### Agriculture and Agri-Food Canada

## Bi-weekly Bulletin

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# CANADA: PRIMARY PROCESSING OF GRAINS, OILSEEDS, PULSES AND SPECIAL CROPS

The capacity of Canada's primary processing industry for grains, oilseeds, pulse and special crops excluding primary processing of animal feed, increased about 14% during the past 5 years. That capacity, currently estimated at 16 million tonnes (Mt) per year, represents about 25% of Canada's total grains, oilseeds, pulse and special crops production. The largest growth has been in primary processing of corn and oats. This issue of the *Bi-weekly Bulletin* examines some of the changes that have occurred within Canada's primary processing industry during the past 5 years.

#### **BACKGROUND**

The importance of Canada's agricultural sector is well documented. Agriculture and agri-food activities contribute to 8.5% of Canada's gross national product and provide one of seven Canadian jobs. Every year, Canadian farmers turn about \$14 billion (bln) worth of farm inputs into \$28 bln worth of

sales, much of which is processed into consumable products for the domestic and export markets. Agriculture and agri-food is the largest manufacturing sector in seven out of 10 provinces, and it is Canada's second largest manufacturing sector. The value of agriculture and agri-food is estimated at \$130 bln annually, of which approximately \$23 bln is exports.

Canada, as a major grains, oilseeds, pulse and special crops producing country, is improving its competitive position in world markets by adopting more efficient and innovative agronomic practices, by diversifying into non-traditional crops, and by shifting toward more value-added activities. These activities include the construction of biomass-based ethanol plants, which

CANADA: GRAINS AND OILSEEDS PROCESSING CAPACITY									
	CANADA		EASTERN CANADA		WESTERN CANADA				
	tonnes per day of raw product								
Commodity	1997 -1998	2001 -2002	1997 -1998	2001 -2002	1997 -1998	2001 -2002			
Oilseeds	16,865	16,500	n/a	n/a	n/a	n/a			
Wheat Flour	10,331	12,400	7,097	8,258	3,234	4,142			
Wheat Fractionation	210	512	0	0	210	512			
Durum Flour	1,495	1,787	987	1,005	508	782			
Corn	4,335	6,440	3,825	5,995	510	445			
Malt Barley	3,249	3,376	820	767	2,429	2,609			
Oats	1,537	2,260	421	454	1,116	1,806			
Specialty Products	374	<u>496</u>	221	343	153	153			
Total	38,396	43,771							

Source: Grain and Milling Annual, Ontario Corn Producers' Association, Canadian Oilseed Processors Association, Canola Council of Canada and other industry sources.



has been encouraged by the Government of Canada Action Plan 2000 on Climate Change. This 5-year initiative, which was announced in October 2000, is aimed at having up to 25% of Canada's total gasoline supply containing 10% ethanol, a blend that can be readily used in most passenger vehicles.

The growth of value-added activities such as primary processing of grains, oilseeds, pulse and special crops has been identified as a priority by Agriculture and Agri-Food Canada (AAFC). Ultimately, these value-added activities will contribute to a stronger agricultural sector, as well as improving Canada's economic and environmental well-being.

#### **Oilseeds**

The **oilseed** processing industry is, by volume, the largest primary processing industry for Canadian grains and oilseeds but the industry has matured in recent years. During the past 5 years, Canadian oilseed processing capacity has remained virtually unchanged. This is in direct contrast to the doubling of capacity during the previous decade when Prairie farmers diversified their farming operations and added considerably more canola production to their crop rotations.

Canola crushing accounts for more than half of Canada's total oilseeds processing capacity. Despite the closure of the Canadian Agra Foods Ltd plant in Sexsmith, Alberta, crushing capacity has been maintained as the remaining plants modernized and expanded. Today, canola crushing capacity is estimated at 12,000 tonnes per day (t/d), however, it must be noted that the industry is operating at well below capacity.

