Transporting Peace Country Grains to Export Position

Conducted on behalf of

Branding the Peace Country Association

October 2008

Aylward Research Services

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Section 1 - Introduction

1.1 Purpose of the Report:

This report provides information on the production, transportation, and export of **food grains** - wheat, canola, flax, oats, rye, barley, and field peas - grown in Canada's Peace Country. The information within this report is intended to assist Branding the Peace Country Association in its advocacy on behalf of the Peace Country for equitable, affordable, and efficient transportation services in order to compete on the international markets.

1.2 Methodology:

The information presented in this report was collected through a variety of sources. To understand the development of the issue and its relation to the Peace Country, historical (10 years +) documents were reviewed. Statistics were garnered from grain producing Associations and international, national, provincial agricultural reports. Local statistics were acquired through municipal, regional offices and/or by special request to Statistics Canada. All resources accessed for this report are listed in Section 5 of this report.

1.3 Description of Canada Peace Country:

Canada's Peace Country is located across Northeast British Columbia and Northwest Alberta. The Peace Country is nestled in a valley on the northern foothills of the Rocky Mountains that is blessed with the unique growing combination of a northern climate, fertile soils, and a watershed system fed by glacial run offs. Though Canada's Peace Country has only 5% of the total agricultural land in Canada, being the most northern agricultural region in North America, the region has become internationally renowned for the superiority of the products grown in the Region.

The Peace Country consists of four Statistics Canada Census Divisions - #55 (BC), #17 (AB), #18 (AB), and #19 (AB) covering 365,000 km^2 and is home to over 250,000 people.[3] The Peace Country represents a significant regional economy that is contained within Northwest Alberta and Northeast British Columbia. Although there has been no

segmentation and analysis of the Peace Country as an economic region, the economic assessments of Northern Alberta and Northeast British Columbia's contributions to their respective provincial economies tell an impressive story.

The significant and growing economic contribution of Northern Alberta is clearly demonstrated in the report; *Analysis of the Economic Contribution of the Northern Alberta Development Council Region to Alberta and Canada.* Northern Alberta has 100% of Alberta's mined oil sands development and produces 58% of the oil and 36% of the natural gas in Alberta. In 2005, the region's mining and energy sector contributed $27.4 billion to Alberta's international exports. Ninety percent (90%) of the province's potentially productive forests are in Northern Alberta. In 2005, the NADC Region exported $2.5 billion of forest products, accounting for 85% of the province's total paper and pulp international exports and 78% of Alberta's wood products. Also, Northern Alberta is the most northern grain producing region in the world and accounts for $372 million of Alberta's international agricultural exports, including $352 million, or 22% of provincial international crop exports, and $20 million or 5% of international livestock exports.

Equally impressive contributions have been reported for the Peace Country region in British Columbia. *Resource Dependency* research conducted by the Urban Futures Institute, reported that the Northeast region of British Columbia was the single largest per capita regional contributor to the province's economic base, at $73,492 in 2001. The Northeast region represents only 1.6% of BC's population but 7.1% of its economic base. Export of fuels, oils and electricity products account for 47% of BC's total energy related exports valued at $3.1 billion. Forestry exports were 20% of BC's total forest products.

Unfortunately, the above impressive contributions from the Peace Country region are largely bulk shipments of raw ingredients. Whether it be energy, forestry or agriculture, the value-added "direct to the consumer" profit for the vast majority of the raw resources in the Peace Country is captured by regions (largely international) that have invested in the processing, packaging, distributing, and ultimately retailing to the consumer.

1.4 Knowledge Definitions:

1 The Canadian Grain Commission is a federal government agency that operates under the authority of the *Canada Grain Act 1912 (*currently under review – Bill C-39). The Commission reports to Parliament through the Minister of Agriculture and Agri-Food Canada. The Canadian Grain Commission (CGC) establishes and maintains quality standards for 21 food grains, according to the *Canada Grain Regulations.* The 21 food grains monitored by the Canadian Grain Commission are a combination of cereals, oilseeds or pulse crops. Of relevance to the Peace Country are wheat, canola, flax, oats, rye, barley, and field peas.

