

The Wheat Industry in Canada

Brian Oleson, University of Manitoba

It is a pleasure to be in Argentina to share with you my thoughts about the Canadian wheat industry. Argentina and Canada have a lot in common, and while we are competitors, there is also a good deal that we can learn from each other's experiences in growing and selling wheat.

1. Overview of the Canadian Wheat Sector

1.1. Canada's Position in the World Wheat Market

Canada is an important producer of high quality wheat. Production of all wheat for 2003/04 is close to 24 million tonnes (Table 1), or about 4% of world production, and was produced on 10.5 million hectares. With a population of only 32 million, Canada exports about 70% of its wheat production. Canada normally ranks second in the world for wheat exports, accounting for 15% to 20% of total world exports.

Table 1: 2003/04 Projected World Wheat Production and Exports, by Country

	Production (MMT)	% of World	Exports (MMT)	% of World	Exports/ Prod.(%)
US	63.6	11.5	31.3	30.2	49.2
Australia	24.5	4.4	17.5	16.9	71.4
Canada	23.5	4.3	16.0	15.4	68.1
Argentina	13.5	2.4	8.0	7.7	59.3
EU	90.7	16.4	7.0	6.8	7.7
Kazakhstan	12.0	2.2	6.0	5.8	50.0
India	69.3	12.6	4.0	3.9	5.8
Russia	34.0	6.2	3.5	3.4	10.3
China	86.0	15.6	2.2	2.1	2.6
Others	134.7	24.4	8.1	7.8	6.0
World	551.8		103.6		18.8

Source: USDA, FAS, February 11, 2004

Canada's Wheat Producing Areas

The majority of Canada's wheat is produced in the prairie provinces region of Western Canada (Figure 1), which includes the provinces of Alberta, Saskatchewan and Manitoba.

Figure 1: Major Wheat Producing Areas of Canada



Source: Canadian Grain Commission

The large expanse of prairie landscape, combined with a temperate climate and long summer days, makes for an ideal spring wheat producing region. The biggest limitation is water. Very little wheat in this area is produced with irrigation, and thus drought is always a threat.

Canada's 23.6 million tonnes of wheat produced in 2003/04 was close to the 10-year average. Ninety percent of this production occurs on the Prairies (Table 2), with Saskatchewan producing close to half of this, followed by Alberta (27%), then Manitoba (18%; Table 2 and Figure 2). Prairie wheat is marketed and sold by the Canadian Wheat Board (CWB). Ontario, a large province located in central Canada, produced 2.2 million tonnes in 2003/04 (9.4% of Canada's production) which was double its previous 10-year average of 1.19 million tonnes. Ontario normally produces only about 5% of Canada's wheat crop. Ontario wheat is not marketed by the CWB; most is sold locally and does not enter export channels, and, therefore, I will focus on wheat from the Prairies.

The majority of Canada's wheat is spring wheat (including durum wheat), accounting for 94% of total wheat production (Table 3 and Figure 3). About 20% of the spring wheat produced is durum, and about 80% of the durum crop is produced in Saskatchewan, with most of the rest produced in Alberta. Only about 6% of total wheat production is winter wheat, most of which is produced in Southern Ontario. The cold prairie winters are not conducive to survival of winter wheat varieties, although with improving production methods, winter wheat acreage is slowly increasing on the prairies.

Spring wheat seeding on the Prairies occurs in April and May and harvest is from August to September -exact seeding and harvest dates vary depending on location and weather conditions. Canada's crop year is considered to be from August 1 to July 31.

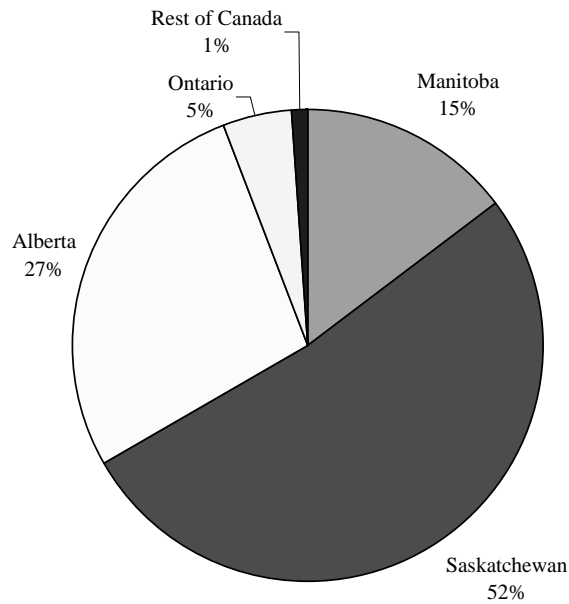
Table 2: Area, Yield and Production of All Wheat on the Canadian Prairies and All Canada, 2003/04

	Wheat Area Harvested (000 HA) ¹	% of Canada Wheat HA	Yield t/HA ²	Production (000 tonnes)	% of Canada Production
Alberta	2,508	24.0	2.6	6,457	27.4
Saskatchewan	6,012	57.4	1.7	10,443	44.3
Manitoba	1,406	13.4	3.0	4,162	17.7
Total Prairies	9,926	94.8	2.1	21,062	89.4
CANADA	10,467	100.0	2.3	23,552	100.0

¹Thousand hectares; ²tonnes/hectare

Source: Canada Grains Council, Statistical Handbook 2003

Figure 2: Wheat Production in Canada, Percent by Province, 1993/94-2002/03 Average



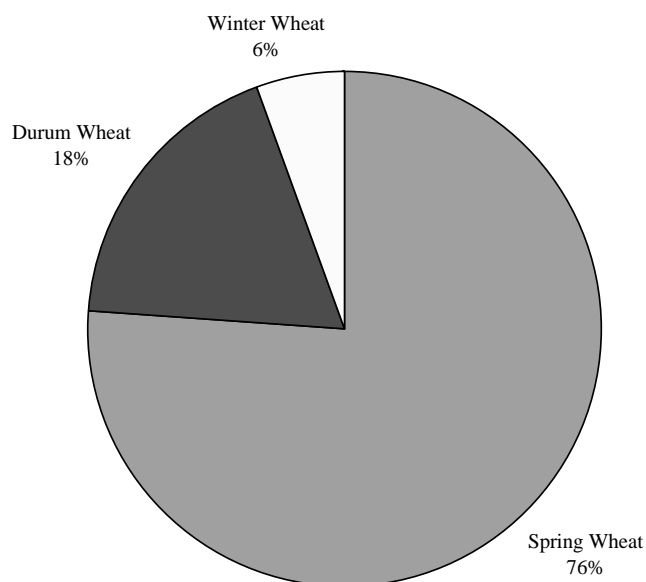
Source: Canada Grains Council, Statistical Handbook 2003

Table 3: Production of Non Durum Spring Wheat, Durum Wheat and Winter Wheat, 1993/94 – 2002/03 Average, (000 tonnes)

	All Wheat		Spring Wheat		Durum Wheat		Winter Wheat	
	000 t.	000 t.	%	000 t.	%	000 t.	%	
Ontario	1,190	99	8.3	0	0.0	1,091	91.7	
Manitoba	3,590	3,370	93.9	118	3.3	102	2.8	
Saskatchewan	12,694	9,031	71.1	3,571	28.1	92	0.7	
Alberta	6,686	5,856	87.6	764	11.4	65	1.0	
CANADA	24,402	18,584	76.2	4,453	18.2	1,365	5.6	

Source: Canada Grains Council, Statistical Handbook 2003.

Figure 3: Wheat Production in Canada by Wheat Types 1993/94 – 2002/03 Average Percentages



Source: Canada Grains Council, Statistical Handbook 2003

1.2. Trends in Canada's Wheat Producing Farms

Wheat has always been an important crop on the Canadian prairies, and was the cornerstone of early settlement of Western Canada. This settlement, which first began in the early 1800's, was accelerated by the expansion of the railways, which were crucial for transporting wheat from the Prairies to markets in Eastern Canada and overseas.

