



# Bi-weekly Bulletin

November 23, 2001 Volume 14 Number 19



## PROTEIN MEAL: SITUATION AND OUTLOOK / CANADA: SOYBEANS

### PROTEIN MEAL: SITUATION AND OUTLOOK

Over the past decade, protein meal production and usage have increased sharply worldwide. This is the result of increased crush capacity, mainly in South America and Asia, and to higher per-capita consumption of meat, particularly in China. Trade in protein meal has increased at a slower pace with Argentina retaining its position as the world's dominant exporter and the European Union (EU) as the largest importer. In Canada, supplies of protein meal increased over the past few years as a result of increased production and imports. For 2001-2002, supplies of protein meal in Canada are forecast to decrease due to the expected decline in canola crush. This issue of the *Bi-weekly Bulletin* examines the situation and outlook for protein meal.

#### SITUATION: 2001-2002

Protein meal is derived from the crushing of oilseeds, and is affected by conditions in the vegoil and oilseed markets. (For a full discussion, refer to *Bi-weekly Bulletin* Volume 11 Number 8).

#### PRODUCTION

Over the past decade, **world** protein meal production has steadily trended upwards, with the last decline in output occurring in 1988-1989. For 2001-2002, world protein meal production is forecast to rise by about 3% primarily due to an expected increase in oilseed processing in China and South America, along with smaller increases in crushing in the EU and the United States (U.S.). The projected percentage distribution of protein meal production, by type, is: soymeal (67), canola meal/rapemeal (12), cottonseed (7), sunmeal (5), fishmeal (3), peanut meal (3), palm kernel meal (2), and copra meal (1).

Production of soymeal is expected to increase by 6 million tonnes (Mt), cottonseed by almost 1 Mt, with peanut and palm kernel rising by less than 1 Mt each. Canola meal/rapemeal, sunmeal, fishmeal, and copra are all expected to decline by less than 1 Mt each for 2001-2002.

The **U.S.** is forecast to be the largest producer of soymeal for 2001-2002, at 29% of total world production, although on a regional basis Latin America (Brazil, Argentina, and Mexico) is larger at 32% of the total world output. For 2001-2002, U.S. production of soymeal is projected to rise by about 0.4 Mt, to slightly over 36 Mt. Most of the incentive to increase U.S. crush is due to the increase in domestic supplies and improved crush margins. With U.S. crush margins being supported by a combination of higher soybean prices and lower soybean prices, the production of soymeal is forecast to rise, despite the decline in the price of soymeal.

#### CONSUMPTION

**World** protein meal consumption has increased by 24% since 1997-1998, to a record forecast of about 182 Mt for 2001-2002, largely due to increased usage in China, the EU and the U.S. The growth in usage is due largely to the increased feeding of monogastric livestock (poultry and hogs), which has been growing at a faster rate than ruminant livestock (cattle). In the developed world, the increased demand for poultry and pork has been supported by health concerns as well as by the widely reported outbreaks of Bovine Spongiform Encephalopathy and Foot and Mouth Disease. As well, organizational changes have increased the efficiency of poultry and hog production. However, demand for beef has been supported by the increase in disposable incomes in North America, and by revised cooking techniques that shorten cooking times.

Since 1997-1998, **Asia** has surpassed

both the U.S. and the EU to become the world's largest consumer of soymeal. For 2001-2002, Asia is expected to consume 28% of the world's soymeal, a projected 35 Mt, which is an increase of 10 Mt over the past 5 years. The fastest rate of growth occurred in China, where annual domestic usage increased by over 6 Mt, to a projected 17 Mt for 2001-2002. This rise in consumption is the result of the rapid economic growth occurring in that country, which is reflected in a desire for an improved diet, which includes more meat. Increased meat consumption, along with improved livestock production techniques, is in turn raising the demand for protein meal.

