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INDIA

India is the world's second most populous country and one of the largest producers of grains and oilseeds. It is also the world's second largest consumer of vegoils. In recent years, India's production of foodgrains has met or exceeded its domestic consumption needs, except for wheat whose production has generally not kept up with consumption. Nevertheless, India continues to be a player in the highly competitive export wheat market. India is also Canada's most important export market for pulse and special crops. This issue of the *Bi-weekly Bulletin* examines the situation and outlook for India's grains and oilseeds sectors and explores the implications for Canada's agriculture and agri-food industry.

BACKGROUND

Economy

India's economy is a mix of traditional small farms, larger and more technologically advanced farming operations, small handicraft enterprises, a wide range of modern industries, and various support services such as those in information technology. India has the world's second largest population, which now exceeds 1 billion people, but much of its population still lives below the poverty line. The situation has improved because India's economy has been growing about 6% annually since 1990, and poverty has been on the decline. Currently, about 25% of India's population lives below the poverty line, down from 35% in 1990.

Agricultural Industry Overview

The agricultural sector accounts for about one-quarter of India's economy and provides employment for about 60% of its labour force. India's agricultural sector faces some serious environmental problems including soil erosion, overgrazing, air pollution, desertification, and inadequate supplies of potable water due partially to runoff of agricultural pesticides.

India is highly dependent on its annual monsoons, and it receives most of its precipitation during the period between June and September. India's crop year is July-June and there are three main crop seasons: *kahrif* (June-September); *rabi* (October-March); and *zaid* (April-May). The major crops grown during the *rabi* season are wheat, barley, gram (chick peas), linseed, rapeseed, and mustard seed.

India's agricultural sector, despite some environmental challenges, continues to experience moderate success. Formerly highly dependent on food imports, India has moved beyond self-sufficiency and now has significant food reserves. This progress has been made possible by bringing more land into production, expanded irrigation capability, the use of higher yielding seed varieties, improved water management skills, and more efficient use of fertilizers and pesticides.

By managing its water resources over a period of 40 years, India has put 8 million hectares, or about one-third of its arable land, under irrigation. With help from the World Bank, India has also established over 500 hydrological stations to collect and transmit data which are used for flood forecasting and dealing with excessive rainfall.

The use of fertilizer in India has increased dramatically during the past three decades due in part to efforts of the Indian Government. This has been accomplished in several ways, including establishing favourable pricing schemes, encouraging the distribution of phosphate and potassium fertilizers, establishing quality control laboratories for fertilizer, and implementing a National Project on Development and Use of Bio-fertilizers. The Indian Government regards biologically based fertilizers to be a cost effective and renewable supplement to chemical fertilizers. Steps have also been taken to improve the availability of fertilizer in remote and previously inaccessible regions.

India established the Ministry of Food Processing in 1988 to encourage valueadded activities for its agri-food sector. Using some of the latest in food processing technologies, the food processing sector has improved employment opportunities in rural areas and provided off-farm incomes. A contributing factor in India's move from food deficit to food surplus has been the work of the Indian Council of Agricultural Research (ICAR). Through its numerous research institutes and projects, ICAR has encouraged a rapid transfer of farm technology from the laboratory to the land.

Private Investment in Agriculture

India's agriculture and agri-food sector is well-positioned for steady growth in the next few years. With encouragement and support from government, agribusiness companies are looking at new ways to reach out to farmers and consumers, providing new technologies, investing in supply chains, and organizing food



retailers to handle more processed food products. The growth in private sector investment has been responsive to the growing demand for ready-to-eat food products as family incomes increase and more families move to urban centres.

In order to capitalize on the world's second largest population and to stimulate economic growth, the Indian Government is looking to improve its rural infrastructure and to develop better market efficiencies. In the past, transportation and distribution activities have been hampered by an inferior road system and unreliable sources of electricity. Gains in market efficiencies have been further limited by the generally high cost of credit. Also, a large number of intermediaries operating along the supply chain can add costs but little value, resulting in inflated prices for consumer products.

India's Trade Strategy

In March 2002, India's Ministry of Commerce and Industry announced a 5year trade strategy, to accelerate India's economic growth, increase employment opportunities, and to alleviate poverty. As a result, many quantitative restrictions on exports have been removed and the same is being done for imports. Registration and packaging restrictions have been lifted, or are in the process of being lifted, and the government is providing more technical assistance to exporters. India, however, still subsidizes some exports of surplus food grains held by the Food Corporation of India (FCI).

