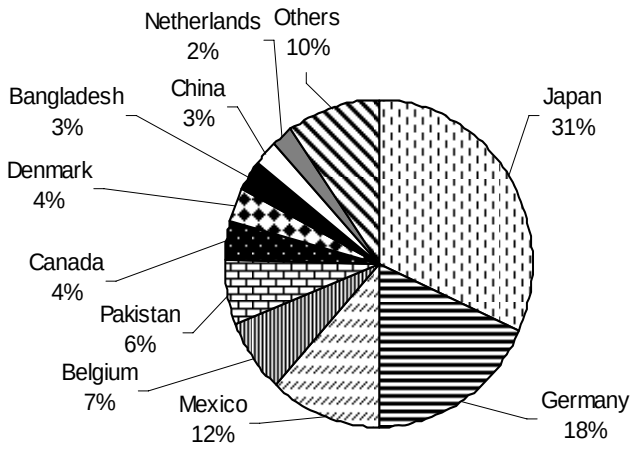


Table 1: World Canola and Rapeseed Production, Historical

Year	*Production in Metric Tons*
1993	26,154
1994	29,634
1995	34,186
1996	30,429
1997	35,068
1998	35,746
1999	43,183
2000	39,513
2001	35,931
2002	34,249
2003	36,617
2004	46,256

Table 2: United States Canola and Rapeseed Production, Acreage and Production

Year	*Acreage*		*Production*		
	Planted (000)	*Harvested (000)*	*Yield (lbs)/ acre*	*Total (000) Pounds*	*Metric Tons*
1993	199	187	1,350	252,450	114,511
1994	354	340	1,316	447,440	202,957
1995	446	429	1,278	548,447	248,774
1996	367	347	1,385	480,521	217,963
1997	671	631	1,237	780,710	354,128
1998	1,115	1,076	1,448	1,557,800	706,613
1999	1,076	1,044	1,306	1,363,680	618,561
2000	1,555	1,498	1,334	1,998,310	906,427
2001	1,494	1,455	1,374	1,998,515	906,520
2002	1,460	1,281	1,197	1,533,420	695,555
2003	1,082	1,068	1,416	1,512,250	685,952
2004	865	828	1,618	1,339,530	607,607
2005	1,153	1,125	1,333	1,499,300	680,078

Worldwide, annual canola and rapeseed production has fluctuated between 26 and 46 million metric tons over the past 12 years (Table 1). Production reached a peak of over 46 million metric tons in 2004, an increase of approximately 10 million metric tons from just a year prior in 2003.

United States: In 2004, the United States accounted for one percent of world canola and rapeseed production. Between 1993 and 1998, the area planted to canola in the United States increased rapidly (Table 2). In part, this expansion in canola acreage was tied to increased production flexibility provided under the provisions of the 1990 federal agricultural legislation (the FACT Act) that introduced normal and optional flex acres for program crops. Acres planted to canola increased substantially after 1996, in part because of further increases in planting flexibility provided through decoupling federal market transition payments from the current production of program crops. The United States planted a record 1,555,000 acres of canola in 2000. Canola acreage in the United States ranks third among oilseeds in total acres behind soybeans and sunflower.

Montana: Montana is a minor producer of canola. In 2005, the area planted to canola in Montana was to 23,000 acres, down from a peak of 65,000 acres planted in 2000 (Table 3). Recent declines in canola acreage and production were partly influenced by a prolonged drought in some of Montana's primary canola producing areas.

Montana's share of total United States canola acreage has declined relatively steadily from over five percent in 1999 to around two percent in 2005 (Figure 2).

Domestic Competition: In addition to farmers in other countries, producers in Montana must compete with other states for the United States canola market. Canola acreage and production in the United States is dominated by North Dakota which produces 91 percent of U.S. canola output (Figures 3 and 4).