EU consumption of soymeal increased by 16% since 1997-1998, to over 28 Mt projected for 2001-2002. This has partly occurred at the expense of sunmeal consumption declining to 3.2 Mt from 4.6 Mt in 1997-1998. Usage of sunmeal has been restricted by the drop in raw seed supplies. The growth in consumption of soymeal has been stimulated by lower prices and by banning meat and bone meals in livestock rations. As a result, feed mills are expected to substitute an extra 1.0-2.0 Mt a year of soymeal into livestock rations.

had announced that it would approve the production of GM soybeans, but has rescinded its decision. Brazil has been regarded as the only large scale supplier of non-GM protein meal in the world, which is supporting its exports into the EU and to a certain extent, China. Exports of soymeal are forecast to increase by 6%, to 10.9 Mt for 2001-2002.

Soymeal output in **Argentina** is forecast at 15.1 Mt for 2001-2002, an increase of 1.1 Mt from 2000-2001, in line with the increase in soybean supplies. Argentina is also a major producer of GM soybeans and soymeal. With Argentina in the midst of a severe economic recession, the processing of soybeans and exports of soyoil and soymeal are encouraged as a means of earning the currency required to support the balance of payments and repay foreign loans. However, crushers are being pressured by high energy costs which is eroding the profitability of processing. Argentina is expected to remain the world's largest exporter of soymeal, with 35% of the world market for soymeal exports in 2001-2002. Exports are forecast to rise by 6% to 14.8 Mt, mostly to the EU and Asia.

### MAJOR EXPORTERS

**U.S.** exports of soymeal are projected to decline slightly for 2001-2002, as it loses market share to South America. Exports are pressured by the high value of the U.S. dollar and by the genetically modified organism (GMO) content of the soymeal as resistance to recombinant GMO remains strong in the EU. Consequently, domestic consumption of soymeal is forecast to increase by 2% to a record high of 29 Mt due to the combination of increased supplies, reduced prices and strong livestock feeding. U.S. usage is expected to be supported by the 7% increase in feedlot placements, as indicated in the United States Department of Agriculture (USDA), *Cattle on Feed Report*. Most of the 1.8 million head increase is due to the increased placement of heifers in feedlots, rather than being retained for breeding, as livestock producers continue to scale back their breeding cow inventories.

**Brazilian** production of soymeal is projected to rise by 4%, to over 18 Mt, as processors take advantage of ample domestic supplies, the relatively low value of the *real* and strong EU demand for protein meal. Brazil

### MAJOR IMPORTERS

The **EU** is expected to remain the dominant buyer of soymeal for 2001-2002, importing about half of the world's trade in soymeal. EU imports are forecast at 21 Mt, up slightly from 20 Mt for 2000-2001 but a significant increase from about 17 Mt for 1997-1998.

**Asian** imports of soymeal have declined from 9.7 Mt in 1997-1998, to a projected 7.8 Mt for 2001-2002, although above the 7.3 Mt imported in 2000-2001. The decline in soymeal imports is largely due to changes in Chinese policy as it switches to importing and processing raw soybeans. This shift has been supported by a 13% tariff on soymeal which was imposed in part to support the Chinese processing industry. However, this tariff is scheduled to be reduced upon China's entry to the World Trade Organization. When the entry is ratified, import tariffs for soymeal are expected to be reduced while import quotas for soyoil increase

### WORLD: PROTEIN MEAL SUPPLY AND DISPOSITION

	2000 -2001	2001 -2002f	2002 -2003f
.....million tonnes.....			
<b>PRODUCTION</b>			
Soymeal	117.3	123.1	126.0
Rapemeal	21.5	20.8	22.0
Other	<u>37.4</u>	<u>38.3</u>	<u>38.0</u>
<b>Total</b>	<b>176.2</b>	<b>182.2</b>	<b>186.0</b>
<b>TRADE</b>			
Soymeal	40.9	42.5	42.0
Rapemeal	4.1	4.0	3.8
Other	<u>11.5</u>	<u>11.3</u>	<u>10.2</u>
<b>Total</b>	<b>56.5</b>	<b>57.8</b>	<b>56.0</b>
<b>CONSUMPTION</b>			
Soymeal	116.9	123.1	126.0
Rapemeal	21.4	20.8	22.0
Other	<u>37.3</u>	<u>38.5</u>	<u>38.0</u>
<b>Total</b>	<b>175.6</b>	<b>182.4</b>	<b>186.0</b>
<b>CARRY-OUT STOCKS</b>			
Soymeal	3.9	3.9	3.9
Rapemeal	0.3	0.3	0.3
Other	<u>1.3</u>	<u>1.1</u>	<u>1.1</u>
<b>Total</b>	<b>5.5</b>	<b>5.3</b>	<b>5.3</b>
<b>OILSEED PRODUCTION</b>			
Soybean	173.4	182.5	186.0
Rapeseed/Canola	37.7	36.4	39.0
Other	<u>99.9</u>	<u>103.9</u>	<u>105.0</u>
<b>Total</b>	<b>311.0</b>	<b>322.8</b>	<b>330.0</b>
<b>OILSEED CRUSH</b>			
Soybeans	147.5	154.9	159.0
Rapeseed/Canola	35.7	34.5	37.0
Other	<u>71.7</u>	<u>74.1</u>	<u>75.0</u>
<b>Total</b>	<b>254.9</b>	<b>263.5</b>	<b>271.0</b>