Although the agricultural industry, and the wheat industry specifically, is still important to the prairie economy, the number of farmers has been decreasing for a number of years, while the size of farms is

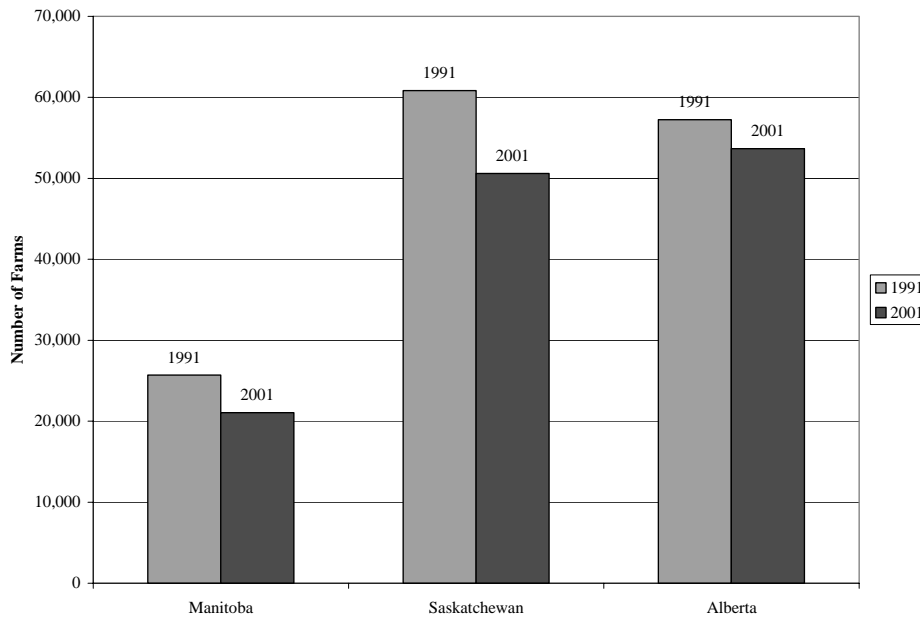
increasing. Between 1991 and 2001 alone, the total number of farms on the Prairies declined by 12.8%, while farm size increased by 13.8% (Table 4), with the most change seen in Manitoba and Saskatchewan (Figures 4 and 5). This trend is due to a number of factors, including the attraction of higher paying city jobs, the availability and use of larger farm equipment that makes it possible to farm more land, and the need for economies of size in order to see a profit in farming.

Table 4: Trends in Farm Number and Size on the Prairies, 1991 and 2001

	Number of Farms			Average Farm Size (Hectares)		
	1991	2001	% Change	1991	2001	% Change
Manitoba	25,706	21,071	-18.0	301	361	20.1
Saskatchewan	60,840	50,598	-16.8	442	519	17.6
Alberta	57,245	53,652	-6.3	364	393	8.0
Prairies	143,791	125,321	-12.8	385	438	13.8

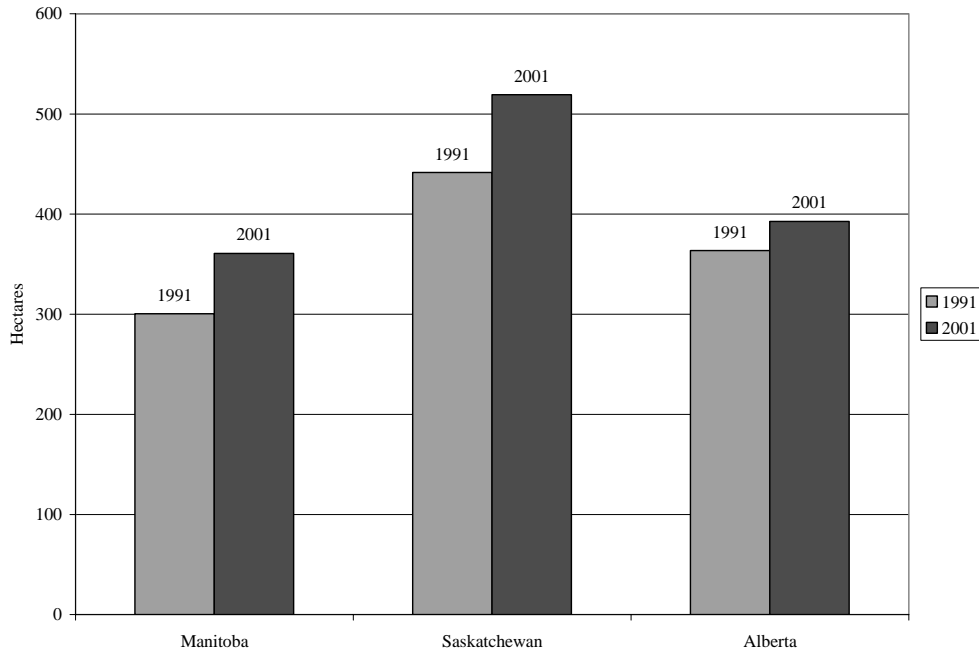
Source: Statistics Canada, Census of Agriculture

Figure 4: Number of Farms, by Province, 1991 and 2001



Source: Statistics Canada, Census of Agriculture

Figure 5: Average Size of Farms, by Province, 1991 and 2001



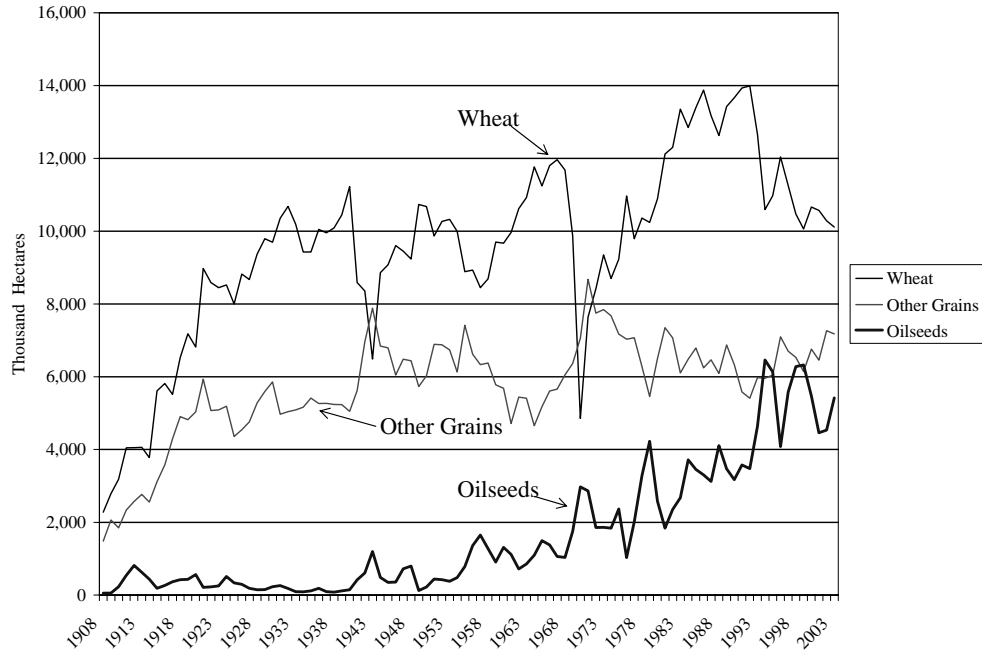
Source: Statistics Canada, Census of Agriculture

Wheat is the most popular crop grown on the Prairies, followed by canola, barley, feed grains (such as oats), and forage crops. Figure 6 shows how crop area increased in the prairie region since the early 1900s. Area planted to wheat continued to increase up to the early 1990s, but has since shown some decline. This decline has been attributed to a number of factors, including low world wheat price, the trend to diversification, and transportation policy changes on the Prairies that have increased farmers' costs of transporting wheat off the Prairies. Oilseeds, in particular canola, have trended upwards since the early 1970s. As well, specialty crop production (dry field peas, dry beans, lentils, mustard seed, and chick peas) has become a more important component of farmers' crop mix, but still accounts for only about 10% of total crop area.

Prior to the May, 2003 occurrence of one incident of Bovine Spongiform Encephalopathy (BSE), livestock production had been increasing across the Prairies for a number of years. The increased demand that occurred for forage and feed grains, plus the increased costs of transporting grain to export markets was an incentive for farmers to convert less productive crop land to forage and feed grain production.