Inspections of Imported Food Items

On June 16, 2004, India's Ministry of Commerce and Industry released a list of "high risk" food items whose imports would be subject to 100% sampling. The list includes edible oils and fats, pulses and pulse products, cereals and cereal products, milk powder, condensed milk, food colours, and food additives. Prior to this announcement, all food imports except perishable food items such as fruit, vegetables, meat and fish were subject to 100% sampling under the *Prevention of* Food Adulteration Act, 1954. The change in India's policy on sampling of food imports was largely in response to importers who complained about the high cost of 100% sampling, and the implication that the policy represented a non-tariff barrier to trade.

Currently, consignments of high risk food items imported through India's ports, airports, container depots, and custom stations are referred to Port Health Officers for testing. If the consignment fails the "clean" test report, Customs authorities ensure that the product is reexported out of the country or destroyed under appropriate rules and regulations.

Food products that are not on the high risk list are subject to sampling procedures which are considerably less onerous, specifically: i) samples are drawn from the first five consecutive consignments of each food item being imported to ascertain any quality and health concerns; ii) if all consignments conform to prescribed standards, Customs then switches to checking 5% to 20% of the consignments; and, iii) the selection of food items for random testing takes into account the nature of the food product, its source or origin, and the track record of the importer. If a sample fails to meet prescribed standards, Customs reverts to 100% sample until such time that 5 consecutive samples meet prescribed standards.

Minimum Support Price

The most pervasive domestic support mechanism for India's agricultural sector is the Minimum Support Price (MSP), and this support mechanism has been in place since 1980. Intended to protect farmers against sharp declines in prices, the MSP was set up to act as a floor price, as recommended by the Commission on Agricultural Cost and Prices (CACP). However, in recent years the government has been setting MSPs at higher levels than those recommended by the CACP. This has caused market distortions for foodgrains and increased the burden on the government treasury. As a result, the Indian Government is making a deliberate effort to improve how they target food subsidies and to review pricing and procurement operations under the MSP to make sure they are more cost effective.

In December 2003, the Indian Government announced its MSPs for wheat and oilseeds for the 2004-2005 *rabi* marketing season, which began April 1, 2004. When the compensation farmers received due to drought is factored into 2003-2004 support prices, the MSP for wheat for the 2004-2005 marketing season is 6,300 rupees/tonne (INR/t) (CAN\$179/t), unchanged from 2003-2004. However, the rapeseed MSP is 16,000 INR/t (CAN\$455/t), up from 13,400 INR/t (CAN\$381/t) in 2003-2004, and for safflower seed MSP is 15,050 INR/t (CAN\$428/t), up from 13,050 INR/t (CAN\$371/t) in 2003-2004.

Buffer Stocks

The Indian Government maintains buffer stocks to guard against serious food shortages arising from drought and other crop failures. Buffer stocks also enable the government to capitalize on domestic price increases by being able to sell off surplus stocks at higher prices than minimum levels prescribed by Indian Government policy. However, in recent years, the stocks held by government have exceeded minimum required levels thereby creating a phenomenon referred to as "a paradox of poverty amongst plenty", i.e., hungry citizens despite large government held stocks. The failure of this program has been attributed to a lack of purchasing power and/or inadequate arrangements for disposing of surplus stocks. As a result, the government is looking to implement more effective measures for disposing of surplus stocks and may even target buffer stocks at 6 Mt and 4 Mt for rice and wheat, respectively, which would be considerably lower than has been the case in recent times.

Expanding the Role of the Private Sector

In January 2004, the Indian Government announced plans to expand the role of private traders in the marketing and export of grains. As of April 1, 2004, traders can procure grain directly from farmers rather than having to work through the state-run FCI. Private traders are now allowed to enter into production contracts with farmers and to set up storage and cleaning facilities. The FCI retains its primary roles of ensuring national food security, moving grain into deficit areas, and maintaining adequate buffer stocks. The expanded role of private traders is expected to increase farm incomes, improve the quality of the crops being produced, and increase private investment in India's grain handling and transportation system.

SITUATION AND OUTLOOK

India's production of major food grains for 2004-2005 is estimated at 209 million tonnes (Mt). This production is comprised

of 90 Mt of rice, 72 Mt of wheat, 33 Mt of coarse grains, and 14 Mt of pulse and special crops. Rice and wheat are by far India's most important crops and they are grown in rotation.