Canada's major canola crushers are: ADM Agri-Industries Ltd with plants in Windsor, Ontario and Lloydminster, Alberta; and CanAmera Foods with plants in Hamilton, Ontario; Altona, Manitoba; Harrowby, Manitoba; Nipawin, Saskatchewan; and Fort Saskatchewan, Alberta. As well, there are two plants owned by *Canbra Foods Ltd* (Lethbridge, Alberta) and *Cargill* (Clavet, Saskatchewan) whose combined capacity accounts for about 25% of Canada's total canola crushing capacity. A new crushing plant built in Ste. Agathe, Manitoba in 1997 went into receivership before it could start crushing operations.

Saskatchewan Wheat Pool (SWP) recently announced that it intends to sell its interest in *CanAmera Foods*, in which it holds 33.3% ownership. SWP and Agricore United, who together have 50% ownership in *CanAmera Foods*, have signed a binding letter of agreement with the remaining partner *Central Soya of Canada Ltd.* to make it the sole owner of *CanAmera Foods*. The agreement is subject to regulatory approval in both Canada and the U.S., and is expected to be finalized by July 31, 2002.

Soybean crushing is concentrated in Ontario, where about 90% of Canada's total soybean production occurs. The major soybean crushing facilities are dual purpose plants owned by *ADM*Agri-Industries Ltd (Windsor) and CanAmera (Hamilton) which can also be used for canola crushing. The two plants have a combined capacity of about 4,500 t/d, up slightly from 4,250 t/d 5 years ago.

#### **Wheat Flour Milling**

Wheat flour milling is the second largest primary processing industry for Canadian grains and oilseeds. Although it is often referred to as a "mature" industry, Canada's wheat milling capacity increased by 20% during the past 5 years to an estimated 12,400 t/d. In contrast to the U.S. flour milling industry which runs at about 82% of annual capacity, Canada's milling industry is running at over 90% capacity.

The majority of wheat flour milling occurs in eastern Canada, but the largest increase in milling capacity over the past 5 years has been in western Canada. Increased capacity in western Canada is due to an expansion of several existing facilities and the construction of two new

plants, specifically *Prairie Flour Mills* in Eli, *Manitoba and FarmGro Organic Food* in Regina, Saskatchewan.

Five years ago, three large milling companies accounted for about 75% of total flour milling capacity in Canada. At the time, combined capacities of the plants owned by ADM Milling Company, Maple Leaf Mills, and Robin Hood Multifoods were as follows: 2,998 t/d; 2,281 t/d; and 2,166 t/d, respectively. Since then, Maple Leaf Mills has sold all three of its flour milling plants, two of which were acquired by ADM Milling Company. With the acquisition of those plants in Calgary, Alberta and Port Colborne, Ontario, ADM Milling Company now has 42% of Canada's total wheat milling capacity.

Over 70% of Canada's wheat milling capacity is controlled by U.S. interests. Over the past 10 years, Canadian flour exports have shifted from offshore to the U.S. Flour exports to the U.S. rose sharply in the early to mid-1990s and have since risen more slowly. In the future, the volume of flour exports to the U.S. will depend in part on product mandates and inter-company transfers.

#### **Durum Milling**

Durum processing capacity includes the capacity of dual purpose facilities which can mill either wheat or durum. On that basis, the capacity of Canada's durum flour milling industry has increased by about 20% during the past 5 years, and is now estimated at 1.787 t/d. The increase is due largely to expanded capacity at the Howson and Howson Ltd. plant in Blyth, Ontario, and the Robin Hood plant in Saskatoon, Saskatchewan. These expansions more than offset the closure of the Robin Hood Multifoods plant in Port Colborne, Ontario which had a capacity of about 151 t/d.

#### **Wheat Fractionation**

From an environmental standpoint, wheat fractionation is aimed at increasing the supply of renewable fuels in Canada. Using the dry milling process, four plants in western Canada

turn mostly feed quality wheat and durum into ethanol and distillers grain, a by-product which is used as animal feed. Total capacity of the 4 plants is estimated at 512 t/d, more than double the capacity that existed 5 years ago.

The API Grain Processing plant in Red Deer, Alberta leads with capacity of about 275 t/d, followed by Pound-Maker Agventures, Ltd in Lanigan,
Saskatchewan with 100 t/d and Mohawk Oil, Canada, Ltd. in Minnedosa,
Manitoba with processing capacity of just under 100 t/d. Highwood Distillers in High River, Alberta uses about 40 t/d of wheat to produce beverage alcohol.

