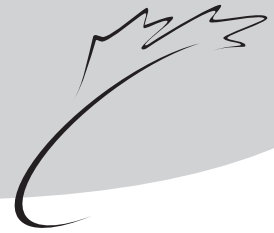




# Bi-weekly Bulletin

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## CHINA: WHEAT

Wheat is the second most important crop in China after rice. Over the medium-term, China's accession to the World Trade Organization (WTO) is expected to create opportunities for Canada to increase its wheat exports to China. For 2002-2003, China is expected to rely heavily on carry-over stocks to address the shortfall created by consumption exceeding domestic production, and wheat imports are forecast at only 1.0 million tonnes (Mt). This issue of the *Bi-weekly Bulletin* examines the structure of China's wheat sector in the context of the current situation and the outlook for Canadian wheat exports to China for 2002-2003 and over the medium-term.

### AGRICULTURE POLICY

China has been undergoing a transformation from traditional agriculture to modernized agriculture. As Chinese agriculture moves from a centrally planned to a more market oriented system, new constraints to efficiency are developing. These constraints are an inadequate legal and banking systems and the absence of an efficient system for timely market supply and demand information. In addition, there are often considerable harvest losses due to poor storage, handling and transport facilities.

The following objectives have been identified by China as the keys to achieving sustainable wheat production: 1) improved wheat yields and quality; 2) reduced use of irrigation water and fertilizer; 3) protection of the environment by reducing pesticide use; and 4) increased wheat production efficiency and profitability.

The Chinese government has actively protected domestic industries by banning the sale of any agri-food company which the government believed was threatened with takeover by foreign companies.

However, with accession to the WTO in December of 2001, China has made commitments to open its markets to agricultural imports. Its commitments are part of a broader transition to a market economy. Domestic policy reform will be

important to increase access to markets in China. China has committed to replace previous quantitative import restrictions with tariff rate quotas for bulk commodities, to reduce tariff rates and to limit domestic agricultural support.

The central purchasing agency, China National Cereals, Oils and Foodstuffs Import Export Corporation (COFCO), continues to play an important role in the importation of wheat, rice, corn, and edible oils.

### PRODUCTION

Wheat can be classified into winter wheat and spring wheat. Winter wheat being the main type grown in China. In the last five years, seeded area for winter and spring wheat has been approximately 90% and 10% respectively of the total wheat acreage.

The main winter wheat producing area in China is the province of Henan, in the east-central area of China which accounts for about 26% of total wheat in both area and production.

Chinese harvested wheat area has fallen each year since 1997-1998 and fell to 24.5 million hectares in 2002-2003, the lowest since 1966-1967. Several factors are responsible for this downward shift in harvested area. Since 1999-2000, the Chinese government has substantially reduced its price support to protect spring wheat acres in northwest China and low quality wheat south of the Yantze River. The government decided to purchase grain according to quality, therefore high quality grains received higher payments than lower quality grains. As a result, alternative crops such as rapeseed, vegetables, fruits, and cotton have proven more attractive to Chinese producers. As well, in the wheat growing regions of northern China, ample

### CHINA: WHEAT SUPPLY AND DISPOSITION

<i>July-June crop year</i>	<b>1998 -1999</b>	<b>1999 -2000</b>	<b>2000 -2001</b>	<b>2001 -2002</b>	<b>2002 -2003f</b>
	..... million tonnes.....				
Carry-in Stocks	96.2	97.9	102.9	91.9	76.6
Production	109.7	113.9	99.7	93.9	92.0
Imports	<u>0.8</u>	<u>1.0</u>	<u>0.2</u>	<u>1.1</u>	<u>1.0</u>
<b>Total Supply</b>	<b>206.7</b>	<b>212.8</b>	<b>202.8</b>	<b>186.9</b>	<b>169.6</b>
Domestic Use	108.3	109.4	110.3	108.8	106.1
Exports	<u>0.5</u>	<u>0.5</u>	<u>0.6</u>	<u>1.5</u>	<u>1.5</u>
<b>Total Use</b>	<b>108.8</b>	<b>109.9</b>	<b>110.9</b>	<b>110.3</b>	<b>107.6</b>
Carry-out Stocks	97.9	102.9	91.9	76.6	62.0

f: forecast, USDA, November 2002

Source: USDA

water resources have become scarce, increasing costs for water transfer projects.

For 2002-2003, Chinese wheat production is estimated at 92 Mt, down slightly from 2001-2002, and the lowest since 1989-1990. This is largely due to early season drought and heavy late rains which have damaged the wheat crop more than originally expected. Irrigation water has become more scarce and has added to the reduction in expected yield. About 70% of Chinese wheat receives some irrigation. In recent years, as both urban and agricultural demand for water has increased, the aquifer in the North China Plain has been drawn down considerably and demand for river and reservoir water is near its limit. As a result, irrigation water has become costly. Decreases in seeded area and consistent irrigation shortages have reduced annual wheat production more than 15 Mt from the highs of the mid-1990s. Of this, about 86 Mt is estimated to be winter wheat with the remaining 6 Mt being spring wheat.