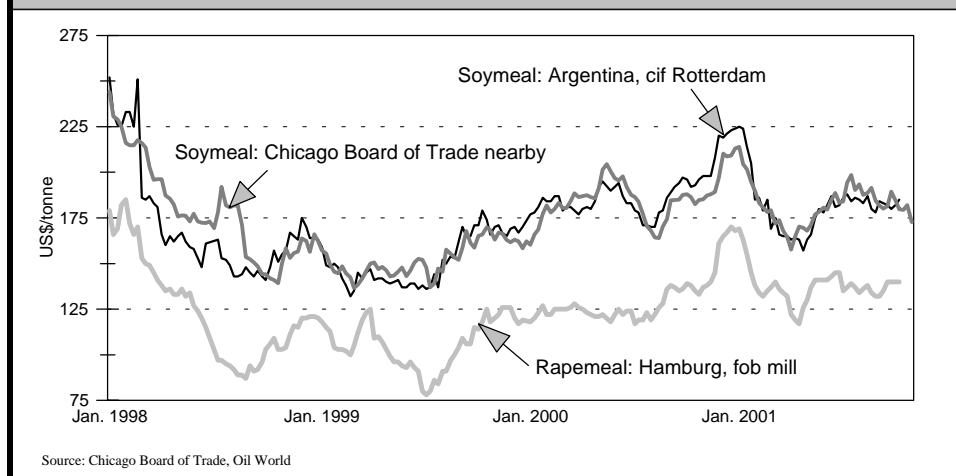
Note: *Other* includes cottonseed, sunflowerseed, fishmeal, peanut, copra, and palmkernel.

f: forecast, November 2001

2000-2001 & 2001-2002, USDA-FAS; 2002-2003, AAFC

Source: USDA

## PROTEIN MEAL: PRICES



over a several year span. This is expected to result in an increase in soymeal imports while the trade in soybeans declines.

Soymeal imports into the **Middle East/North Africa** have increased by 35% over the past 5 years, to a projected 4.6 Mt for 2001-2002.

### Meal Prices

**World** protein meal prices are closely linked to the price of soymeal which dominates the world protein meal market. Since the U.S. accounts for about 45% of world output, the Chicago Board of Trade is the focal point of price discovery for soymeal. All other protein meals are priced relative to soymeal, largely based on the relative protein content of the meal which is determined by the amino acid content. Amino acids are the building blocks of protein meal. Generally, the price of soybeans and soymeal move in the same direction, while the price of soymeal and soyoil move in opposite directions.

**U.S.** soymeal prices are projected to decrease by 11% from 2000-2001. Prices reached a low of US\$153 per short ton (/st) (CAN\$240 per tonne [/t]) set in 1997-1998 and a high of US\$289/st (CAN\$455/t) in 1996-1997. The collapse in soymeal prices late in the 1990s reflected the global expansion in soybean production, which was spurred by high vegoil prices. An increase in crush led to increased supplies of protein meals. Unable to store the meal, processors

aggressively marketed it. However, crush volumes, and protein meal production, remained high after vegoil prices dropped, due to the ample supplies of soybeans worldwide and aggressive marketing by processors in an attempt to maintain market share. Prices of protein meal were also pressured by the expanded Asian and South American crush, as China, Brazil, and Argentina processed more of their soybeans domestically. With the devaluation of the Brazilian *real*, world soymeal prices were further pressured.