Table 3: Montana Canola Production, Historical Production

Year	*Acreage*		*Production*		
	Planted (000)	*Harvested (000)*	*Yield (lbs.) acre*	*Total (000) Pounds*	*Metric Tons*
1999	60	58	1,200	69,600	31,570
2000	65	58	960	55,680	25,256
2001	58	49.5	910	45,045	20,432
2002	37.5	34.5	860	29,670	13,458
2003	28	27	940	25,380	10,818
2004	15	15	1,590	23,850	10,818
2005	23	18	1,400	25,200	11,431

Figure 2: Montana's Share of United States Total Canola Acreage

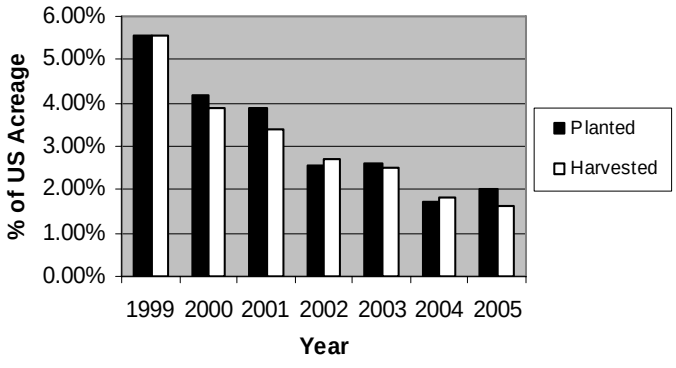


Figure 3: Percent of United States Canola Acreage by State: 2005

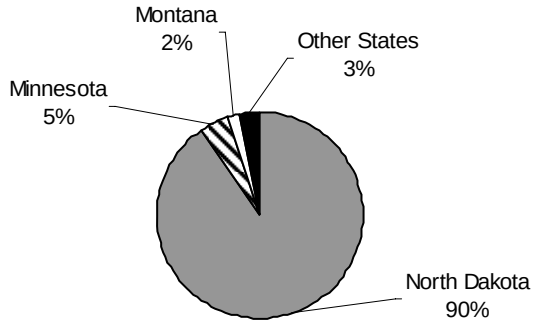
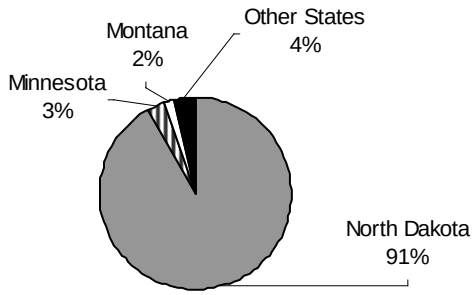


Figure 4: Percent of United States Canola Production by State: 2005



Consumption

Canola contains approximately 40 percent oil and is primarily used in vegetable oil, margarine, and salad oil for human consumption. In the United States, 45 percent of margarines, 60 percent of shortenings, and 80 percent of salad dressings contain canola oil. The widespread use of canola oil in edible products occurs because it has seven percent or less saturated fats and contains significant amounts of essential fatty acids believed to lower cholesterol, aid the immune system, and help in blood clotting.

Both oil and canola meal are extracted from canola seed. Canola meal, a high protein food, is suitable for livestock consumption and is highly palatable. Canola meal contains from 20 to 35 percent protein.

Rapeseed oil is used in the manufacture of inedible products such as cosmetics, fungicides, herbicides, pesticides, and suntan oil.

Imports

In recent years, about 18 percent of the world's production of canola and rapeseed has been traded internationally (approximately 7 million metric tons in 2005).

In 2003, the top three importing countries for canola and rapeseed were Japan, Germany, and Mexico (Table 4 and Figure 5). Collectively, these three countries account for 61 percent of world imports of canola and rapeseed. The United States imports only minor quantities of canola.

Exports

Canada, France, and Australia accounted for 78 percent of the world's canola and rapeseed exports in 2003 (Figure 6). The United States exported 282,855 metric tons of canola and rapeseed, accounting for approximately four percent of world canola and rapeseed export totals in 2003 (Table 5).