#### **Corn Processing**

Most of Canada's available corn supply is consumed as animal feed. The remainder, estimated at 18% of the total supply, is processed for human consumption or used for the production of fuel ethanol. Canada, on average, imports about 17% of its total corn requirements from the U.S. annually.

Since 1997-1998, corn processing capacity has increased by about 49%, to 6,440 t/d. The increase has been primarily in eastern Canada where the processing plants are concentrated.

Wet milling accounts for about 60% of Canada's total corn processing capacity, and this capacity is estimated at 4,220 t/d. The wet milling process is used primarily for the production of food products such as corn starch and corn sweeteners. The two major companies that have wet milling facilities in Canada are: Casco Inc./ Canada Starch Operating Company Inc. which has three plants located in Cardinal, London and Port Colborne, Ontario; and Nacan Products Ltd., whose single plant is located in Collingwood, Ontario.

Canada's production of fuel ethanol and beverage alcohol is concentrated in Ontario, which is relatively close to good, reliable sources of corn. The economics of production favour the **dry milling** process, in contrast to the large U.S. plants which are able to exploit the

efficiencies of wet milling technology. Canada's dry milling capacity is estimated at 2,260 t/d, of which a small proportion is used to produce brewers grit, corn flour, and corn meal. As well, *J.R. Short Milling Company* has a facility in Toronto that produces a variety of specialty ingredients including pregelatinized corn flours, confectioners flakes, stabilized grain, and toasted bran products.

#### **Barley Malt**

Canada processes about 1.2 Mt of malting barley each year. The domestic brewing market has been relatively flat for the last few years, but it is still the single largest market for Canadian malt, accounting for about 350,000 t of malting barley processed annually. Canada Malting Co., with plants in Thunder Bay, Montreal and Calgary, is Canada's largest maltster with about half of total malting capacity, followed by Prairie Malt Ltd. in Biggar, Saskatchewan, Westcan Malting in Alix. Alberta, and Dominion Malting Ltd. in Winnipeg, Manitoba. Canada's barley malt exports are increasing and, as a result, malting capacity has increased about 4% in the past 5 years to an estimated 3.376 t/d. Most of the expansion has been in western Canada, where over two-thirds of Canada's total malting capacity is currently located.

#### Oats

Most of Canada's oat processing capacity is in western Canada. That capacity increased by about 47% during the last 5 years, and is now estimated at 2,260 t/d. The bulk of the increase is attributed to an expansion at the *Can-Oat Mill* in Portage la Prairie, Manitoba which more than doubled its daily capacity to 910 t/d. With that expansion, western Canada's share of oat processing capacity increased from 69% to 80%.

Over 40% of Canada's oat processing capacity is controlled by U.S. interests. Canadian oat product (grain equivalent) exports to the U.S. increased from 22,000 t in 1991-1992 to 231,000 t in 2000-2001.

#### **Pulse and Special Crops**

The Canadian pulse and special crops processing industry is very diversified and located throughout most of Canada. Primary processing of these crops involves receiving, cleaning, and sorting according to quality. Secondary processing usually involves the preparation of product for final use by consumers, and this would normally occur at a different location from primary processing.

The largest secondary processor is the livestock feed industry, which consumes an increasing volume of dry peas, as well as some lentils, chick peas, and fababeans, mainly in the Prairie provinces. The bird seed industry uses canary seed, as well as sunflower seed, safflower seed, millet, buckwheat and dry peas in feed mixtures for pet and wild birds.

Secondary processing includes the splitting of dry peas, lentils and chick peas, and production of gluten free flour. Dry peas and beans are also processed into components such as pea fibre, flour, starch and protein concentrate. Mustard seed is processed into flour and condiments. Confectionary sunflower seeds are used for snack food, such as roasted seeds, and dehulled for use in baking. Buckwheat is milled into flour, groats and grits which are then used for baking, noodles, hot breakfast cereal or pancake mixes.

#### **Specialty Products**

The popularity of niche marketing is evident in the increased growth of specialty products. These include organic flour, cereal bran, dark rye flour, 100% whole wheat flour, spelt flour, brewers flakes, oat flour, and snack pellets. Many of those specialty items are aimed at health-conscious individuals who are willing to pay a premium for products they believe provide health benefits.