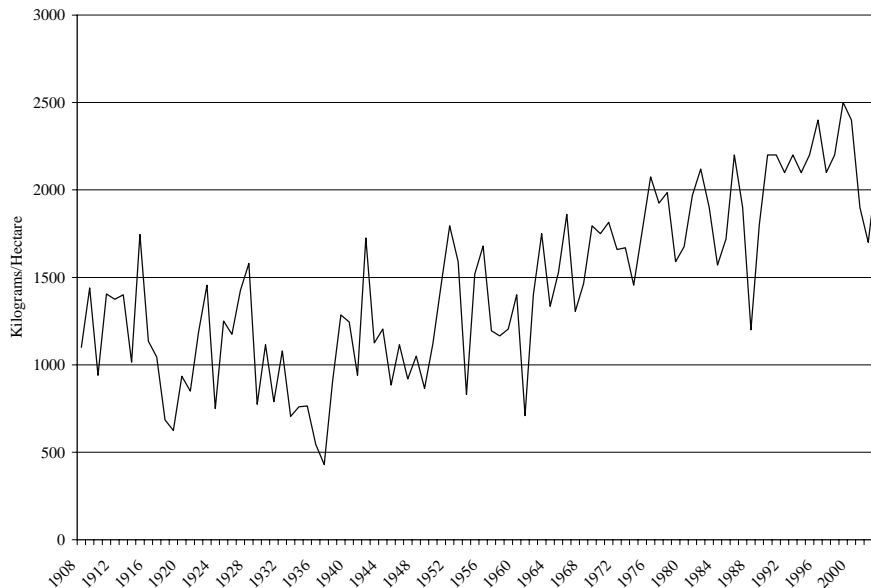
Wheat breeding for agronomic, disease, quality and yield attributes is important to the Prairie economy. Figure 7 shows how wheat yields have improved over the years. Note the variability, particularly that caused by periodic severe drought.

Figure 6: Seeded Area of Wheat, Other Grains and Oilseeds, Prairie Provinces, 1908 - 2003



Other grains include oats, barley, rye, mixed grain and grain corn; oilseeds include canola and flax
 Source: Statistics Canada, Cansim II

Figure 7: Trends in Wheat Yields, Prairie Provinces, 1908 - 2003
 Source: Statistics Canada, Cansim II



The Prairies can be broken down into soil zones, with the most agricultural production occurring in the brown, dark brown and black soil zones. The level of precipitation and thus also soil organic matter and crop productivity is lowest in the brown soil zone area, higher in the dark brown zone and highest in the black soil zone. Most of Manitoba's crop producing area is of the black soil type, whereas Saskatchewan and Alberta have all three soil types, with the drier brown soil zone located mainly in

Southcentral and Southwestern Saskatchewan and Southeastern Alberta. Figure 8 shows 10-year average yields in each province for four periods from 1964-2003. Average yields are generally lowest in Saskatchewan, which has the largest area of brown and dark brown soil type with the lowest precipitation levels.

With increased area planted to wheat and improved yields, wheat production on the Prairies showed an increasing trend up to the early 1990s when area planted to wheat began to decline (Figure 9).

Figure 8: Ten Year Average Yields for Four Time Periods, Prairie Provinces

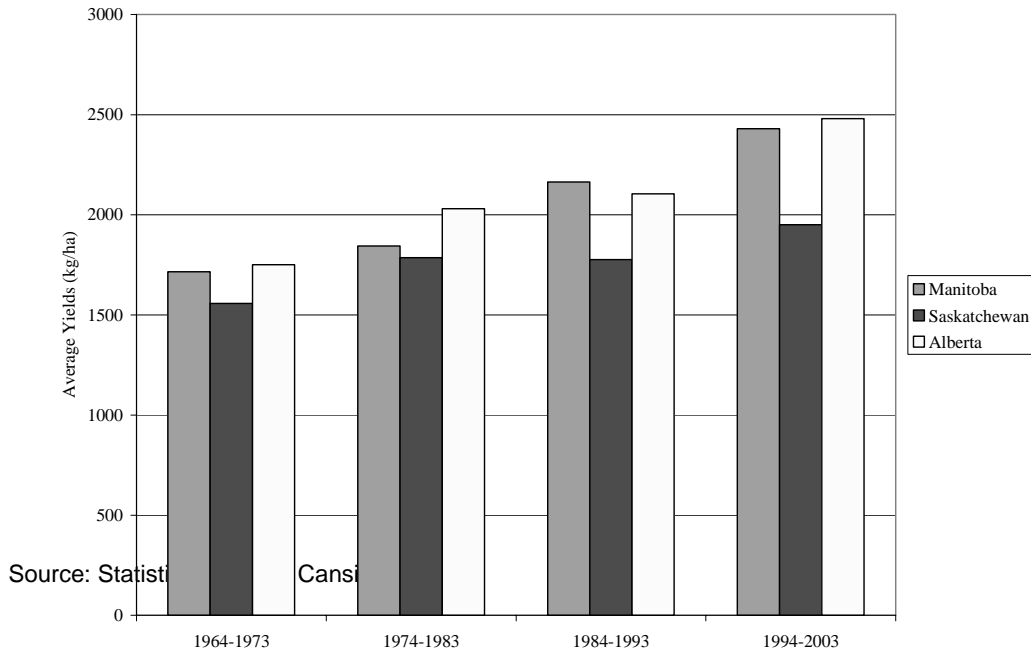
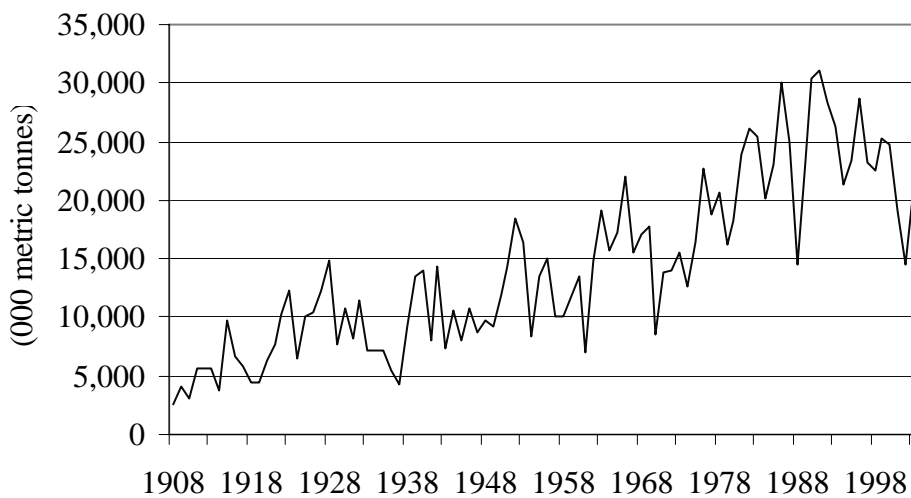


Figure 9: Annual Wheat Production, Prairie Provinces, 1908 - 2003



2. The Canadian System of Quality

Canada's wheat industry prides itself not only for producing high quality wheat, but also on its' reputation for consistency and uniformity. There are two processes which are key to Canada's quality system:

- § The variety registration system, which guides the development and licensing of new varieties.
- § The grading system, which classifies production according to strict quality criteria.

Canada's quality system was developed in the early 1900's and has been evolving since to meet changing producer and market needs. An integral part of this quality system is the participation by all members of the wheat industry in all aspects of quality control, from development and licensing of new varieties, to the establishment and maintenance of the grading system.

There are currently seven classes of Canadian wheat grown on the Prairies:

- § Canada Western Red Spring (CWRS)
- § Canada Western Amber Durum (CWAD)
- § Canada Western Extra Strong (CWES)
- § Canada Prairie Spring Red (CPSR)
- § Canada Western Red Winter (CWRW)
- § Canada Prairie Spring White (CPSW)
- § Canada Western Soft White Spring (CWSWS)

Within each class there are further divisions according to grades and protein levels. The most commonly grown class of wheat grown on the Canadian prairies is Canada Western Red Spring (CWRS) wheat, which is a hard wheat with high protein content and strong gluten. Both of these qualities make it an ideal wheat for bread production, as well as for blending with lower quality wheats to improve their baking performance. Over the 10 year period from 1994-2003, approximately 67% of the area seeded to wheat on the prairie provinces was CWRS wheat, 22% was CWAD wheat and 11% was from the other wheat classes.

CWAD wheat is a hard wheat that mills to a pale yellow or amber coloured flour or semolina and is ideal for pasta products.

A new class of wheat that is currently in the development stage, is Canada Western Hard White (CWHW) wheat. Similar to CWRS wheat in milling and baking characteristics, CWHW has a white bran that gives a higher flour extract and a lighter coloured flour that is preferred by some markets. CWHW wheat is expected to compete with Australian Prime Hard wheat and provide new market outlets for Canadian wheat. The CWB is currently offering production contracts with the purpose of producing sufficient quantities for test marketing. Production is expected to reach 1.0 million tonnes by 2005/06.

2.1. Variety Registration

Wheat varieties must be approved or licensed in Canada to qualify for top grades. The variety registration system for wheat is a rigorous process with many conditions to be met prior to licensing. The process is monitored by the Prairie Registration Recommending Committee for Grain (PRRCG), which consists of representatives of a cross section of the industry, including, for example, plant breeders, plant pathologists, chemists, marketing experts, processors, and farmers. The PRRCG makes

recommendations to the Variety Registration Office (VRO) of the Canadian Food Inspection Agency (CFIA) regarding whether to approve a variety for licensing.