The average U.S. farm price for soybeans is forecast by the USDA to decrease to US\$4.30 per bushel (/bu) in 2001-2002, from US\$4.55/bu in 2000-2001. The U.S. price for soymeal, basis Decatur, is forecast to average US\$155/st (CAN\$256/t, {assuming US\$1=CAN\$1.50}) for 2001-2002, compared to about US\$174/st (CAN\$292/t, for 2000-2001).

### Canada

In 2001-2002, protein meal production is forecast to decline due to a drop in canola crush. Consequently, protein meal supply is expected to fall, as an anticipated modest rise in soymeal imports fails to offset the drop in output of protein meals.

Soymeal production is expected to remain steady, due to the strong pace of soybean imports, which are expected to offset the drop in domestic production caused by the mid-summer dry conditions and heavy harvest rains. However, soymeal supplies are expected to rise to a record high, because of an increase in imports and the steady output of soymeal. For 2001-2002, total usage of soymeal is expected to increase slightly, as a result of the forecasted increase in hog production and cattle numbers; combined with the higher than usual placement of lightweight cattle into feedlots as a result of the drought in Alberta and Saskatchewan.

The production of canola meal is forecast to decrease significantly for 2001-2002, due to the combination of drought-reduced production of canola in western Canada and low crush margins. Canola oil and meal prices are remaining relatively low compared to the price of raw seed. Low supplies of canola meal are expected to result in decreased exports of canola meal and an increased substitution of soymeal into livestock rations.

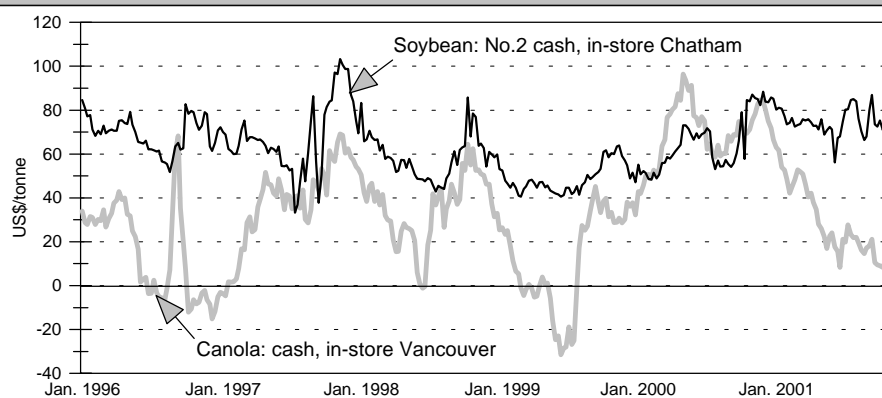
## CANADA: PROTEIN MEAL SUPPLY AND DISPOSITION

	2000 -2001e	2001 -2002f	2002 -2003f
.....thousand tonnes.....			
<b>CANOLA MEAL</b>			
Carry-in Stocks	25	25	25
Production	1,870	1,495	1,450
Imports	5	5	5
<b>Total Supply</b>	<b>1,900</b>	<b>1,525</b>	<b>1,480</b>
Exports	1,135	775	705
Domestic Use	740	725	750
<b>Total Use</b>	<b>1,875</b>	<b>1,500</b>	<b>1,455</b>
Carry-out Stocks	25	25	25
<b>SOYMEAL</b>			
Carry-in Stocks	35	35	35
Production	1,392	1,400	1,395
Imports	915	950	950
<b>Total Supply</b>	<b>2,342</b>	<b>2,385</b>	<b>2,380</b>
Exports	30	30	30
Domestic Use	2,277	2,320	2,315
<b>Total Use</b>	<b>2,307</b>	<b>2,350</b>	<b>2,345</b>
Carry-out Stocks	35	35	35

Note: Flaxseed meal is not included due to confidentiality of data.

f: forecast, November 2001  
Source: AAFC

### CANADA: BOARD CRUSH MARGINS CANOLA VERSUS SOYBEANS



Source: Chicago Board of Trade, Oil World, Winnipeg Commodity Exchange, Ontario Soybean Growers

For 2001-2002, Canada is expected to become a net importer of protein meal as exports of canola meal from western Canada are more than offset by imports of soymeal into both the eastern and western regions of the country. Most of the canola meal produced on the Canadian Prairies is exported into the U.S., mostly California, Montana, and Washington states.