Table 4: Major World Canola and Rapeseed Importing Countries, 2003

Country	*World Rank*	*Metric Tons*
Japan	1	2,084
Germany	2	1,211
Mexico	3	782
Belgium	4	479
Pakistan	5	415
Canada	6	251
Demark	7	238
Bangladesh	8	185
China	9	167
Netherlands	10	152
Others		644
World Total		**6,605**

Table 5: Major World Canola and Rapeseed Exporting Countries, 2003

Country	*World Rank*	*Metric Tons*
Canada	1	3,251
France	2	1,717
Australia	3	625
Germany	4	389
United States	5	283
United Kingdom	6	272
Lithuania	7	104
Austria	8	60
Hungary	9	59
Belgium	10	56
Others		338
World Total		**7,154**

Figure 5: Percent of World Canola and Rapeseed Imports by Country: 2002-2003

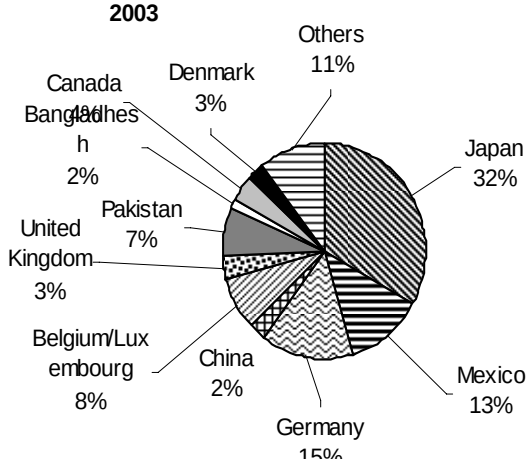
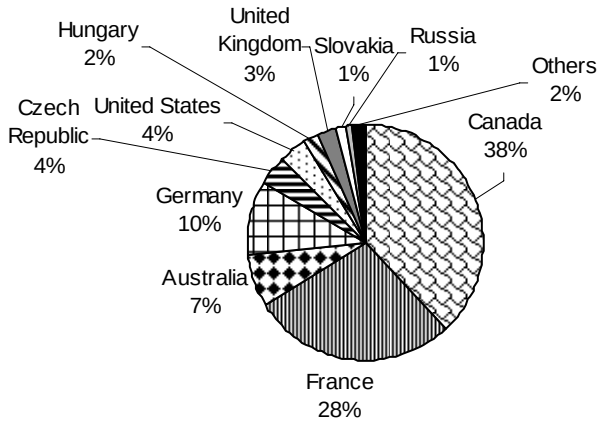


Figure 6: Percent of World Canola and Rapeseed Exports by Country: 2002-2003



Summary

World production of canola increased to over 46 million metric tons in 2004. About 18 percent of world production (approximately 7 million metric tons) is traded internationally annually.

The United States accounts for one percent of world production and about four percent of world exports. Canola and rapeseed imports into the United States are minimal.

In recent years, Montana accounted for approximately two percent of the total acres of canola planted in the United States. In 2005, acres of canola planted in Montana increased slightly from the sharp decline in prior years due to prolonged drought conditions.

References

1. "Canola: A Slippery Cole Crop," Ag Innovation News, July-September 2003 Volume 12, Number 3; Internet Accessed 7/17/03: http://www.auri.org/news/ainjul03/12canola.htm

2. "Canola History," Northern Canola Growers Association, Internet Accessed7/17/03: http://www.northerncanola.com/canolainfo/history.asp

3. "Canola Production in Montana," Montana State University Extension Service, September 13, 2001, Internet Accessed 7/18/03: http://scarab.msu.montana.edu/extension/MTPIAP-CANOLA.htm

4. Hair, William M, Phd., "Canola Production Guide," Clemson Canola Information Database, Internet Accessed 7/18/03: http://www.clemson.edu/edisto/canola/guide.htm

5. McNew, Kevin and Bixler, Sam, "Canola: Production, Uses, and Exports," Agricultural Marketing Policy Center, Briefing Number 18, November 2001

6. "Montana Canola Production Statistics-Historical Data," National Agricultural Statistics Service of the USDA, Internet Accessed 7/17/03: http://www.nass.usda.gov/mt/crops/canolayp.htm

7. "United States Canola Production Statistics-Historical Data," National Agricultural Statistics Service of the USDA, Internet Accessed 7/17/03: http://www.nass.usda.gov:81/ipedb/report.htm

8. "World Canola/Rapeseed Data," Canola/Rapeseed Market Analysis Report, April 22, 2003, Internet Accessed 7/18/03: http://www.statcom-online.com