New varieties must go through a number of years of variety testing and must meet strict quality definitions. CWRS and CWAD wheat varieties must be equal to or better than the variety standard with respect to quality characteristics, agronomic performance and disease resistance (a wheat reference is used for the other classes). Also, a key component is that new varieties must comply with the Kernel Visual Distinguishability (KVD) criterion. According to the KVD criterion, each class of wheat must be visually distinguishable from the other classes, such that new varieties must comply with the kernel shape, size and seed coat colour characteristics of that class. This is crucial to Canada's visually-based grading system. Canada is unique in the usage of a visually based KVD system.

This system ensures the consistency and uniformity of wheat shipments from Canada, but KVD also restricts the number of varieties that can be registered. For example, a new variety might show promising agronomic characteristics in a particular area, such as resistance to a particular disease. If this new variety was visually indistinguishable from, for example, CWRS wheat, then according to KVD criteria it would be expected to be a CWRS wheat—but, if it does not meet the other quality requirements of this wheat class, registration will be denied. If farmers grow unlicensed varieties the wheat may only be sold as feed wheat.

While this system has served Canada well, there are criticisms and pressures for change. New varieties of wheat for food, feed, and industrial needs have, at times, been restricted by KVD requirements. A second concern is the difficulty in detecting and segregating nonregistered varieties that may be grown in the US and that are visually similar to current Canadian wheat classes. This raises potential customer quality concerns if these varieties make their way into Canada's wheat market system.

The Canadian Grain Commission (CGC), a federal government department which is responsible under the Canada Grains Act for much of the quality control of Canada's grain, is currently reviewing the visually based KVD system. As an alternative to KVD, segregation based on technology and/or affidavits are under consideration. Unfortunately, technology-based, non-visual methods of segregation of wheat are not expected to be ready for widespread usage for a number of years.

To address the constraints imposed by the visual requirements of a KVD system, an alternative mandatory Variety Eligibility Declaration (VED) system was considered. Under the VED system, wheat delivered into the grain handling and transportation system would no longer be segregated by class according to visual characteristics. Instead, when farmers delivered grain to the elevator they would, by law, have to sign a written declaration stating the wheat is an approved variety, and samples would be taken. As wheat moved through the grain handling system, further samples would be taken and declarations signed. Detection of any problems at vessel loading regarding the wheat not being of the required class would result in a traceback of samples and affidavits to determine the responsible party and they would be held accountable.

After widespread consultation with farmers and industry, and further study, it was decided to not proceed with VED, as it was felt that the potential benefits of such a system did not warrant such a move. The CGC has committed to continue on with what it calls an integrated *Wheat Quality Assurance Strategy*, with three basic strategies:

- § Development of rapid, affordable variety identification technology;
- § Increased CGC monitoring of railcar and vessel shipments for nonregistered wheat varieties; and
- § Development of a proposal to restructure the western wheat classes to enable the development of non-milling wheats, such as high-yielding feed varieties.

2.2. Canada's Wheat Grading System

The Canadian Grain Commission (CGC) is responsible for the regulation of the grading and inspection system for Canada's grain. Wheat is graded and segregated according to quality standards set by the CGC. Canada's KVD system, whereby each class of wheat is visually distinct, provides the means for a rapid, efficient and effective visually based grading system. Once wheat is visually segregated by class, it is further segregated by grade. Wheat is graded by a visual evaluation for such characteristics as kernel condition, freedom from disease, and presence of foreign material. By segregating wheat by quality, Canada is able to provide its customers with a product which will perform and produce the products as expected, and will do so on a consistent basis. Customers can make decisions regarding the grade of grain purchased based on the end use requirements. Canada's quality control system also ensures uniformity, in that each shipment of a particular class and grade will be uniform.

Each class of wheat has several grades assigned to it. There are three milling grades of CWRS wheat, four of Canada Western Amber Durum (CWAD) and two each of all other classes. Anything graded below these milling grades is considered feed wheat. Wheat grades determine the end use characteristics, and enable farmers to capture prices according to the quality of wheat they produce. Further premiums can be garnered for protein content. Protein levels tend to be higher in drier years and in drier locations; thus, for example, protein levels are usually higher in the drier areas of Saskatchewan than in the more moist areas of Manitoba.

Large amounts of wheat from many farms is delivered into and blended in Canada's bulk handling system. The CGC ensures that the integrity of wheat shipments is maintained as they move from field to end user, whether the end use is a domestic flour mill or an export customer. Farmers usually will deliver wheat to a grain company owned primary elevator, who will establish the grade the wheat receives; any disputes over the grade are resolved by the CGC. Further sampling and grading of wheat is performed by CGC grain inspectors as the wheat moves from primary elevators to terminal elevators, to transfer elevators, and, when export bound, on to ships. Canadian wheat is when exported is cleaned to a high level. This cleaning is carried out terminal positions, but increasingly it is being done at high throughput primary elevators. The CGC also ensures the safety of wheat shipments to customers, monitoring for toxic substances or contaminants. A Certificate Final is issued by the CGC for each load of grain on ships, to guarantee to the customer that the load is equal to or better than the grade level they ordered. Canada is the only country to provide a Certificate Final.

3. Wheat Industry Profile

The Canadian wheat industry consists of a number of participant groups, each with their own distinct functions, contributions, as well as concerns, regarding the logistics of growing and marketing Canadian wheat. These participants include farmers, the Canadian Wheat Board, grain companies, the railways, as well as involvement by various federal government departments.

As is discussed below, numerous and profound changes have been occurring throughout the Prairie grains industry, as industry players strive for efficiency gains in a tight global economy and as they respond to major recent federal government policy changes.

3.1. The Canadian Wheat Board

The Canadian Wheat Board (CWB) is the sole marketer of Western Canadian wheat and barley for export and for human consumption domestically, representing approximately 85,000 prairie farmers, selling their wheat and barley to over 70 countries. The domestic feed grain market is not under the control of the CWB; farmers are free to sell their feed grain going to the domestic market through private trade.

As a single desk seller, the CWB goal is to capture premium prices for prairie farmers' wheat and barley, without farmers having to compete against each other. Its' mandate is to obtain the highest possible return for prairie farmers' wheat and barley, and to provide all farmers with equitable access to export markets.

One of the main features of the CWB is price pooling. Sales returns are deposited into one of four pool accounts—wheat, durum wheat, feed barley, and designated barley, and producers all receive the same return at export position for a particular grade of wheat or barley, regardless of when in the crop year they delivered their grain. This price pooling provides a degree of price stability, protecting prairie farmers from the daily ups and downs of the market.

Producers are guaranteed an initial price for their wheat at the beginning of the crop year, which runs from August 1 to July 31, and receive this initial payment as they deliver their grain through the year. The initial payment is 75% of what the CWB estimates the wheat and barley will sell for over the crop year, based on world prices. Adjustment payments may be made through the year. If there is a surplus in the pool accounts at the end of the year after all marketing costs have been deducted, producers receive a final payment. Any shortfalls in the pool accounts (i.e. if the CWB pays out more through the initial and any adjustment payments than what they receive for selling the year's wheat and barley crop) are guaranteed by the federal government.

The CWB makes use of delivery contracts with farmers for delivery of wheat into the grain handling system. The CWB calls in grain from the country based on its knowledge of what grades and protein levels are available and what is required for its sales commitments.

The CWB begins developing its marketing plan approximately five to six months before the start of a given crop year, utilizing a wide variety of market intelligence information gathered from all departments of the CWB. The majority of sales are made through contracts negotiated directly with the buyer on an annual basis. Some sales are also made through accredited exporters, and some are made as long-term contracts.

Market development is an important component of the CWB's overall marketing plan. The CWB works closely with the Canadian International Grains Institute (CIGI), which provides services and programs for promoting Canada's grains, oilseeds and pulse crops to the international community.

In recent years, there has been a great deal of discussion and debate in Canada regarding the CWB and its monopoly position for selling prairie wheat and barley. A strong majority of farmers support continuation of the CWB single desk system. However, some farmers would prefer to market their wheat and barley on the open market as they do for other crops. In particular, a number of producers want to have the ability to sell their wheat into the U.S. where spot U.S. prices can be higher at times than the expected CWB pool returns.