The import and export of protein meal are recorded at the point of entry or exit, which is not necessarily the province of production or usage. For example, most soymeal is imported into Canada through Ontario, Quebec, and Manitoba. In eastern Canada, some soymeal is transhipped from Ontario to Quebec, and from Ontario and Quebec to the Maritimes. In western Canada, a significant quantity of soymeal is imported through Manitoba for use in Saskatchewan and Alberta. This is the result of a combination of geography and the location of head-offices for the major feed companies. With most of the soybeans grown and crushed in the center to eastern half of the U.S., a number of companies with headquarters in Manitoba import and tranship a significant quantity of soymeal to local feedmills in the western provinces.

#### OUTLOOK: 2002-2003

Based on the USDA's medium term forecasts, **world** protein meal production is expected to increase in 2002-2003, largely due to record high soybean

production in the U.S., Brazil, and Argentina, combined with an increase in crush due to rising demand for protein meal from the growing population of hogs and poultry.

Area seeded to soybeans in the **U.S.** is expected to increase to around 31 million hectares, based on the change in area forecasted by the USDA in the medium term baseline. Production of soybeans is forecast at about 82 Mt, assuming trend yields. U.S. soymeal output is forecast to increase to over 41 million short tons.

Soymeal production is also projected to rise in South America, due to the expected rise in soybean output in **Brazil** and **Argentina**, as they continue to expand the area seeded to soybeans. South American crushing will also be supported by further devaluation of the *peso* and the *real* against the U.S. dollar, making those countries exports more competitive and offsetting pressure on crush volumes from higher interest rates and energy costs.

World protein meal consumption is forecast to rise by about 2% for 2002-2003 as a result of increased demand in **China** and the **U.S.** This growth will be led by the almost 3 Mt rise in soymeal usage worldwide. Soymeal consumption in China is expected to exceed

18 Mt, while U.S. usage rises to close to 34 Mt. This offsets the projected moderate decline in EU disappearance, with the consumption of soymeal falling to about 28 Mt for 2002-2003.

World protein meal trade is expected to decline in 2002-2003, however, as trade in soybeans increases at the expense of soymeal. Exports of soymeal are expected to decline slightly, while trade in canola and other protein meals fall at a faster rate.

The U.S. and India are expected to be the most hurt by the projected decline in soymeal exports. Shipments from the U.S. are projected to fall to slightly under 7.5 Mt, from in excess of 7.7 Mt in 2001-2002. Similarly, Indian exports are expected to fall to 2.0 Mt for 2002-03, versus 2.2 Mt for 2001-2002. By contrast, Argentine and Brazilian exports are expected to increase moderately to 14.8 Mt and 10.2 Mt for 2002-2003. Chinese exports of canola/rapeseed meal into neighbouring South Asian countries are also expected to decline to very low levels for 2002-2003.

The price of soymeal, basis Decatur, is

### CANADA: PROTEIN MEAL TRADE BY PROVINCE

	1999 -2000	2000 -2001e	2001 -2002f
.....thousand tonnes.....			
<b>CANOLA MEAL: EXPORTS</b>			
Quebec	7	15	10
Ontario	129	120	100
Manitoba	170	169	150
Saskatchewan	318	286	190
Alberta	482	519	310
British Columbia	35	27	15
Other	0	0	0
<b>Total</b>	<b>1,141</b>	<b>1,136</b>	<b>775</b>
<b>SOYMEAL: IMPORTS</b>			
Quebec	173	114	115
Ontario	181	272	275
Manitoba	209	219	225
Saskatchewan	89	92	95
Alberta	105	116	120
British Columbia	71	95	100
Other	1	6	5
<b>Total</b>	<b>829</b>	<b>914</b>	<b>935</b>