2) Grain Elevators: In order to handle food grains in Canada, receiving facilities (i.e. ... grain elevators) and dealers must be licensed by the Canadian Grain Commission. As of Dec 2007 there were 399 licensed elevators across Canada. Below is a descriptive of the classification of grain elevators in Canada.

> 336 Primary Elevators: These are the farm gate to local delivery point receivers. Deliveries are by truck. In 2006 there were 336 primary elevators in Canada. Their principal use is the receiving of grain directly from producers for either or both storage/ cleaning and export out of the local region. There are 24 communities that provide primary elevators in the Peace Country. These communities are: Albright, Dawson Creek, Dimsdale, Donnelly, Falher, Fort St. John, Girouxville, Grande Prairie, Grimshaw, Hawk Hills, High Level, High Prairie, Hythe, Judah, Keg River, Kinuso, Manning, Nampa, Peace River, Rycroft, Sexsmith, Spirit River, Wembley, and Woking.
>
> > High-throughput Primary Elevator – capable of cleaning and segregating up to 15,000 tonnes of grain. Evolving since the 1990's – regional high through-put elevators have been replacing smaller community grain elevators.
>
> 34 Process Elevators: Receive grains directly from the farm or dealers. Process elevators manufacture or process the grain into "next level" buyer products (i.e... vatted canola oil, barley malts, retail products, etc ...). There are no process elevators in the Peace Country. Alberta has 10 process elevators, British Columbia has 1, Saskatchewan has 13, and Ontario has 9. Process elevators are owned and operated by private companies such as Bunge Canada, Canbra Foods, Rahr Malting, Smuckers of Canada, etc...

13 Transfer Elevators: Principal use is the transfer of raw grain that has been officially inspected and weighed at other elevators (i.e... primary elevators). Transfer elevators are typically used for pre-export positioning as grain volumes from different regions are bulked for export; typically trans-continental North America. There are no transfer elevators in the Peace Country. Ontario has six transfer elevators, Quebec has six and Halifax has one.

16 Terminal Elevators– The principal use is receiving of grain upon or after the official inspection, weighing and categorization of the grains. Grains are cleaned and stored in preparation for export. There are no terminal elevators in the Peace Country. Ontario has 8 terminal elevators, Manitoba has 1, and British Columbia has 7.

2) Canadian Wheat Board (CWB) - The Canadian Wheat Board (CWB) is a farmer-controlled (as of 1999) organization that markets wheat and barley grown by western Canadian producers. Based in Winnipeg, Manitoba, the CWB is the largest single seller of wheat and barley in the world, holding more than 20 per cent of the international market. As one of Canada's biggest exporters, the Winnipeg-based organization sells grain to over 70 countries and returns all sales revenue, less marketing costs, to farmers.

3) Measurements: Imperial or metric units were used across the various national and international sources. Unless otherwise noted, data presented in this report has been converted to metric. The metric tonne is equal to 1,000 kilograms, or 2205lbs.

1.5 Grain Transportation Challenges:

1.5.1) Grain Elevators: Perhaps the most dramatic change in Canadian agriculture over the last three decades has been the closing of community grain elevators. Now referred to as primary elevators, in the 1930's thousands of these elevators were built across western Canada to facilitate the transportation of grain to domestic and international markets. As delivery from the farm to the elevator was by horse-drawn wagons, the elevators had to be within a day's journey - a distance of about 15 km. In 1933 there were 5,474 primary elevators across the Prairies. In 2007 there were 336. Consolidation and efficiency on the receiving end (high-throughput elevators and shareholder owned privatized rail services) meant the farmer had to travel farther to deliver grain. Figure 1.1 shows the dramatic decline in community elevators across Canada since 1981.

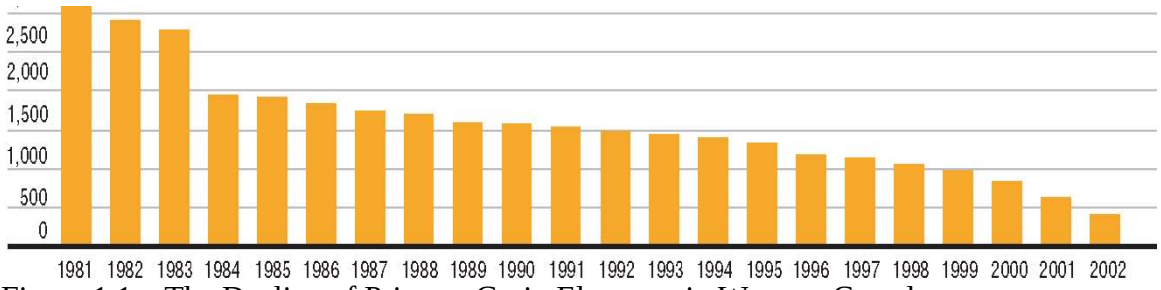


Figure 1.1 – The Decline of Primary Grain Elevators in Western Canada.