Major changes have been made in recent years to both structure and pricing. This includes a number of pricing alternatives and pool cash-out options. The biggest change, however, was in 1998 when the old governance structure of appointed Commissioners was replaced with a Board of Directors of 10 farmer elected directors and five federal government appointed directors (with one of the latter five appointed as the President and CEO). The current structure was brought about by pressures that the CWB be more accountable to the farmers it represents and less under the control of the federal government. This change has been popular with farmers. The CWB is also under constant scrutiny and challenge by the United States, with charges that Canadian wheat and durum is unfairly subsidized and that the CWB dumps wheat and durum into the US market at below market prices

3.2. The Railways

Canada is very dependent on railway transportation of wheat. To reach the ocean ports grain must be transported by rail and/or inland waterway up to 3000 kilometers. There are two major railways that transport Prairie wheat the Canadian National (CN) Railway and Canadian Pacific (CP) Railway. There are also several short line railways that mainly transport grain from areas not serviced by the mainlines to the mainlines.

Several major rail-related regulatory and policy changes have occurred over the past ten years that have had major impacts on farmers and have prompted changes throughout the grain handling and transportation system.

These major changes include:

§ Elimination in 1995 of the grain transportation subsidy, which resulted in farmers paying the total cost of rail transportation for their grain, and, depending on their location, added considerably to their total costs.

§ Replacement in 2000 of the rate cap that railways were allowed to charge for grain transportation to a revenue cap, which allowed the railways more flexibility in setting rates.

§ The Canada Transportation Act of 1996 that gave the railways more flexibility in abandonment of rail lines, enabling them to make changes to rail lines that were used mainly for grain transportation, but which the railways did not consider profitable.

Although the railways had been making changes to their operations to improve efficiencies even prior to these regulatory changes, the changes assisted in their own rationalization process. One major move made by the railways was to provide incentives to grain companies to load grain in multi-car blocks of from 50 to 100 cars, and 100 to 110 cars. This, in turn, has been a major incentive for grain companies to construct large high throughput elevators.

Regulatory changes enabled the railways to rationalize their rail lines. Total rail lines decreased from 20,758 miles in 1994 to 18,908 miles in 2003, a decrease of 9%. A large majority of the abandoned lines were grain dependent branch lines. These grain dependent branch lines declined by a total of 25% between 1994 and 2003.

Railways deliver and pick-up rail cars from the grain elevators, and assemble and sort them so that the correct loads arrive at the ports. This is a somewhat complicated process, with the railways allocating cars to customers (i.e. the CWB and grain companies) according to customer requirements for shipping to the ports and car availability. The method of car allocation has also recently been changed, with the CWB much more involved in car allocation in the past than it is today -the railways now have more control of how they allocate their rail cars between CWB grains, non-CWB grains and other shipments. The CWB

negotiates car capacity with the railways to ensure adequate rail cars to move wheat to either port or domestic position to meet sales requirements. The cars that are allotted for CWB grains are allocated by the CWB to grain handling agents (grain companies) based on tendering and car awards.

3.3. The Grain Companies

The main role of grain companies in the Prairie wheat industry is through their offerings of supplies and services to farmers, including input supplies such as pesticides and fertilizers, and their grain handling services. The CWB does not own any grain handling facilities—it enters into grain handling agreements with grain companies. The grain companies act as agents for the CWB, paying the initial payment when they accept farmers' wheat and are then reimbursed by the CWB when the grain reaches port position. Grain companies also purchase other non-CWB grains from farmers. Primary elevators that farmers deliver their grain to must be licensed through the Canadian Grain Commission. When farmers deliver their wheat to an elevator, the manager grades the grain and the farmer receives a price based on the grade and protein level, with deductions taken for dockage and handling and transportation charges.

At one time the dominant grain companies on the Prairies were the four farmer owned co-operatives, the Alberta Wheat Pool (AWP), the Saskatchewan Wheat Pool (SWP), Manitoba Pool Elevators, and United Grain Growers (UGG). These co-operatives were completely farmer directed, providing grain handling supplies and services to its farmers and also serving as a farm policy instrument. They represented, between them, tens of thousands of prairie farmers, playing an important role in the rural community. A familiar site on the prairie landscape was a large wooden grain elevator, with the name of one of these co-operatives blazoned across the top, depending on which province one was in. Other private and public grain companies operated on the Prairies, however, the farmer owned co-operatives together handled two-thirds of the prairie wheat crop.

Substantial changes have occurred since the early 1990s in the grain handling industry. Large multinationals have established their own facilities on the Prairies. And the co-operatives have undergone substantial changes, in their attempts to respond to changing economic conditions and in order to compete with each other, as well as with other private and public grain companies. First, SWP became a publicly traded company in the mid-1990s, in attempts to raise capital for its planned expansions. Then Manitoba Pool and AWP merged in 1998 to become Agricore, which initially remained a farmer co-operative. This changed, however, when Agricore then merged with United Grain Growers (UGG) in late 2001, in what some considered as a takeover by UGG. The new company, Agricore United, now the largest grain handling company on the Prairies, is no longer a farmer owned co-operative. UGG, which itself had once also been a co-operative but became a publicly traded company in 1993, had financial backing from the multinational Archer Daniels Midland (ADM) when it partnered with ADM, giving ADM a major stake in UGG. Other grain companies operating on the Prairies include a mix of public and private companies.

Canada has a constrained country handling system with a capacity of approximately 5.0 million tonnes to handle over 30 million tonnes of annual grain production. This means our handling system must turn over about six times a year. The configuration of this system has undergone major changes as well. There has been the entry of new multinational companies and the collapse of the historic farmer cooperatives. As well, the numerous small wooden elevators have given way to a few large concrete inland elevators. The number of elevators in Western Canada dropped from 1,539 in 1991/92 to 382 in 2003/04 (a 75% reduction), while total capacity dropped from close to 7.0 million tonnes to close to 5.0 million tonnes (a 28% reduction).

This major rationalization was spurred on by a number of factors, including the grain companies' needs for efficiencies, as well as a need to compete with new players moving into the Prairies, and the large number of old wooden elevators that were in need of replacement. A major factor has been to take

advantage of incentives offered by the railways for loading grain in multi-car blocks—the smaller elevators can not service multi-car train runs.

3.4. The Farmers

According to the 2001 Census of Agriculture, Canada has approximately 73,000 farms that grow wheat, of which 81%, or 58,620 farms, are in the prairie provinces, and 15% in Ontario. Wheat is an important component of prairie farmers' crop mixes, and is rotated with oilseeds and other grains, with the exact rotation varying with location and moisture conditions, as well as with demand and prices of wheat and competing crops. Summerfallow as a rotation component has declined considerably with the adoption of minimum tillage, and is used mainly in the drier areas of Saskatchewan and parts of Alberta.

From Table 5, total farm cash receipts from wheat on the Prairies averaged \$3.4 billion for the ten year period from 1993 to 2002, accounting for the greatest proportion of crop receipts, or approximately 45% of cash receipts from all crops. Canola accounted for the next highest proportion of crop receipts at 24%. Wheat accounted for approximately 22% of total farm cash receipts on the Prairies during this period, while crops in total represented about 50%, cattle/calves 27% and hogs 7%. At one time wheat was the largest single component of total farm cash receipts but has been recently overtaken by cattle.

Table 5: Farm Cash Receipts, Prairie Provinces, 1993-2002 10-Year Average

Farm Cash Receipts	Receipts (\$billion)	% of Total Crop Receipts	% of Total Farm Receipts
Wheat Receipts	3.404	44.6	22.3
Canola Receipts	1.836	24.1	12.0
All Crops Receipts	7.624	100.0	49.9
Cattle/Calves Receipts	4.125		27.0
Hog Receipts	1.079		7.1
Total Farm Cash Receipts	\$15.274		100.0

Source: Statistics Canada, Cansim II

The loss of the historic Crow rate benefit (rail transportation subsidy) had a major impact on farmers' rail transportation costs. For example, wheat freight rates from a mid-Prairie point to export position rose from \$14.72/tonne in 1994/95 to \$33.43/tonne in 2002/03, a 127% increase. This, in turn, has prompted farmers to make changes in their own crop mixes, moving to more low-volume, high-value crops, including more specialty crops, and to increase livestock production and thus grow more feed grains that do not require off-Prairie rail transportation. As a result, wheat area has been declining since the early 1990s, as was indicated in Figure 6. Low world wheat prices, particularly relative to special crops, canola and livestock prices, contributed to this trend.

The rationalization that has been occurring throughout the grain handling and transportation system has also had major impact on producers. Fewer elevators situated further apart has required farmers to invest in larger, better trucks for transporting, as well as in more on-farm storage facilities. Farmers have been increasing the number and size of storage bins, as well as improving the types of bins, such as those with aeration capabilities. Again, as with other changes in the industry, this has been attributed to a number of factors, including the elevator rationalization, a greater variety of crops grown requiring more bins for segregating, larger farms, as well as less summerfallowing on the Prairies, meaning farmers have more of their farmland in crops and thus more grain to store.