The capacity of plants involved in processing of specialty products has increased by one-third during the past

few years, and is now estimated at 396 t/d. This follows a decade when processing capacity for specialty products nearly doubled.

#### Some Recent and Planned Expansions in Primary Processing

There have been several expansions in wheat flour milling capacity in the past year. *Prairie Flour Mills* at Elie, Manitoba has completed a 45 t/d expansion, and *Dover Flour Mills* in Cambridge, Ontario has added 225 t/d to their daily capacity. In Alberta, *API Grain Processors, Inc.* in Red Deer and *Ellison Milling Co.* in Lethbridge have increased their combined capacity by 265 t/d.

Can-Oat Milling is expanding its oat milling operation in Portage la Prairie, Manitoba. Scheduled for completion in August 2002, the expansion will increase their finishing capacity by over 11,000 tonnes (t) annually. The company, which has another oat processing facility in Saskatoon, Saskatchewan, processes over 260,000 t of milling quality oats annually and employs 150 full-time employees at its two prairie locations.

Construction plans are being drawn up on what would be the largest special crops processing plant in western Canada. Blue Hills Processors Ltd. (BHPL) of Avonlea, Saskatchewan is expanding and renovating a former Saskatchewan Wheat Pool elevator to process 140,000 t of peas, lentils and chickpeas annually. BHPL will load cleaned bulk product to hopper rail cars, boxcars, containers or hopper trucks, and bagged product to rail boxcars, containers or intermodal trucks. The existing elevator system will be left intact for shipments of bulk raw product.

Louis Dreyfuss Canada is planning to spend CAN\$1.3M to add a cleaning and processing plant for chickpeas and green and yellow peas at its Wilson, Alberta terminal. The upgrades include new cleaners to clean and size peas, extra storage for cleaned seed, and handling and bagging equipment capable of loading a container with 570 bags of product in about 20 minutes. The expansion is expected to be completed in November 2002.

Saskcan Pulse Trading Inc. is constructing a lentil splitting facility in Regina, Saskatchewan which will have an annual capacity of 75,000 t upon completion in August 2002. Arbel Pulse Grain, which is headquartered in Mersin, Turkey, is one of the major shareholders in this venture and was the largest importer of Canadian whole red lentils during the 2000-2001 crop year.

Canada's capacity for producing ethanol is expected to more than double, mostly as a result of major expansions in Ontario and Quebec. Commercial Alcohols Inc. is planning to produce 120 million litres (ML) of ethanol per year once their plant in Varennes, Quebec is completed, and an expansion of the Chatham, Ontario plant is expected to increase output by about 150 ML annually. In addition, Seaway Grain Processors Inc. is going ahead with plans to build a plant in Cornwall, Ontario capable of producing 66 ML of ethanol annually. Commercial Alcohols Inc. is believed to be exploring the possibility of building a plant in Saskatchewan, possibly in the Melville district.

Saskatchewan has become the first province in Canada to establish the legal framework to allow for mandating an ethanol blend in gasoline sold in the province. The *Ethanol Fuel Act*, which received Royal Assent in June 2002, will not come into effect until the industry has had the chance to develop adequate capacity to meet consumption needs. By way of a rebate program, the *Ethanol Fuel Act* also allows for the elimination of the provincial fuel tax on ethanol produced and consumed in

Saskatchewan.

The Manitoba Government has initiated a public consultative process regarding the expansion of production and use of ethanol in the province. In addition to seeking public input on whether all gasoline sold as vehicle fuel in Manitoba should be blended with ethanol, the province is also seeking advice on how to promote local ethanol production for the purpose of creating new jobs and business opportunities. A major benefit of expanded ethanol production is the high quality livestock feed that is a byproduct of the ethanol production process.