Over the last 50 years in India, rice yields have tripled and wheat yields have nearly quadrupled. In both cases, the increases are due to increased irrigation and the introduction of higher yielding varieties. About 220 new varieties of wheat were

INDIA: WHEAT SUPPLY AND DISPOSITION					
July-June	2002	2003	2004		
crop year	-2003	-2004	-2005		
million tonnes					
Carry-in Stocks	23.0	15.7	6.9		
Production	<u>71.8</u>	<u>65.1</u>	<u>72.0</u>		
Total Supply	94.8	80.8	78.9		
Food	73.7	67.8	69.4		
Feed	0.6	0.6	0.5		
Exports	<u>4.9</u>	<u>5.5</u>	<u>1.5</u>		
Total Use	79.1	73.9	71.4		
Carry-out Stocks Source: USDA	15.7	6.9	7.5		

INDIA: COARSE GRAINS SUPPLY AND DISPOSITION					
July-June	2002	2003	2004		
crop year	-2003	-2004	-2005		
	million tonnes				
Carry-in Stocks	1.8	0.7	2.0		
Production	<u>25.7</u>	<u>35.0</u>	<u>33.0</u>		
Total Supply	27.4	35.7	35.0		
Food	19.8	24.9	24.6		
Feed	6.9	8.3	8.4		
Exports	<u>0.1</u>	<u>0.5</u>	<u>0.3</u>		
Total Use	26.8	33.7	33.3		
Carry-out Stocks Source: USDA	0.7	2.0	1.7		

INDIA: VEGOIL SUPPLY AND DISPOSITION					
July-June crop year	2002 -2003	2003 -2004	2004 -2005		
	million tonnes				
Carry-in Stocks Production Imports	0.4 4.7 <u>5.5</u>	0.1 6.9 <u>4.9</u>	0.4 6.5 <u>5.4</u>		
Total Supply	10.7	11.8	12.2		
Food	10.6	11.5	11.8		
Carry-out Stocks Source: USDA	0.1	0.4	0.5		

released during this same period.

Wheat

India's wheat production, which is primarily made up of winter varieties, is concentrated in the north-western states and is typically produced under irrigation. Wheat production declined for a couple of years after reaching a record 76.4 Mt in 2000-2001, but is expected to recover in 2004-2005.

India's wheat consumption has generally exceeded production for the past few years and this is due in part to the growth in fast food products such as pizza, hamburgers and cakes. However, the bulk of wheat grown in India is of soft or medium hard varieties, which are better suited for baking traditional flatbreads such as *chapattis* and *rotis*.

India's domestic and import policies have encouraged the development of its domestic milling and baking industry to meet the demand for ready-to-eat food products. As a result of the wheat production shortfall and record exports during the past couple of years, carry-out stocks for 2003-2004 dropped to the lowest level since 1997-1998, despite a temporary decrease in human consumption in 2003-2004.

For 2004-2005, wheat *production* is forecast at 72.0 Mt, up from 65.1 Mt in 2003-2004. The increase is due largely to increased seeded area and production is expected to exceed domestic consumption for the first time since 2001-2002. *Consumption* is forecast at 70.0 Mt, up from 68.4 Mt in 2003-2004. With the expected increase in production and lower exports, carry-out stocks are forecast at 7.5 Mt, up from 6.9 Mt in 2003-2004, and the first increase since 1998-1999.

Coarse Grains

India's coarse grains production, which is comprised primarily of corn, millet and sorghum, has fluctuated from year to year, depending on growing conditions. During the past five years, that production has ranged from 25.6 Mt to 35.0 Mt. In years of good rainfall, Indian farmers shift production out of coarse grains into higher-value crops such as rice, wheat and oilseeds. There has also been a shift out of coarse grain production as irrigation has been expanded into traditional coarse grains areas. Government policies have also encouraged farmers to grow other crops, largely at the expense of coarse grains.

About one-quarter of India's total coarse grain production is used for animal feed. This includes almost half of India's corn production and 10% of each of millet and sorghum production.

For 2004-2005, coarse grains *production* is forecast at 33.0 Mt, down from the record 35.0 Mt in 2003-2004. *Consumption* is also expected to decrease slightly, to 33.0 Mt, from the record 33.2 Mt in 2003-2004. *Carry-out stocks* are forecast at 1.7 Mt, down from 2.0 Mt in 2003-2004.

Oilseeds

The main oilseed crops grown in India are groundnuts, rapeseed, mustard seed, sesame, sunflower seed, safflower seed, nigerseed, cottonseed and soybeans. Since the late 1980s, India has focussed its efforts on increasing oilseed production to meet its growing demand for vegoils. Increased production has been accomplished by expanding seeded area, increasing irrigation, improving crop production techniques, and developing higher yielding varieties of oilseeds.