## RESEARCH AND VARIETIES

The shift to a more market oriented production system has affected the quality of wheat seeded. With farm land and now water, scarce in major wheat growing areas, producers are finding it more profitable, with government's encouragement, to switch to high quality wheat varieties which can give better returns on crop inputs. The high quality wheat refers to new low protein and high protein wheat varieties. These are intended to allow Chinese producers to

diversify away from the medium protein varieties that have dominated domestic production for the past 40 years, when maximizing yields was the primary concern. These new varieties are expected to provide millers with the wheat necessary to produce western style cakes, cookies and breads which have increased in popularity in recent years, and also improve the quality of traditional noodles, dumplings and steamed breads.

Since mostly medium gluten varieties are used, there is a lack of high gluten and low gluten wheat. Compared to United States (US) or Canadian wheat, protein contents of Chinese wheat, reaching a high of 16-17%, are not low at all. But, with lower dough gluten value and shorter stability time, protein quality and baking quality are poor. This is largely due to the genetic makeup of the varieties. The problem with low gluten wheat in China is that the protein content is not low enough. There is a lack of varieties with protein content below 10%, and those with low protein often lack satisfactory extensibility.

The Chinese have been breeding high quality wheat varieties with high gluten varieties in recent years to deal with this situation. Presently, there are more than 120 varieties of high quality wheat in China, and there are more than 10 varieties which perform at the levels exhibited by foreign high gluten varieties. Despite this, production levels are too low, seeding areas too scattered, agronomy practices too varied, and storage too poor. This has led to problems with inconsistent quality,

insufficient quantity and unstable properties.

High quality wheat production is expected to account for more than a quarter of the 2002-2003 crop, compared to near zero production just three years ago. However, consistency of quality supplies is a problem and as a result, Chinese millers have contracted with individual producers to ensure supply. High quality wheat largely consists of winter wheat varieties with spring wheat being the lowest quality. Millers have reported that although new varieties of high quality winter wheat can reduce their need for imports of wheat for cakes, cookies, and bread, they cannot completely replace it. Domestic millers are required to blend imported wheat to reach the desired quality levels.

## CONSUMPTION

About 70% to 80% of wheat consumption is in the form of human food, followed by feed or seed use. As is the case with most developing countries, per capita consumption of staple food falls with an increase in income, and China is no exception. Wheat based foods are the staple diet for most of northern China and consumption has fallen over the past decade. It was previously assumed that the drop in wheat consumption in northern China was being offset by increases in demand throughout the rest of China for western type wheat products. As a result, wheat consumption had been thought to increase in line with the rate of population growth. However, high domestic corn prices in the last two years resulted in increases in feeding of wheat. At the same time, wheat supplies have fallen by about 25% since

1999-2000 due to reduced seeded area and poor weather conditions, while Chinese imports have remained relatively low. Chinese per capita wheat consumption has in fact been shifting downward in the past 9 years from a high of 85 kilograms (kg) in 1993 to 80 kg in 2001. There are still a large number of low income rural Chinese in northern China who rely on the traditional wheat based diet. However, the rural population is gradually moving to urban centres and becoming wealthier. In northern Chinese cities, people are eating more meat, seafood, and vegetables, and traditional

### CHINA: 2002-2003 WHEAT PRODUCTION BY PROVINCE

	million tonnes
Henan	24.0
Shandong	15.0
Hebei	11.0
Anhui	6.6
Jiangsu	6.2
Sichuan	4.6
Shaanxi	3.9
Xinjiang	3.8
Gansu	3.0
Shanxi	2.0
Hubei	1.7
Inner Mongolia	1.3
Heilongjiang	0.9
Other	8.0
<b>Total</b>	<b>92.0</b>

Source: National Grain and Oils Information Centre (NGOIC)



## CANADA: WHEAT EXPORTS TO CHINA

August-July crop year	1998 -1999	1999 -2000	2000 -2001	2001 -2002	2002 -2003f
.....thousand tonnes.....					
Wheat	219.5	660.6	16.5	767.1	100
Wheat Flour	1.2	0.6	1.3	1.2	1.2

f: forecast, AAFC, November 2002  
Source: Canadian Grain Commission

wheat foods are becoming less popular in comparison to rice. For 2002-2003, Chinese domestic use is forecast at 106 Mt, down slightly from 2001-2002 and the lowest since 1994-1995.