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	WHEAT F	LOUR MILLING			
					ACITY
				(t/d of rav <b>1997</b>	v produc <b>200</b> 1
COMPANY	OWNERSHIP	LOCATION	PRODUCTS	-1998	-2002
ADM Milling	Archer Daniels Midland (USA)	Montreal. PQ	WF, WWF	1,140	1,167
ADMMilling	Archer Daniels Midland (USA)	Montreal, PQ	WF, WWF	502	502
ADM Milling	Archer Daniels Midland (USA)	Midland, ON	WF, WWF	726	726
ADM Milling	Archer Daniels Midland (USA)	Mississauga, ON	WF	363	423
ADM Milling	Archer Daniels Midland (USA)	Strathroy, ON	SWF	113	106
ADM Milling	Archer Daniels Midland (USA)	Winnipeg, MB	WF, SWF,WWF	187	200
ADM Milling	Archer Daniels Midland (USA)	Medicine Hat, AB	WF	460	514
ADM Milling	Archer Daniels Midland (USA)	Port Colbourne, ON	WF, SWF,WWF	798	865
ADM Milling	Archer Daniels Midland (USA)	Calgary, AB	WF, SWF,WWF	792	956
API Grain Processors	Independent (CAN)	Red Deer, AB	WF	0	380
Arva Flour Mills	Independent (CAN)	Arva, ON	SWF, WWF, RF	18	18
Ellison Milling	Parrish & Heimbecker (CAN)	Lethbridge, AB	WF, WWF, RF	333	333
Camrose Milling Co.	Independent (CAN)	Camrose, AB	WF	30	33
Cereal Foods	Cereal Food Processors (USA)	Montreal, PQ	WF, SWF, WWF	181	212
Dawn Foods	Dawn Foods (USA)	Saskatoon, SK	WF	375	375
Dawn Foods	Dawn Foods (USA)	Humboldt, SK	WF	15	30
Dover Mills	Dover Industries (ĆAN)	Halifax, NS	WF	242	357
Dover Mills	Dover Industries (CAN)	Cambridge, ON	WF	333	628
FarmGro Organic Food	Independent (CAN)	Regina, ŠK	WF	0	73
Halton Flour Milling	Independent (CAN)	Acton, ON	WF	128	234
Hayhoe Mills	Independent (CAN)	Woodbridge, ON	WF, SWF, WWF	212	302
Kraft Milling	Kraft Foods (USA)	Streetsville, ON	SWF, WF	385	514
New-Life Mills	Parrish & Heimbecker (CAN)	Hanover, ON	WF, SWF	376	454
Port Royal Mills	Independent (CAN)	Aurora, ON	WWF	0	48
Prairie Flour Mills	Independent (CAN)	Elie, MB	WF	0	181
Robin Hood Multifoods	International Multifoods (USA)	Montreal, PQ	WF	758	758
Robin Hood Multifoods	International Multifoods (USA)	Port Colbourne, ON	WF	696	800
Robin Hood Multifoods	International Multifoods (USA)	Saskatoon, SK	WF, SWF,WWF	709	847
Rogers Foods	Nisshin Flour Milling (Japan)	Armstrong, BC	WF, RF, WWF	165	216
Other	Independent (CAN)	various	various	294	148
Total Capacity				10,331	12,400
	DURU	JM MILLING			
				CAP	ACITY
				(t/d of rav	
				1997	2001
COMPANY	OWNERSHIP	LOCATION	PRODUCTS	-1998	-2002
ADM Milling	Archer Daniels Midland (USA)	Montreal, PQ	durum products	285	285
ADM Milling	Archer Daniels Midland (USA)	Port Colbourne, ON	durum products	79	79
Ellison Milling	Parrish & Heimbecker (CAN)	Lethbridge, AB	durum products	235	235
FarmGro Organic Food	Independent (CAN)	Regina, SK	durum products	0	73
Howson & Howson	Independent (CAN)	Blyth, ON	durum products	272	363
Kraft Milling	Primo Foods (USA)	Woodbridge, ON	durum products	175	272
Robin Hood Multifoods	International Multifoods (USA)	Saskatoon, SK	durum products	272	454
Robin Hood Multifoods	International Multifoods (USA)	Port Colbourne, ON	durum products	151	(
Other	Independent (CAN)	Various	durum products	26	26
Total Capacity			aaram producto	1,495	1,787
	WHEAT F	RACTIONATION			
				CAP	ACITY
				(t/d of rav	
				1997	200
COMPANY	OWNERSHIP	LOCATION	PRODUCTS	-1998	-2002
API Grain Processors	Independent (CAN)	Red Deer, AB	fuel ethanol	0	27
Highwood Distillers	Independent (CAN)	High River, AB	beverage alcohol	40	4
Mohawk Oil	Mohawk Oil (CAN)	Minnedosa, MB	fuel ethanol	77	9
Pound-Maker Agventures	Investments (CAN)	Lanigan, SK	fuel ethanol	<u>93</u>	100
		,			512
Total Capacity				210	314
Total Capacity  Note: (WF) wheat flour. (W\	NF) whole wheat flour, (SWF) soft wh	eat flour. (RF) rve flour		210	51