The share of oilseed crops is expected to increase as India moves toward the commercialization of its agricultural sector. This includes the removal of price supports that have long favoured the production of sugarcane, paddy rice and wheat. The expectation is that if pricing of cereal crops is left to market forces, there will be a shift out of rice and wheat production into non-cereal crops such as oilseeds. The expected shift will help accommodate the growing demand for healthful products such as soyoil and canola/rapeseed oil, rather than the less expensive palm oil, as living standards in India continue to improve.

For 2004-2005, total oilseed **production** is forecast at 26.1 Mt, down from the record 28.6 Mt in 2003-2004. The decrease is due largely to lower rapeseed and soybean production in response to record-high imports of palm oil from Malaysia and Indonesia and soyoil from South America.

India, as the world's second largest consumer of vegoils, has seen per capita

consumption increase from about 4 kilogram (kg) per annum to 10 kg per annum in the past four decades. The increase in vegoil consumption is due partially to a reduction in import barriers which helped to lower domestic prices and improve the availability of vegoils. India's vegoil consumption for 2004-2005 is forecast at a record 11.8 Mt, up from the previous record of 11.5 Mt in 2003-2004.

India is the world's second largest producer of vegoils, but that production only meets about half of its annual requirements. The shortfall is made up primarily with *imports* of palm oil from Malaysia and Indonesia, which have averaged 3.7 Mt annually during the past five years. The remainder is made up with imports of soyoil, sunflower seed oil, and canola/rapeseed oil.

Individually, the volumes of the soyoil, sunflower seed oil and canola/rapeseed oil fluctuate considerably from year to year, depending on availability and prices, but the total volume of the three oils imported averages 1.5 Mt annually. Currently, canola/rapeseed is the smallest component of India's vegoil imports, but that is expected to increase with increased urbanization, higher disposable incomes, and a heightened awareness of the health benefits of canola/rapeseed oil.

Pulse and Special Crops

India is the largest producer of pulse crops in the world, and these crops are generally grown on marginal land that is not irrigated. It is also the world's largest consumer of pulse crops. The major pulse crops grown in India are gram, murg beans, urd, pigeon peas, dry peas, and lentils. Total **production** of pulse crops in India has remained fairly constant at about 13 Mt during the past few years while *consumption* has averaged 15 Mt annually. The shortfall is made up with imports of pulse crops from countries such as Canada.

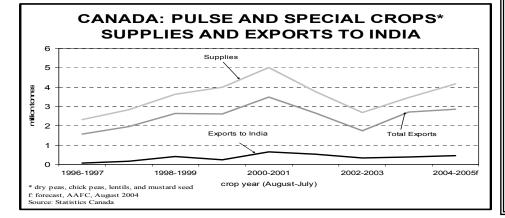
For the last three years, India has been Canada's most important export market for pulse and special crops, replacing Spain which had been Canada's biggest customer for four years. Canada's exports of pulse and special crops to India, in order of importance, are dry peas, chick peas, lentils, and mustard seed, and have averaged 0.43 Mt annually for the past five years.

Canadian exports of pulse crops to India peaked in 2000-2001, when Canada's exportable supplies hit a record 5.0 Mt. In the years that followed, Canadian exports dropped off significantly as consecutive years of drought affected crop yields and lowered Canada's exportable supplies. Crop conditions in Canada have since improved and exportable supplies have also increased significantly. For 2004-2005, Canada's exports of pulse crops to India are forecast at 0.45 Mt, up from 0.38 Mt in 2003-2004.

Canada's Prospects for Trade with India

Canada' major agricultural exports to India are pulse crops and, to a lesser extent, canola oil. In return, India exports horticultural products such as cucumbers, leguminous vegetables and onions to Canada.

Since the mid-1990s, India's agricultural policies have shifted away from self-sufficiency, and trade policy reforms



have improved market access. Despite those positive developments, prospects for increased trade with India may be limited for some commodities. With domestic price supports for wheat being held constant while prices support for oilseeds increase, the result could be higher domestic oilseed production than might have otherwise been experienced. In the vegoil market, any gains in market share by Canada may be limited by strong competition from palm oil producers in Malaysia and Indonesia, and soyoil exports from Argentina and Brazil.

By virtue of its huge population and economic strength, India presents great opportunities for future market development. India also remains an important market for Canadian exports of pulse crops.

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