### TRADE

Chinese wheat trade relies heavily on two factors, wheat supplies and the introduction of high quality wheat varieties. Many experts feel that despite the fall in wheat production and increased feed use in the last three years, wheat stocks remain more than adequate for 2002-2003. However, despite quality improvements, Chinese domestic wheat is not of the quality of Canadian and US Hard Red Spring wheat varieties and low protein classes such as Soft White Winter wheat are needed for a large proportion of the Chinese millers' flour requirements.

China was obligated to open an 8.468 Mt tariff rate quota (TRQ) for wheat in the 2002 calendar year as a result of China's entry into the WTO in December of 2001, with the quota rising to 9.05 Mt in 2003 and to 9.64 Mt in 2004. Under this agreement the wheat within this TRQ would have a 1% tariff, with imports beyond this quota carrying a duty of 71%, which was announced March 5, 2002.

Imports of wheat have not increased greatly after the allocation of the wheat TRQ in March. Domestic wheat has a value added

2002-2003, wheat imports are forecast at 1 Mt, down from 1.1 Mt in 2001-2002, but similar to the 5-year average. Canadian wheat exports to China are expected to decrease from 0.8 Mt in 2001-2002 to only 0.1 Mt. This is largely due to short supplies of No.1 or No.2 Canada Western Red Spring wheat (CWRS) in Canada in 2002-2003 as a result of the severe drought. Canadian wheat exports to China consist largely of No.1 and No.2 CWRS with protein levels 14% and up. The other Canadian class of wheat exported to China is Canada Prairie Spring Red Wheat. In 2001-2002, the other major suppliers of wheat to China were the US at 0.2 Mt and Australia at 0.1 Mt.

Chinese wheat exports are largely of feed quality, mainly to South Korea. Smaller amounts are sold to Hong Kong, Indonesia, and the Philippines. Wheat is priced very low to compete with the large supplies in India and Ukraine. Chinese wheat exports have not only created more competition for these other wheat suppliers but also for US corn sales, as feed wheat is substituted for corn in Korean feed rations. Chinese feed wheat exports compete directly with US soft red winter and Canadian feed wheat in the Philippines. China has also exported small amounts of milling wheat, the first since 1949, to Southeast Asia. For 2002-2003, Chinese wheat exports are forecast at 1.5 Mt, unchanged from last year, but above

tax advantage over imported wheat. The effective value added tax on domestic wheat is 3% while it is 13% for imports. In addition to this, large stocks of domestic wheat and improved domestic quality will limit imports for 2002-2003. For

the 5-year average of 0.9 Mt. Since 2000-2001, China has become a net exporter of wheat.

### STOCKS

With smaller wheat production in each of the last 3 years, supplies are forecast to fall from a record 213 Mt in 1999-2000 to 170 Mt in 2002-2003. Total domestic use is forecast near the 10-year average at 106 Mt, however, it is expected to exceed production for the third consecutive year. As a result, carry-out stocks are forecast by the United States Department of Agriculture (USDA) to decrease to 62 Mt, down 20% from 2001-2002 and the lowest since 1992-1993. The stocks-to-use ratio is forecast at 58%, down from 70% in 2001-2002.

### FLOUR

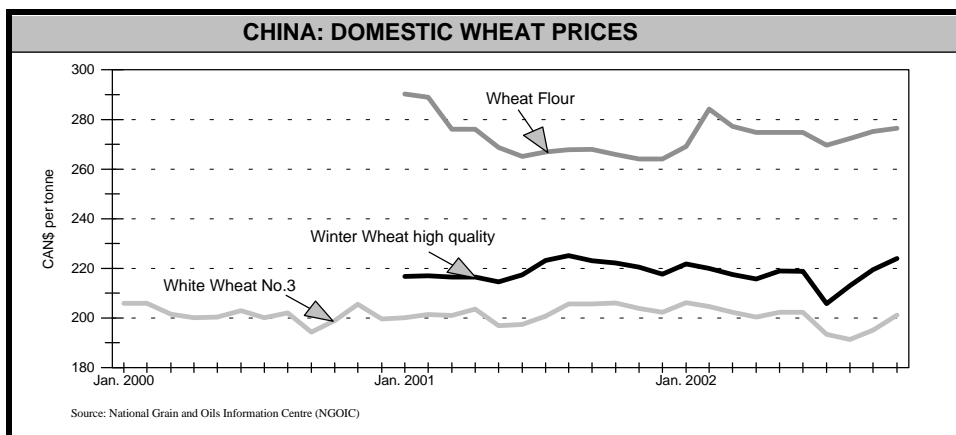
Since the early 1980s, China's flour industry has been developing rapidly with a current total capacity over 300 Mt. China currently has more than 40,000 flour processing plants: 9,800 with a capacity of over 50 tonnes per day (t/d) and 80 with a capacity of over 400 t/d. Most of the flour mills are located in the northern provinces of Shandong, Henan, and Hebei. In the south, mills can be found in the provinces of Guangdong, Anhui, and Jiangsu. For 2002-2003, Chinese flour consumption is forecast at 90 Mt, similar to the 5-year average. There is an excess of flour milling capacity and as a result, domestic flour prices are low and because of strong competitiveness, most flour mills are not highly profitable. For 2002-2003, Canadian exports of flour to China are forecast at 1,200 t, unchanged from last year. Chinese import tariffs for wheat flour are included in the wheat TRQ. However, the