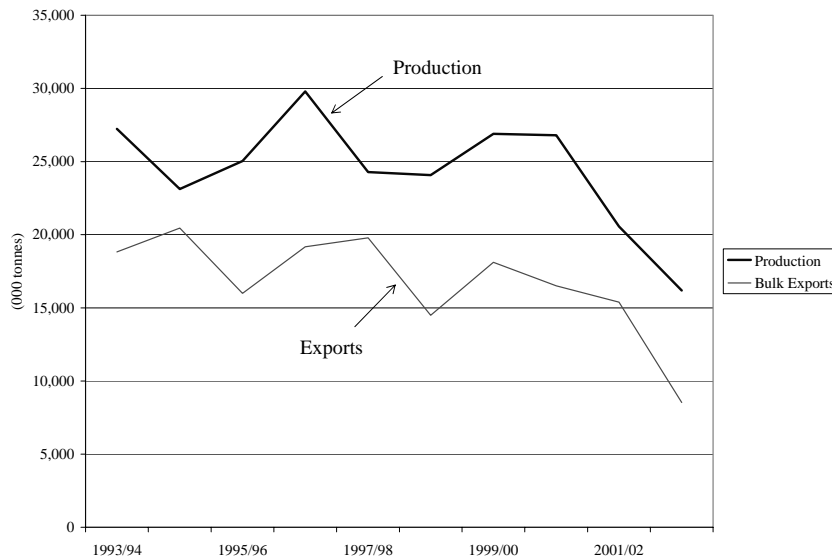
3.5. Markets for Canadian Wheat

Domestic wheat usage is for feed grains and seed usage, and for processing into flour for use into flour products. Approximately 70% of Canada's wheat production is exported, mostly as bulk wheat, with annual flour exports of only about 240,000 tonnes. During the most recent 10 year period from 1993/94 to 2002/03, the proportion of Canada's wheat production exported ranged from 53% to 88% (Figure 10).

Canada exports wheat to a number of countries, we are not dependent on any one market for our wheat, as indicated by Figure 11, which gives the major export destinations for non-durum wheat over the 1993/94 – 2002/03 periods. The Canadian Wheat Board will seek out markets wherever opportunities exist, depending on the changing needs of wheat importing countries. Over the past ten years our largest customers for wheat (excluding durum), have been, on average, China, Iran, Japan and the United States (Figure 12).

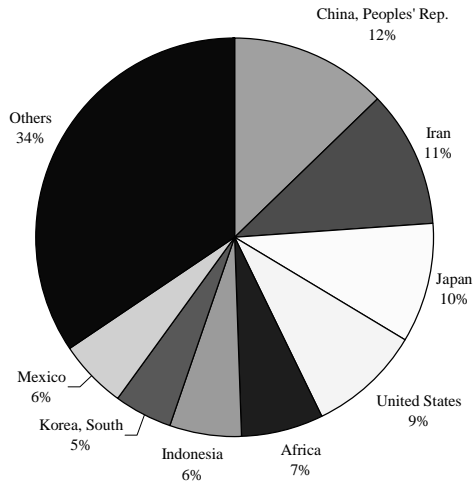
Exports to China have fallen dramatically through the past 10 years, however, as they gained more self-sufficiency in wheat production. Exports to Iran have fluctuated widely, while a fairly consistent supply of wheat has been exported to Japan. The US has become an important market for Canadian wheat since the enactment of the North American Free Trade Agreement (NAFTA). From Figure 13, the major export destinations for non-durum wheat for the 2002/03 year were Japan (17% of wheat exports), followed by Mexico (11% of exports), indicating how export destinations have changed over the 10 year period up to the present.

Figure 10: Production and Bulk Exports of All Canadian Wheat
1993/94-2002/03



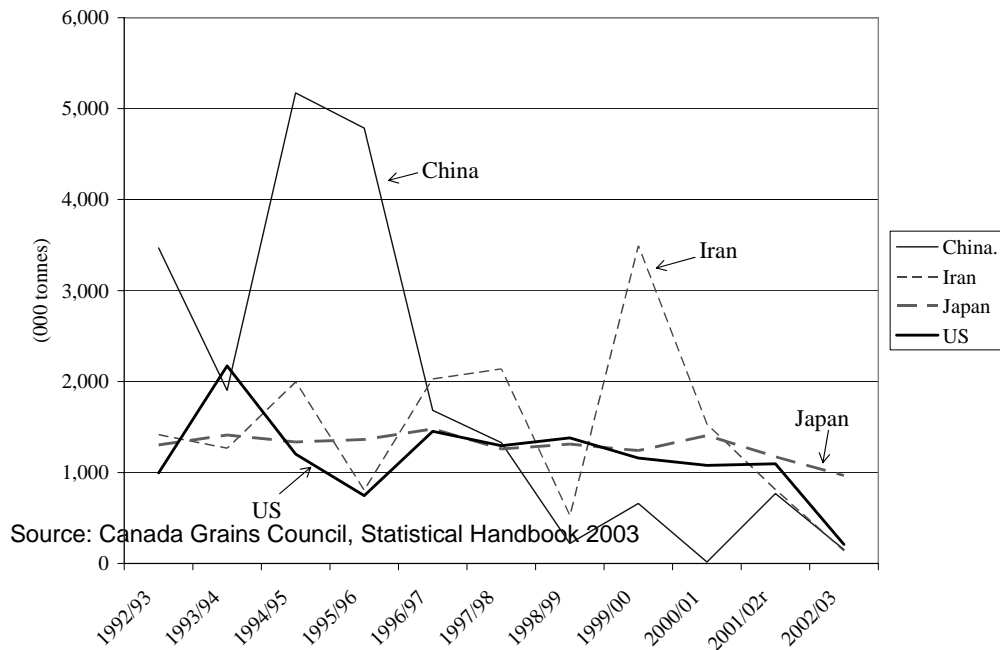
Source: Canada Grains Council, Statistical Handbook 2003

Figure 11: Major Destinations for Canada's Wheat Exports (excluding durum), 1993/94 – 2002/03 Average



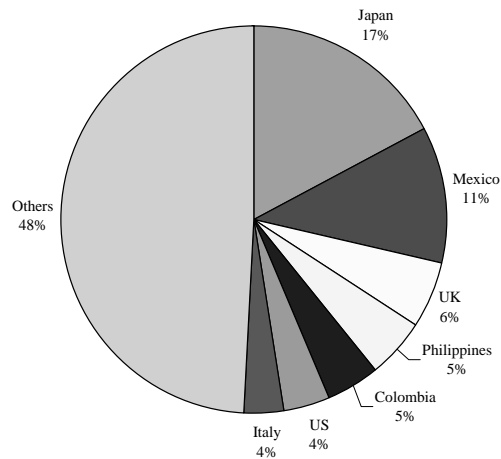
Source: Canada Grains Council, Statistical Handbook 2003

Figure 12: Canada's Wheat Exports (Excluding Durum) to Top Four Destinations, 1992/93 – 2002/03



Source: Canada Grains Council, Statistical Handbook 2003

Figure 13: Major Destinations for Canada's Wheat Exports (excluding durum) 2002/03