Source: Canadian Agriculture at a Glance. Statistics Canada, Catalogue no. 96-325-XPB

1.5. 2) Rail Line Abandonment: The process of abandoning rail branch lines began in Canada almost as soon as the last line was completed. By the early 1960s, Canadian National (CN) and Canadian Pacific (CP) railways were claiming that the operation of many grain-dependent branch lines was a money-losing proposition; under the transportation legislation of that time, the federal government would provide funding to subsidize these losses. Concerns over branch line abandonment caused the federal government to commission a review. In 1975 which recommended the closure of some branch lines and the inclusion of others in a permanent network. However, in the mid-1990s the railways were still unable to abandon all of the highest-cost branch lines. The federal government commissioned another review in 1995 which gave permission to the railways to abandon all 525 miles (845 km) of high-cost branch lines. The Canada Transportation Act of 1996 streamlined the abandonment process, and branch line abandonment accelerated. In the next five years the railways abandoned over 1,450 (2,333 km) miles of prairie branch lines; the vast majority of these railways were grain dependent.

1.5. 3) Railcar Access: With each elevator closing the distance from the farm gate to the drop-off point simultaneously increased. The average Canadian distance now being 50Km. In the Peace Country, this average distance has increased to 100km due to its northern location and access to facilities that can accommodate 50 or more rail cars; a service condition put in place by Canadian National Railways. This service condition is intended to maximize the efficiency of the rail services, yet the vast majority of the grain delivery stations in the Peace Country cannot accommodate 50 rail cars at one time.

Table 1.2 shows the cost per railcar from each grain elevator in the Peace Country to the Port of Vancouver. Note how the cost per railcar decreases as the number of railcars booked increases. However, also note how the number of delivery points dramatically decreases as the number of railcars required increases with the price per-car discounts.

Table 1.2 Rail Volume Incentives – Peace Country	
Per Railcar Cost- $ CN 24 Delivery Points **Tariff Table 510798-AD**	
Rail Pick-up Spot	**To Vancouver**
ALBRIGHT	3002
DAWSON CREEK	2889
DIMSDALE	3071
DONNELLY	3580
FALHER	3580
FORT ST. JOHN	2889
GIROUXVILLE	3508
GRANDE PRAIRIE	3071
GRIMSHAW	3798
HAWK HILLS	4013
HIGH LEVEL	4311
HIGH PRAIRIE	3645
HYTHE	3002
JUDAH	3724
KEG RIVER	4096
KINUSO	3645
MANNING	3942
NAMPA	3645
PEACE RIVER	3724
RYCROFT	3211
SEXSMITH	3141
SPIRIT RIVER	3285
WEMBLEY	3071
WOKING	3211
Per Railcar Cost- $ CN 50 Car Block **4 Delivery points** **Tariff Table 510796-AD**	
FALHER	3120
HIGH LEVEL	3812
NAMPA	3181
RYCROFT	2838
Per Railcar Cost- $ CN 100 Car Block **1 Delivery Point** **Tariff Table 510795-AD**	
RYCROFT	2478

Source: Canadian National Railways – 2008 Tariff Tables 512538-AB

Canadian National Railways (the only rail service in the Peace Country) offers a maximum per-car discount and railcar allocation priority to grain elevators that pre-book for 20 consecutive weeks of 100 or more rail cars. However, only 22% of all grain elevators across Canada can accommodate 100 rail cars at one time and even fewer still that can commit for 20 consecutive weeks of full volumes of grain (Source: Forest C. Hume Law Corporation,; pg. 12) . To meet maximum discount a community would need to have a facility that can accommodate 100 railcars and have them filled for 20 consecutive weeks (2000 railcars in total). Not surprising, over 80% of all Canadian grain deliveries occur at less than 10% of all the grain elevators available across Canada.