e: estimate, AAFC, November 2001

f: forecast, AAFC, November 2001

Source: Statistics Canada

## DISTILLERS GRAIN

The production of distillers grain, the co-product obtained from producing ethanol from grain, has been increasing in Canada. The increase has been driven by increasing energy costs and by growing concerns over the environment. A tonne of corn is expected to yield, by weight, about one-third each of ethanol, carbon dioxide, and distillers grain. Each year, about 0.6 Mt of corn is used in the production of ethanol, resulting in the production of about 0.2 Mt of distillers grain. As production for the ethanol market continues to grow, so will the supply of distillers grain. In turn, this will pressure the price of soymeal and canola meal. Currently, distillers grain sells at a discount to soymeal, based on protein content, due to a number of quality and supply related issues.

## ISOLATING PROTEIN FROM CANOLA

Through a new technique, a Canadian company has developed a process to extract a high-grade protein isolate from canola/rapeseed meal. Until now, canola meal/rapemeal have been unfit for human consumption due to the presence of large quantities of fibre and anti-nutritional factors. The new process, involving only canola meal, table salt, and tap water, produces a powder containing a minimum of 90% protein with a significant reduction in the anti-nutritional factors normally associated with canola meal.

The resulting powder, branded Puratein, includes physical attributes such as a bland flavour, off-white to light-tan colour and no odour. In its dry form, it requires no refrigeration. Canola protein extracted using this process has functional properties similar to egg whites, making it one of the most valuable of all food proteins. It is potentially usable in cakes and pastries, processed meats, canned meats, mayonnaise and salad dressings and as a meat firming and binding agent. The Burcon process is now being tested in large-scale 10,000 litre batches.

This process could significantly improve crusher margins by increasing the value of the canola meal. In Canada, 1 t of canola seed yields about \$100 in meal revenue, assuming a canola meal price of \$160/t. If the same meal was further processed to produce protein isolate, it could yield about \$320 in income, with significant value remaining in the spent canola meal.

This process can work with other oilseeds, raising the possibility that the protein in the meal left over from the processing of flaxseed and sunflowerseed could be developed as high-value-protein isolates for a variety of uses. This is also a significant development that may alter the economics of vegoil production and lead to the creation of new proteins for the global food industry.

expected to increase modestly to about US\$165/st (CAN\$272 a tonne (t) {US\$1=CAN\$1.50}) for 2002-2003, while the price of soybeans, basis central Illinois is projected to remain stable at US\$4.10/bu. The price of soymeal is expected to be supported by lower growth of vegoil production. The expected slowdown in the rate of crushing for vegoil will reduce the pressure on protein meal and support prices above those received during 2000-2001 and 2001-2002.

## Canada

The supply of **oilseeds** in Canada is expected to decrease for 2002-2003. Assuming normal moisture conditions, the area seeded to oilseeds is expected to increase as a result of higher prices in 2002-2003 and expected improvement in profitability. Yields are also expected to return to near-normal, after falling sharply below the five-year average in 2001-2002 because of the extremely dry growing conditions across western Canada. While the Canadian price for protein meal is expected to recover from the lows established in 1999-2000, it will continue to be pressured by burdensome U.S. supplies of soymeal.

Canadian **canola** meal supplies are projected to decrease in 2002-2003, due to a 4% drop in production to 1.4 Mt. Exports are expected to decrease to around 0.68 Mt, from 0.78 Mt in 2001-2002, well below the record of 1.2 Mt set in 2000-2001. Most of the exports are expected to continue going into the U.S., although minor quantities will be shipped into Japan and South Korea. As a result of the reduced competition from Chinese exports, Canadian shipments of canola meal into Southern Asia may rise during the crop year. Due to increased

soymeal prices and the stability of the Canadian dollar against the U.S. dollar, the price of canola meal, in-store Vancouver, is expected to increase slightly to about CAN\$200-230/t for 2002-2003.

The supply of **soymeal** in Canada is forecast to remain unchanged due to stable production and imports. Domestic usage is expected to rise marginally, to a record high 2.3 Mt, due to continued growth in Canadian pig and livestock inventories. Exports are expected to remain stable.