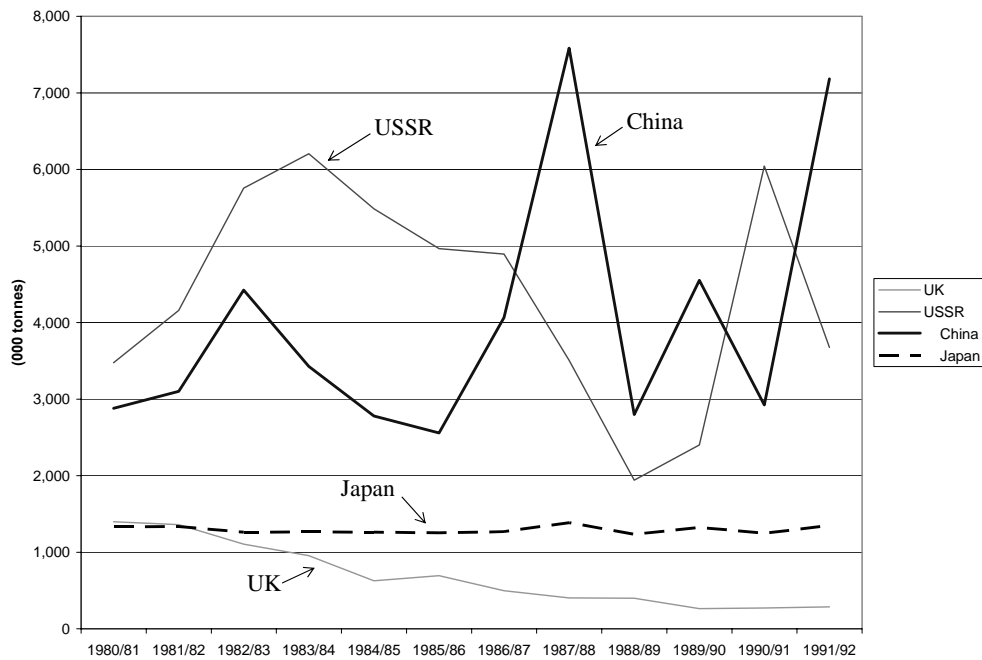


Source: Canada Grains Council, Statistical Handbook 2003

China, the former Soviet Union (FSU) and the United Kingdom have all been important wheat export destinations in the past (Figure 14). During the 1970's the UK accounted for about 10% of Canada's wheat exports, but this dropped from the 1980s on, such that the UK now accounts for only about 2% of exports. A large proportion of Canada's wheat exports were destined for China and the FSU in the past -together accounting for 46% to 56% of Canada's non-durum wheat exports during the 1980s. The last large sale of wheat to the FSU was in 1992/93 at 1.8 million tonnes.

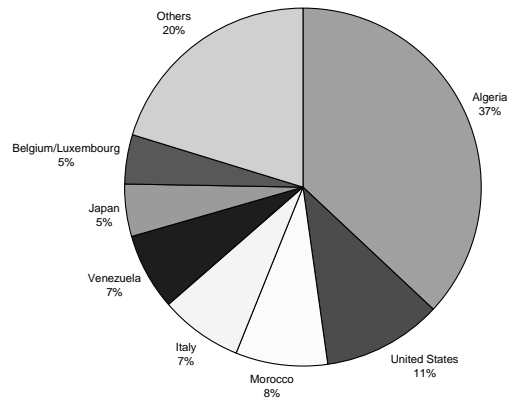
The most important destination for durum wheat over the past ten years has been Algeria, accounting for an average of 37% of durum exports during the 1993/94 – 2002/03 period (Figure 15). Other important markets include the US, Morocco, Italy and Venezuela, each accounting for an average of from 7% to 11% of Canada's durum exports. As can be seen from all of these graphs, Canada exported smaller amounts of wheat and durum wheat to a number of other countries (the Other category), reflecting the wide market base for our wheat.

Figure 14: Canada's Wheat Exports (Excluding Durum) to Top Four Destinations, 1980/81 – 1991/92



Source: Statistics Canada, CANSIM II

Figure 15: Major Destinations for Canada's Durum Wheat Exports, 1993/94 – 2002/03 Average



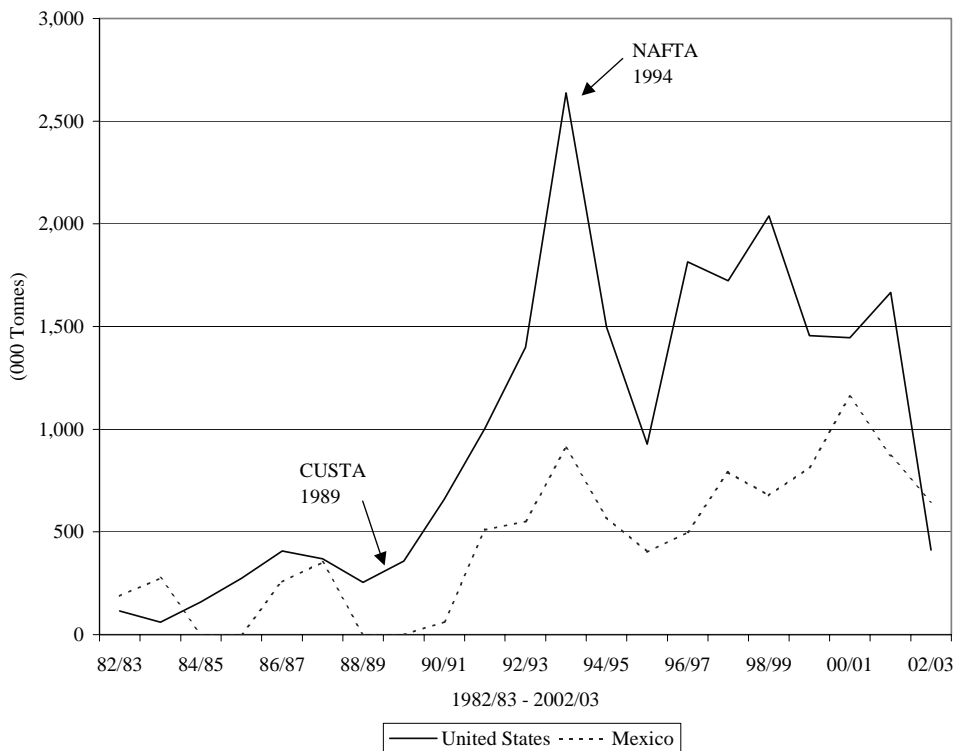
Source: Canada Grains Council, Statistical Handbook 2003

North American Free Trade Agreement

The Canada – United States Trade Agreement (CUSTA) came into effect in 1989 and was superseded and extended to Mexico with the North American Free Trade Agreement (NAFTA), which came into effect January 1, 1994. NAFTA was to eliminate trade barriers between the three countries, and promote cross-border movement of goods and services as well as promote conditions of fair competition.

Since the implementation of the CUSTA/NAFTA, trade between all three countries has increased. Prior to 1989, trade barriers prevented any significant wheat trade between Canada and the US. Canada made use of import licenses to restrict wheat imports from the US, and the US made use of high import tariffs on Canadian wheat. Since 1989, and particularly since 1994 and NAFTA, Canadian wheat exports to the US have increased substantially, although they have also varied widely on a year-to-year basis (Figure 16). Wheat exports to Mexico have also increased since NAFTA. The increased exports cannot be solely attributed to NAFTA, as other factors have come into play, a major one being the lower valued Canadian dollar, which has shown a downward trend since the early 1990s and only just recently strengthened relative to the US dollar. However, it was through NAFTA that an increase in exports was achievable.

Figure 16: All Wheat Exports to the US and Mexico



Source: Canadian Grains Council, Statistical Handbook, Various Years

But also since the implementation of CUSTA/NAFTA, a number of complaints of dumping and unfair subsidies have been made by the US against Canada's wheat trading practices. Nine such past charges were unsuccessful, but the latest charges, through which the US Department of Commerce (DOC) imposed combined countervailing and dumping tariffs of 14.15% for Canadian hard red spring wheat and 13.55% for Canadian durum wheat, have resulted in the US's International Trade Commission (ITC) to rule in a split two-to-two vote that Canadian hard red spring wheat imports cause injury to US farmers.

Durum wheat imports were not found to cause injury and tariffs against durum wheat were removed. The CWB, along with the federal government and the Alberta and Saskatchewan provincial governments have filed a joint appeal to a NAFTA panel regarding the DOC finding that hard red spring wheat is unfairly subsidized. Plus, the CWB has filed an appeal to a NAFTA panel regarding the ITC's finding of injury from Canadian hard red spring wheat exports to the US.

4. Genetically Modified Wheat

Currently, no genetically modified (GM) wheat varieties have been approved or registered for commercial production in Canada. Monsanto has applied for approval of its Roundup Ready wheat, a variety that is tolerant to the glyphosate herbicide Roundup. Although Monsanto's Roundup Ready canola was rapidly adopted by Prairie farmers, there is strong opposition by farmers, farm groups, millers, consumers and the Canadian Wheat Board regarding GM wheat. A major concern is with regards to consumer reluctance to accept GM wheat. Whereas GM canola is used to produce vegetable oils, from which the genetically modified proteins have been removed, these proteins would remain in the flour from GM wheat. According to the CWB, customers representing 87% of wheat sales from the CWB require guarantees that the wheat is not GM wheat.

Monsanto's application for approval has prompted a number of these groups, including the CWB, to form a coalition and lobby the federal government to include a cost-benefit analysis as part of the variety registration and approval process, which is currently science-based.

While a number of those opposed to GM wheat are not opposed to biotechnology and the potential benefits it offers to consumers and producers, the concerns are with market reluctance to accept GM wheat and the attendant problems this creates. Canada's handling and transportation system does not yet have the capability to effectively segregate GM wheat from non-GM wheat, nor do we, or any country, have suitable detection technology available. Even if the segregation and detection issues could be resolved, there is concern that Canada would still lose customers to non-GM wheat growing countries. Farmers are also concerned about the potential for contamination of non-GM wheat fields from neighbouring GM wheat fields.