In the Peace Country there is only one location that can accommodate 100 railcars – Rycroft. And even Rycroft is challenged to meet the extra discount of committing 20 consecutive weeks of filled bookings. That aside, over 45% of all grains destined for export from the Peace Country are delivered to Rycroft as farmers, brokers, and dealers, merge to get the maximum discount from the rail system.

The following paragraphs present a summary of the railway challenges faced by Canadian farmers with specific reference to Peace Country complaint recently filed with the Canadian Transportation Agency – *Great Northern Grains* (Nampa, Alberta).

> *Stakeholder complaints over railway service and car allocation have increased in recent years. Of particular concern has been a perceived decline in the consistency and reliability with which that service has been delivered. Grain shippers have frequently cited costly instances where railcars have not been spotted in a timely manner at country elevators for loading, or at destination terminals for unloading. The general car allocation process – always a contentious matter – also came under increasing fire from shippers who argued that they were being shortchanged by the preference given to unit trains ordered through the railways' advance booking products.*
>
> *Moreover, grain shippers were troubled by what they claimed to be the railways' lack of accountability. Arguing that regulatory change provided the only practical means of rectifying these perceived failings, they joined forces with shippers of other commodities in raising their complaints to the federal government for attention. In response, the*

railways contended that no such remedy was necessary, and that most problems could satisfactorily be remedied through private dispute resolution mechanisms. Even so, the shipping community continued to press for legislative change, allying themselves in a broader governmental lobbying effort.

In May 2006, Transport Canada advised shippers that the government intended to address their complaints about railway service with an amendment to the Canada Transportation Act. A little over a year later, on 30 May 2007, the Minister of Transport tabled these promised changes to the Act in the House of Commons. In general terms, Bill C-58 was aimed at protecting rail shippers from the potential abuse of market power by the railways, and included more effective means of addressing their concerns over service and rates. Furthermore, the government also committed itself to a review of railway service within 30 days of the Bill being passed into law. Although these actions were welcomed by shippers, they could do little to retroactively correct the service problems that many grain shippers had been experiencing.

One aggrieved grain shipper, Great Northern Grain Terminals Ltd. (Nampa, Alberta), opted to file a level-of-service complaint with the Canadian Transportation Agency. In its complaint, filed on 8 March 2007, GNG alleged that CN's advance products discriminated against it and other small shippers in the allocation of railcars, thus rendering them uncompetitive in the marketing of grain. Furthermore, GNG also alleged that CN had failed to provide the complainant with an adequate level of rail service under its general railcar allocation program. In many ways the case acted as a lightning rod for a host of smaller shippers, with over 20 separate organizations having sought intervenor status in the case. All of the intervenors offered evidence respecting how the CN car allocation program worked and why its application resulted in an inadequate level of service.

In early July 2007, after considering the matter for almost four months, the Agency determined that CN's car allocation practices had resulted in a significant deterioration in the service being provided to GNG. Moreover, it found that CN had in fact breached its common carrier obligations and that GNG would likely suffer substantial commercial harm if the breach went unchecked. Of particular interest was the fact that the Agency also found the difficulties encountered by GNG in obtaining an adequate and suitable car

supply were not isolated, but rather systemic in nature with widespread effect. In addition to directing that CN make reasonable accommodation for GNG's specific transportation needs, the Agency also ordered the carrier to undertake a number of broader corrective measures. Foremost among these were the requirement that CN allot and distribute equipment used in the movement of grain in a manner that was fully transparent and nondiscriminatory; that this equipment be maintained in sufficient number so as to allow the carrier to meet its level-of-service obligations; that at least 50% of its available hopper car fleet be set aside for general distribution to grain shippers; and that the maximum block size under its advance products be set at 50 cars (which could then be combined to form 100-car blocks by shippers wishing to do so).

With its implications for the industry at large, many of the GHTS's smaller shippers looked upon the Agency's decision with favor. Moreover, as CN had been ordered to implement these remedies by 1 August 2007, they anticipated a significant improvement in their ability to secure equipment and compete more fully in the upcoming 2007-08 crop year.