## For more information:

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# CANADA: SOYBEANS

**Canada's ability to supply the specific growing demands of our soybean export market is a direct result of successful cooperation between government, the soybean industry and producers. This supplement to the *Bi-weekly Bulletin* briefly examines some of the developments and uses that have contributed to the growth of our export markets.**

Soybean exports in 1999-2000 (September-August) reached a record 0.95 million tonnes (Mt) and a value of almost CAN\$305M compared with 0.20 Mt and \$66M exported just 10 years earlier. During this period, exports to Asia have increased from about 77,000 tonnes (t) in 1989-1990 to about 441,000 t in 1999-2000. Likewise, exports to Europe have increased from about 19,000 t to about 173,000 t during the same ten-year period. Exports have risen despite increased competition from the United States (U.S.) and South America due to recognition from buyers that Canadian developed food grade soybeans are a high quality product.

## PRIMARY MARKETS

Japan and Europe, two of the largest and most lucrative markets for soybean exports, have increasingly turned to Canada to supply a higher percentage of their soybean needs. In Japan, many food manufacturers have shifted to non-genetically modified (GM) varieties from Canada in reaction to the Japanese government's implementation of mandatory labelling of GM products. Likewise, importers in Europe have turned to Canada for soybeans in order to avoid mandatory GM food labelling and to supply consumers that demand GM-free products.

## IDENTITY PRESERVATION (IP)

As of September 13, 2001, soybean customers will have assurances that their purchases meet minimum guidelines for all stages of production from growing to processing with the launch of the National Identity Preservation Standard. The Canadian Grain Commission is the third party certifying body for the standard.

The Canadian soybean industry already has the infrastructure and skills for running a sophisticated IP program because the industry has been producing food grade soybeans for more than 30 years and

running IP programs for more than 15 years. IP has been a vital process for food grade production and exports because Canada has developed superior soybean varieties. These varieties, with traits such as larger seed size and elevated proteins and sugars, have helped to capture niche markets. It is estimated that in 2001, 25% of Ontario soybean producers were involved with IP contracts. Many small local elevators have aided IP segregation and have ensured that buyers receive the specific soybeans purchased.

## WHITE HILUM

Approximately 90% of world food-use soybeans are consumed in Asia. Canada has increasingly gained market share in this region through years of diligent marketing and by the introduction of a food grade soybean called white hilum. White hilum soybeans are preferred in food grade soybeans because they lack the brown speck found in feed grade soybeans and produce desirable products such as white tofu.

A recent profile of the white hilum soybean market in Canada has indicated that in 2000-2001 producers received premiums that average \$3.84 per bushel (bu) for soybeans sold for natto and tofu, \$0.99/bu for IP special soybeans, and \$1.10/bu for special quality white hilum. The profile concludes that the special quality soybeans together with our developed IP systems are effective in distributing premiums to producers and have contributed to an increasingly higher volume of exports each year.

## VALUE-ADDED

Researchers in Ontario have begun the process to develop soybean varieties that are higher in isoflavone content. Isoflavones are phytochemicals naturally found in soybeans that are thought to play an important role in the prevention of

## CANADA: SOYBEAN EXPORTS

September-August crop year	kt	M\$
1995-1996	599	229
1996-1997	478	208
1997-1998	769	309
1998-1999	876	307
1999-2000	949	305
2000-2001	705	239

Source: Statistics Canada

cancer, heart disease, kidney disease and osteoporosis.

The Ontario Soybean Growers (OSG) ([www.soybean.on.ca](http://www.soybean.on.ca)) has actively been working with BIOX Corporation in a pilot plant designed to perfect a new process for producing biodiesel. Improvements involved in the new process are expected to result in significant cost savings and lead to biodiesel that will be price competitive with conventional diesel. Other new uses currently being studied are soy-based adhesives, inks, plastics, and hydraulic fluid.

The OSG and the Canadian Soybean Export Association have provided a success story within Canada's grain and oilseed sectors amidst difficult times and have provided a model of how to segregate, develop, and gain market share within export markets. Canadian soybean producers have directly benefited from the cooperation of all players within the industry and should continue to benefit from Canada's reputation for high quality soybeans that have earned a high degree of consumer acceptance.

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