PROTEIN MEAL: SITUATION AND OUTLOOK / CANADA: SOYBEANS

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

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 soyoil 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.

### WORLD: PROTEIN MEAL
SUPPLY AND DISPOSITION

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

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.

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

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
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
Exports are forecast to rise by 6% to
14.8 Mt, mostly to the EU and Asia.
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$153 per short ton (US$/st) (CAN$240 per tonne [CAN$/st]) in 1997-1998 and a high of US$289/st (CAN$455/st) 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.


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.

<table>
<thead>
<tr>
<th>CANADA: PROTEIN MEAL SUPPLY AND DISPOSITION</th>
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<tbody>
<tr>
<td>2000</td>
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<td>2001</td>
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<tr>
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<td>Carry-out Stocks</td>
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Note: Flaxseed meal is not included due to confidentiality of data.
f: forecast, November 2001
Source: AAFC
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 soymeals 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
expected to increase modestly
to about US$165/st (CAN$272/
tonne (t) (US$1=CAN$1.50))
for 2002-2003, while the price of
sorghum, 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

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
pressed by burdensome U.S.
supplies of soymeal.

Canadian canola meal supplies
are expected 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.

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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 cancer, heart disease, kidney disease and osteoporosis.

The Ontario Soybean Growers (OSG) (www.soybean.on.ca) has actively been working with BION 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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**CANADA: SOYBEAN EXPORTS**

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Source: Statistics Canada

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