Source: Monitoring the Canadian Grain & Handling Transportation System- 2007

1.5. 4) Increased Trucking Costs:

Principle grains grown in Canada (wheat, oats, canola, barley, etc)…are exported in bulk. Large volumes and seasonal peaks necessitate using a transportation system that can carry these volumes shortly after harvest season. For the Canadian farmer, the most economical transportation option has traditionally been the national railway system. However, with elevator closures and railcar access being centralized more and more to southern mainlines the trucking industry has simultaneously evolved to being a potential alternative for small and medium sized producers further north.

Trucking grain has proven to have its own challenges. Bulk food- grade grain is monitored and moved under stringent export criteria. Only a few trucking companies actually meet these criteria or even fewer have the ability to meet the volume (note: on average Canada exports 25 million metric tonnes of grains each year). Thus, the option of trucking on a large scale is very limited. The trucking option works best for specialty crop producers that sell directly to niche markets with pre-identified buyers. In reality,

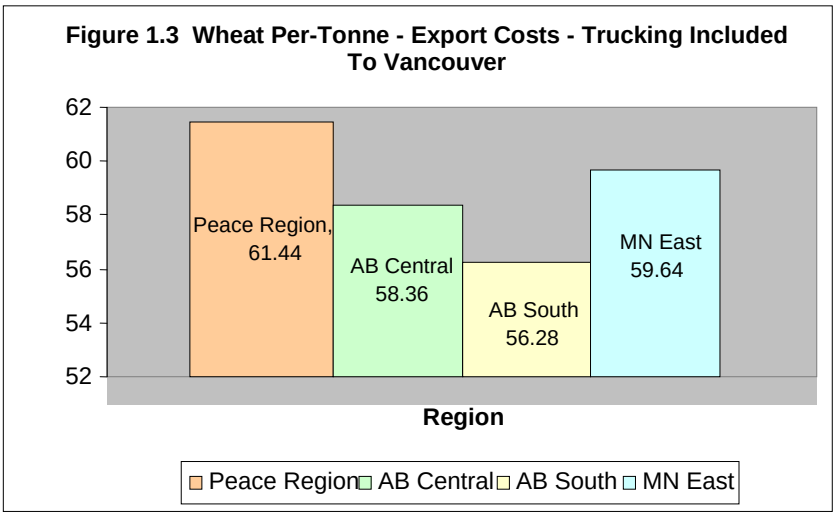
the Canadian grain farmer still depends upon the national coordination of rail services to compete on the export markets.

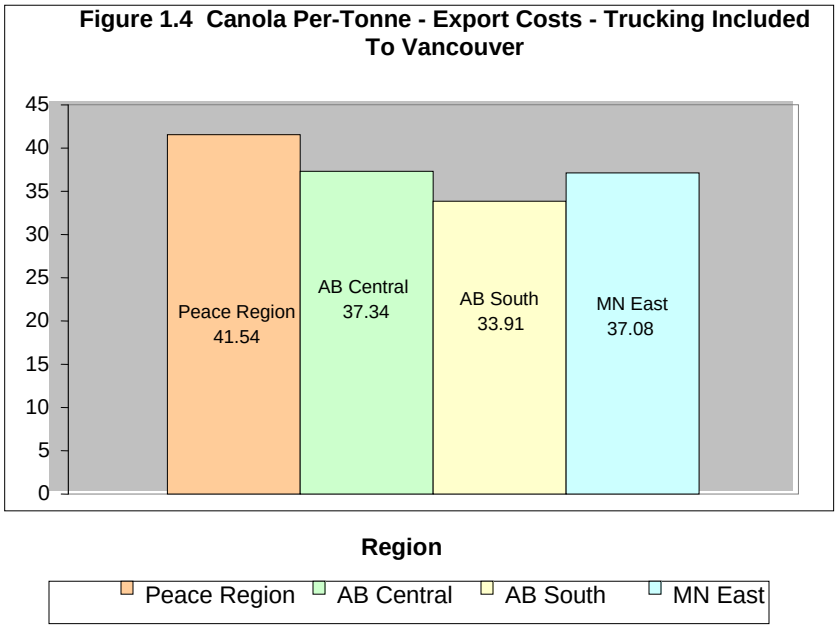
From the farm to the elevator though, the farmer has no option but use a truck. As the distance to delivery point for grain increases so does the cost to truck from the farm to grain elevator and the weight of each road trip simultaneously increases with distance to travel. Trucking costs are not reflected in the "railway incentives". Neither are the hidden expenditures of municipalities that are maintaining roads due to the increased grain-truck transport across back roads and highways.