5. Wheat Situation and Outlook

5.1. 2003/04 Situation

Canada's 2003/04 wheat yields increased considerably from the drought reduced yields of the previous two years, to bring production for all wheat back up to 23.6 million tonnes, compared to 16.2 million tonnes in 2002/03 (Table 6) and 20.6 million tonnes in 2001/02. Wheat yields and production were, however, still affected by drought in 2003/04 in Saskatchewan, Canada's largest wheat producing province.

Wheat quality was above average in 2003/04, with above normal protein levels. Export levels increased for both durum and non-durum wheat above drought reduced levels in 2002/03. Total 2003/04 wheat exports are forecast at 15.8 million tonnes.

Table 6: Wheat Production and Exports, 2002/03 to 2004/05

Crop Year	Area (000 ha)	Yield (t/ha)	Production (000 tonnes)	Exports (000 tonnes)
2002/03	8,836	1.83	16,198	9,191
2003/04f	10,467	2.25	23,552	15,800
2004/05f	10,125	2.32	23,530	14,900

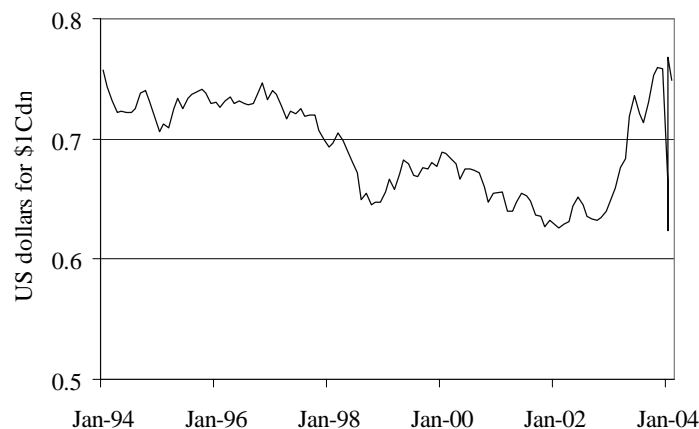
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Source: Agriculture and Agri-Food Canada

Because close to 70% of Canada's wheat production is exported, the value of the Canadian dollar has a major impact on farmers' realized price, since export sales are valued in US dollars. Canada's dollar appreciated rapidly relative to the US dollar during 2003 (Figure 17). To give an example of the impact this has, if a buyer purchased our hard red spring wheat for \$147US per tonne when our dollar was valued at \$0.63US (which was as recently as October, 2002) this would have equated to \$233Cdn. per tonne. Currently, with our dollar valued at approximately \$0.75US, this same sale price equates to \$196Cdn per tonne, a difference of \$37Cdn per tonne, representing a 16% reduction in realized price due to the exchange rate.

The increasing value of the Canadian dollar has had a significant negative impact on not only wheat returns, but on all export based commodities produced in Canada. This, along with the impact of successive drought in parts of Western Canada, as well as the impact that one single case of Bovine Spongiform Encephalopathy (BSE) has had on Canada's cattle industry, have combined to produce, for the first time in history, a negative realized net farm income (includes depreciation charges) at the national level of \$-13.4 million for 2003. The greatest devastation occurred in Saskatchewan and Alberta with realized net incomes of \$-465.3 million and \$-229.6 million, respectively.

Figure 17: Value of the Canadian Dollar Relative to US Dollar, Jan/94-Feb/04



Source: Bank o

5.2. 2004/05 Situation and Outlook

Canadian farmers make their seeding decisions based on a number of factors, with several of the most important being current and projected prices of the various crops, operating costs, soil moisture conditions, predicted weather conditions, and anticipated pest and disease problems. Farmers use the

information available to them to make crop mix and seeding decisions in order to realize the greatest profit on a given piece of land, taking into consideration their crop rotation requirements.

Projections for 2004/05 indicate lower non-durum wheat prices due to larger global wheat production and competition from the major exporters along with large export surpluses in Russia, Ukraine, Kazakhstan and India. However, relatively tight carry-in stocks for some major exporters as well as continued drought conditions that exist in parts of Canada, the US and Australia could produce volatile world wheat prices depending on weather conditions. Canada's wheat carry-out stocks were at historically low levels in 2003/04 and are projected to be the case in 2004/05.

The expectations for lower world wheat prices in 2004/05 combined with high oilseed prices relative to wheat is expected to shift area in Western Canada by a small amount from wheat to oilseeds, mainly canola. Canola area is expected to increase by 9% in Canada for 2004/05. Although wheat must compete with higher priced canola for area, canola area is limited by soil moisture conditions (the small seed of canola is planted shallow relative to wheat and is more susceptible to dry conditions and wind) and crop rotation restrictions (due to disease susceptibility it is recommended that canola be seeded on the same plot of land only once every four years). Because of this, spring wheat area is still expected to account for over 27% of seeded crop area.

Agriculture and Agri-Food Canada forecasts that Canadian wheat (excluding durum) production will decrease slightly in 2004/05 by 3% to 18.6 million tonnes, from the 19.3 million tonnes produced in 2003/04. Yields are expected to be similar to the year previous, but area is expected to decline slightly to 7.6 million hectares versus 8.0 million hectares in 2003/04. In particular, Ontario winter wheat production is expected to decrease by 27% due to lower seeded area. (Ontario wheat production, however, on average accounts for less than 5% of all Canadian wheat production.) Domestic use is expected to increase by 4%, mainly due to increased feed wheat, but exports are expected to decrease by 6%.

Durum wheat area is expected to increase slightly in 2004/05 to close to 2.5 million hectares, due to higher prices for durum compared with wheat, and production is forecast to rise to 5.0 million tonnes (15% increase) due mainly to increased yields. The price premium for durum wheat, however, has been falling. Durum exports are expected to decrease slightly by about 3%, as a result of increased production in EU and an expected above average crop in North Africa.

Area seeded and yield forecasts are made based on the assumption of normal precipitation levels, and thus all forecasts will be tempered by soil moisture conditions at time of seeding. Soil moisture conditions across much of the Prairies have not recovered from droughts in 2001 and 2002. Alberta and Saskatchewan were most affected by drought. Currently, precipitation levels for the 2003/04 crop year are below normal for about two thirds of Western Canada. Environment Canada forecasts spring precipitation levels of below normal in Alberta, normal for Saskatchewan and above normal for Manitoba and normal summer growing season precipitation levels for most of the southern Prairies.

The removal of the 13.55% tariff on durum wheat by the US's International Trade Commission (ITC) is good news for Canada's durum market, but the continued US tariff on spring wheat will hamper that market. Canada is trying to resolve this issue through an appeal of the decision to a NAFTA panel, but this is a lengthy and expensive process. US millers and pasta producers have testified to the ITC that Canada's wheat prices are no lower than that of the US's and that they buy Canadian wheat for its' quality. It remains to be seen whether they will be willing to pay a 14.15% tariff for that quality.

Two factors which will continue to have a significant impact on the realized price that farmers receive for their grain are the strong Canadian dollar relative to the US dollar and high ocean freight rates for bulk commodities.

6. Summary

In summary, Canada has been a major exporter of wheat this past century. We have been a strong competitor to our friendly competitor nations like Argentina. In the past decade, there has been a shift in our country from wheat to oilseeds and other crops. As an important competitor to Argentina, I am sure several important questions must come to mind. These include:

- Will wheat area in Canada continue to decrease?
- Will wheat production continue to decrease?
- Will Canada continue its focus on quality?
- Will variety registration and KVD continue?
- Will USA tariffs continue to block Canadian access to the USA market?
- Will Canada keep the CWB single desk selling system?
- Will GMO wheat varieties be allowed in Canada?

At current prices, wheat area in Canada will not recover to earlier levels. However, area has likely stabilized and with increases in yield, trend production may increase slightly. Canada will continue its focus on consistency and high intrinsic quality but the system will variety registration system will adapt in future years to accommodate more low quality high yielding wheat to accommodate the feed and ethanol markets. The debate over GMO wheat is likely to continue for some time to come; however, GMO wheat will likely not be registered in the foreseeable future. As for the CWB single desk selling system, the debates are likely to continue but the CWB system is also likely to continue and thrive in future years. In short, Canada like Argentina will have its share of challenges in future years. However, as for the past 100 years, Canada will continue to be a strong and worthy competitor to Argentina in the wheat market.