	CORN P	ROCESSING			
				CAPA	CITY
				(t/d of raw	
	OWNEROUS	LOCATION	PROPULATO	1997	2001
COMPANY Casco Inc.	OWNERSHIP Corn Products Int'l Inc (USA)	LOCATION London, ON	PRODUCTS corn starch, sweetners	<b>-1998</b> 1,145	<b>-2002</b> 1,600
Casco Inc.	Corn Products Int'l Inc (USA)	Port Colbourne, ON	corn starch, sweetners	660	1,000
Casco Inc.	Corn Products Int'l Inc (USA)	Cardinal, ON	corn starch, sweetners	<u>1,195</u>	1,250
Subtotal	, ,			3,000	3,850
Alberta Distillers	Jim Beam Brands Inc (USA)	Calgary, AB	beverage alcohol	180	90
Canadian Mist Distillers	Brown Foreman (USA)	Collingwood, ON	beverage alcohol	105	105
Commercial Alcohols	Independent (CAN)	Tiverton, ON	fuel ethanol	150	150
Commercial Alcohols Hiram Walker	Independent (CAN) Allied Domecq Spirit & Wine (UK)	Chatham, ON Windsor, ON	fuel ethanol beverage alcohol	0 70	990 300
King Milling	Lauhoff (Swiss)	Chatham, ON	BG, CF, CM	105	115
Nacan	National Starch (USA)	Collingwood, ON	corn starch	255	255
Schenley Distilling Inc.	Constellation Co. (USA)	Valleyfield, PQ	beverage alcohol	140	230
Seagrams	Diageo (UK)	Gimli, MB	beverage alcohol	200	215
The Black Velvet Distilling Co.	Constellation Co. (USA)	Lethbridge, AB	beverage alcohol	130	140
Total Capacity				4,335	6,440
	MALTIN	G INDUSTRY			
				CAPA	
				(t/d of raw	
COMPANY	OWNERSHIP	LOCATION	PRODUCTS	1997 -1998	2001 -2002
Canada Malting	Tiger Oats (South Africa)	Montreal, PQ	barley malt	300	292
Canada Malting	Tiger Oats (South Africa)	Thunder Bay, ON	barley malt	520	475
Canada Malting	Tiger Oats (South Africa)	Calgary, AB	barley malt	875	950
Dominion Malting	Sumitomo (Japan) and IMC (USA)	Winnipeg, MB	barley malt	340	314
Gambrinus Malting Prairie Malt	Independent (CAN)	Armstrong, BC	barley malt	19 840	30 804
Westcan Malting	SWP and Cargill (CAN, USA) Rahr Malting (USA)	Biggar, SK Alix, AB	barley malt barley malt	355	511
Total Capacity	ram wating (00/t)	Alla, AD	bancy man	3,249	3,376
	OAT DI	ROCESSING		•	
	OATTI	(OCESSII4O		0.1.0.1	OITY
				CAPA (t/d of raw	
				1997	<b>2001</b>
COMPANY	OWNERSHIP	LOCATION	PRODUCTS	-1998	-2002
ADM Milling	Archer Daniels Midland (USA)	Midland, ON	oat flour, oat products	132	165
Alberta Oats Ltd	Independent (CAN)	Edmonton, AB	oat products	331	331
Can-Oat Milling	SWP (CAN)	Portage la Prairie, MB	oat flour, oat products	413	910
Emerson Milling Popowich Milling	Independent (CAN) Grain Millers (USA)	Emerson, MB Yorkton, SK	oat flour, oat products oat flour, oat products	62	100 250
	Giaili Willers (USA)	•	oat flour, oat products		250
, ,		Peterhorough ON		95 165	165
Quaker Oats	Quaker Oats (USA)	Peterborough, ON Port Colbourne, ON		165	
		Peterborough, ON Port Colbourne, ON Saskatoon, SK	oat flour oat flour		124
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling	Quaker Oats (USA) International Multifoods (USA)	Port Colbourne, ON	oat flour	165 124 124 <u>91</u>	124 124 <u>91</u>
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)	Port Colbourne, ON Saskatoon, SK Barrhead, AB	oat flour oat flour	165 124 124	124 124
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)	Port Colbourne, ON Saskatoon, SK	oat flour oat flour	165 124 124 <u>91</u>	124 124 <u>91</u>
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)	Port Colbourne, ON Saskatoon, SK Barrhead, AB	oat flour oat flour	165 124 124 91 1,537	124 <u>91</u> <b>2,260</b> ACITY
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)	Port Colbourne, ON Saskatoon, SK Barrhead, AB	oat flour oat flour	165 124 124 91 1,537 CAPA (t/d of raw	124 124 <u>91</u> <b>2,260</b> CITY product)
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE	Port Colbourne, ON Saskatoon, SK Barrhead, AB	oat flour oat flour oat flour, oat products	165 124 124 91 1,537 CAPA (t/d of raw 1997	124 124 91 2,260 ACITY product) 2001