## CANADIAN HARD WHITE SPRING WHEAT

The development of Hard White Spring (HWS) wheat varieties Snowbird and Kanata at the Cereal Research Center (CRC) of Agriculture and Agri-Food Canada (AAFC) in Winnipeg, Manitoba provides a new diversification opportunity for significant production of white bread wheat in western Canada. Snowbird is scheduled to be grown on a commercial basis in 2003-2004 and Kanata in 2004-2005. About 150,000 acres of Snowbird are expected to be seeded in 2002-2003.

The attractions of white wheat are linked to its light colored hull. It allows millers to increase the flour extraction rate over red wheat, which translates into increased revenue for the miller. Another advantage is the ability to provide white wheat products with a lighter color and a milder taste. While it will be used in bread, the prime market is in Asian noodles. China may be a potential export market for HWS wheat varieties.

A new HWS wheat breeding program began in July of 2002 at the AAFC Lethbridge Research Center to diversify cropping options for producers and open new markets for Canada's wheat industry. The program is collaborating closely with established breeding programs at the CRC in Winnipeg, and the Semi-Arid Prairie Agricultural Research Station in Swift Current, Saskatchewan.



in quota duty is 6% and the over quota duty is 71%.

To achieve better profitability, Chinese flour millers are hoping to increase the proportion of high quality special use flours such as bread, cake, and biscuit flour, as well as home use flour (steamed bun, dumpling and noodle flour). Currently, high quality flour accounts for about 10% of demand, but is forecast to increase to over 50% with more varieties of flour available.

### SPECIALTY MARKETS

Foreign manufactured breakfast cereals are beginning to penetrate the Chinese marketplace and while the present market is small, there is the potential for much larger demand. Chinese hotels that cater to foreign guests are the current buyers of breakfast cereals. Nearly every hotel has a restaurant that offers buffet breakfasts which include cereal. The growth, however, appears to be in the supermarkets, where sales to local customers are beginning to increase.

The Chinese prefer either sweet tasting cereals or types without sugar so that fruit and spices can be added as desired. The two largest constraints on retail sales are consumer education and price. The marketing of breakfast cereals must include educating the Chinese in the manner in which North American style breakfast cereals are normally consumed. Chinese importers and distributors also believe that breakfast cereals are currently priced too high for most consumers. Studies have shown that the Chinese enjoy cereals as a snack food, eaten straight out of the box,

which is where the most market potential may be. The reason is that the Chinese still prefer their own cuisine for traditional meals and are more willing to try other products for snacks. Chinese import tariffs for breakfast cereals range from 25 to 30%. Since cereals are processed foods, they are also subject to an additional 17% value added tax. With China's accession to the WTO, import tariffs are expected to fall over the next several years, which may allow for a retail price reduction and increased imports of Canadian breakfast cereals.

### OUTLOOK

For 2002-2003, Chinese wheat imports are unlikely to exceed the current USDA forecast of 1.0 Mt. Wheat supplies in China appear to be sufficient because domestic wheat prices remain relatively low. However, Canadian wheat exports to China are expected to decrease due to the drought in western Canada. Demand for low and high protein wheat in China still cannot be met by domestic production, but the Chinese government is, with some success, encouraging production of high quality wheat which may reduce potential wheat imports. With the state trading companies controlling 90% of the wheat TRQ, it seems likely that the quota will remain largely unfilled for 2002-2003. However, the Chinese government is pursuing downsizing strategies, underlying its commitment to market reform. At the current pace in which wheat stocks are being diminished it is possible that Chinese wheat imports may increase as early as 2003-2004, despite an expected increase in Chinese wheat production as a result of high world wheat

prices. Canadian wheat exports may also increase as early as 2003-2004, as Canadian wheat production recovers from its drought.

In the medium-term, China will continue to be a wheat deficient nation. Wheat production is not expected to surpass consumption in the next three to five years. With world wheat prices expected to fall as many of the world's leading wheat exporters recover from drought conditions, total Chinese wheat imports in the 3.0 to 4.0 Mt range seems reasonable. With this anticipated increase in wheat imports, Canada is expected to be well positioned to continue to service this expanding market.

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