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)	Port Colbourne, ON Saskatoon, SK Barrhead, AB	oat flour oat flour	165 124 124 91 <b>1,537</b> CAPA (t/d of raw	124 124 91 2,260 ACITY product) 2001 -2002
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB	oat flour oat flour oat flour, oat products  PRODUCTS canola & soybean products canola products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000	124 124 91 <b>2,260</b> CITY product) 2001 -2002 n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB	oat flour oat flour oat flour, oat products  PRODUCTS canola & soybean products canola products canola & flax products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000	124 124 91 2,260 CITY product) 2001 -2002 n/a n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods CanAmera Foods	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA) Central Soya Canada (USA)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB Nipawin, SK	products  PRODUCTS  canola & soybean products  canola & flax products  canola products  canola products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000 1,000	124 124 91 2,260 CITY product) 2001 -2002 n/a n/a n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods CanAmera Foods CanAmera Foods CanAmera Foods	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA) Central Soya Canada (USA) Central Soya Canada (USA) Central Soya Canada (USA)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB Nipawin, SK Fort Saskatchewan, AB	PRODUCTS canola & soybean products canola & flax products canola products canola products canola products canola products canola products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000 1,000 700	124 124 91 2,260 2,260 2,01 2001 -2002 n/a n/a n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB Nipawin, SK Fort Saskatchewan, AE Hamilton, ON	PRODUCTS canola & soybean products canola & flour products canola products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000 1,000 700 3,000	124 124 91 2,260 ACITY product) 2001 -2002 n/a n/a n/a n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA) Central Soya Canada (USA) Central Soya Canada (USA) Central Soya Canada (USA)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB Nipawin, SK Fort Saskatchewan, AB	PRODUCTS canola & soybean products canola & flax products canola products canola products canola products canola products canola products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000 1,000 700	124 124 91 2,260 2,260 2,001 -2002 n/a n/a n/a n/a n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods CanAmera Foods	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB Nipawin, SK Fort Saskatchewan, AE Hamilton, ON Harrowby, MB	PRODUCTS canola & soybean products canola & flax products canola products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000 1,000 700 3,000 1,400	124 124 91 2,260 2,260 2001 -2002 n/a n/a n/a n/a n/a n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods CanBra Foods CanBra Foods Cargill Cold Springs Farm Ltd.	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA) Independent (CAN) Cargill (USA) Employees (CAN)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB Nipawin, SK Fort Saskatchewan, AE Hamilton, ON Harrowby, MB Lethbridge, AB Clavet, SK Thamesford, ON	products  PRODUCTS canola & soybean products canola products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000 700 3,000 1,400 975 2,000 100	124 124 91 2,260 2,260 2001 -2002 n/a n/a n/a n/a n/a n/a n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods Canbra Foods Canbra Foods Canbra Foods Canbra Foods Cargill Cold Springs Farm Ltd. Helin Oils	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA) Independent (CAN) Employees (CAN) Independent (CAN)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB Nipawin, SK Fort Saskatchewan, AE Hamilton, ON Harrowby, MB Lethbridge, AB Clavet, SK Thamesford, ON Whitby, ON	PRODUCTS canola & soybean products canola & flax products canola products soybean products soybean products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000 700 3,000 1,400 975 2,000 100 250	124 124 91 2,260 CITY product) 2001 -2002 n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods Canbra Foods Carpill Cold Springs Farm Ltd. Helin Oils Jackson Seed Services	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA) Independent (CAN) Cargill (USA) Employees (CAN) Independent (CAN) Independent (CAN)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB Nipawin, SK Fort Saskatchewan, AE Hamilton, ON Harrowby, MB Lethbridge, AB Clavet, SK Thamesford, ON Whitby, ON Dresden, ON	PRODUCTS canola & soybean products canola & flax products canola products soybean products soybean products soybean products soybean products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000 700 3,000 1,400 975 2,000 100 250 40	124 124 91 <b>2,260</b> CITY product) 2001 -2002 n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods CanAm	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA) Independent (CAN) Cargill (USA) Employees (CAN) Independent (CAN) Independent (CAN) Canadian Agra (CAN)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB Nipawin, SK Fort Saskatchewan, AE Hamilton, ON Harrowby, MB Lethbridge, AB Clavet, SK Thamesford, ON Whitby, ON Dresden, ON Sexsmith, AB	PRODUCTS canola & soybean products canola & flax products canola products soybean products soybean products soybean products canola products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000 700 3,000 1,400 975 2,000 100 250 40 700	124 124 91 2,260 2,260 2001 -2002 n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods Canbra Foods Canbra Foods Canbra Foods Canbra Foods Cargill Cold Springs Farm Ltd. Helin Oils	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA) Independent (CAN) Cargill (USA) Employees (CAN) Independent (CAN) Independent (CAN)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB Nipawin, SK Fort Saskatchewan, AE Hamilton, ON Harrowby, MB Lethbridge, AB Clavet, SK Thamesford, ON Whitby, ON Dresden, ON	PRODUCTS canola & soybean products canola & flax products canola products soybean products soybean products soybean products soybean products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000 700 3,000 1,400 975 2,000 100 250 40	124 124 91 2,260 CITY product) 2001 -2002 n/a n/a n/a n/a n/a n/a n/a n/a n/a
Quaker Oats Robin Hood Multifoods Robin Hood Multifoods Westglen Milling Total Capacity  COMPANY ADM Milling ADM Milling CanAmera Foods CanAmera Foods CanAmera Foods CanAmera Foods CanAmera Foods Canhera Foods Canbra Foods Can	Quaker Oats (USA) International Multifoods (USA) International Multifoods (USA) ConAgra (USA)  OILSEE  OWNERSHIP Archer Daniels Midland (USA) Archer Daniels Midland (USA) Central Soya Canada (USA) Independent (CAN) Cargill (USA) Employees (CAN) Independent (CAN) Independent (CAN) Canadian Agra (CAN)	Port Colbourne, ON Saskatoon, SK Barrhead, AB  D CRUSHING  LOCATION Windsor, ON Lloydminister, AB Altona, MB Nipawin, SK Fort Saskatchewan, AE Hamilton, ON Harrowby, MB Lethbridge, AB Clavet, SK Thamesford, ON Whitby, ON Dresden, ON Sexsmith, AB Wingham, ON askatchewan Wheat Poo	PRODUCTS canola & soybean products canola & flax products canola products soybean products	165 124 124 91 1,537 CAPA (t/d of raw 1997 -1998 3,600 2,000 1,000 700 3,000 1,400 975 2,000 100 250 40 700 100	124 124 91 2,260 2,260 2001 -2002 n/a n/a n/a n/a n/a n/a n/a n/a n/a