> *Over the past decades, transportation policy reform has led to a dramatic restructuring of rail and truck haul traffic in western Canada. A reduction in rail branch lines, and a consolidation of grain elevators, caused 80% of the grain to shift from "community" to centralized between 1995 and 2005. As a result, the distance that producers transport grain from farm to delivery point has lengthened, with producers using much larger trucks that carry substantial grain haul weights. The result has been a transformation in grain handling from a system formerly dependent on 'rail' to a system now dependent on 'road and rail'.* *Source:* Prairie Grain Roads Program - Agriculture and Agri-food Canada 2006

The cost of trucking to centralized drop-off centers is increasingly absorbed by the individual farmer. With an average per-load of 40 tonnes trucked from the farm to the elevator at an average cost of $15.00 per tonne (Source: Grain Harvesting 2006 – Alberta Agriculture) the cost of transportation is one of the highest costs incurred by the farmer (Source: *Ken Ritter, Chair-Canadian Wheat Board*).

Overall Peace Country producers have higher transportation costs than other producers across Canada. As shown in Figures 1.3 and 1.4 the average cost per-tonne for wheat and canola shipped to Vancouver for export is significantly higher for Peace Country farmers.





Source: Section 5A - Producer Impact 2006 – Grain Monitoring System – The Quorum Corporation

Using the cost per- tonne shown in Figures 1.3 and 1.4, Table 1.5 shows the calculation of the increased cost of transportation that is absorbed by Peace Country farmers. Volumes delivered in 2006 to Vancouver from the Peace Country were provided by the Canadian Grain Commission (see Table 3.3 of this report).

Table 1.5 Comparison of Transportation Costs of Wheat and Canola to Vancouver – CND $

	Peace Country	AB Central	AB South	MN East
Wheat–Cost	61.44	58.36	56.28	59.64
Wheat-Delivered	160,447	160,447	160,447	160,447
Wheat-Total Cost	$9,857,864.00	$9,363,687.00	$9,029,957.00	$9,569,059.00
Difference Relative to Peace Country		**$494,177.00**	**$827,907.00**	**$288,805.00**
Canola–Cost	41.54	37.34	33.91	37.08
Canola-Delivered	732,447	732,447	732,447	732,447
Canola-Total Cost	$30,425,848.00	$27,349,570.00	$24,837,277.00	$27,159,134.00
Difference Relative to Peace Country		**$3,076,278.00**	**$5,588,571.00**	**$3,266,714.00**

Note: Peace Country volume used in all calculations for comparison purposes.

The present grain handling and transportation system in Canada operates as two disconnected components. Farm-to- elevator trucking and related road costs are considered in isolation from elevator-to-port logistics. The federal government has created policies and monitors the patterns and costs associated with the elevator-to-port monitoring component to help improve efficiency but this is a partial measurement of the overall system. As a result, efficiency gains in this component can come at the expense of the other component. Spring road bans, weight restrictions on key grain roads and uncoordinated permitting requirements between municipalities can influence the efficiency and cost of grain delivery to elevators. This component can also influence the ability to meet customer delivery requirements. Efficiency improvements in the elevator to port component of the grain handling transportation system can create cost consequences for the provinces and municipalities and increase trucking costs to grain producers. Prairie Grain Roads Program - Agriculture and Agri-food Canada 2006

The challenges of transporting grain in Canada in general, the Peace Country in particular are not new. The following excerpts were extracted from the website of the Manitoba Museum – *The History of Agriculture*. Note how removing the date one could easily assume these excerpts were written today.

1902 - Farmers were fired up over the issue of rail car allocation. In the fall of 1902, the Canadian Pacific Railway (CPR), ignoring the producer loading rights provision in the Manitoba Grain Act (1900), continued to favor distributing its cars to elevators, rather than to the loading platforms and warehouses some farmers preferred to use.

1970 - The grain transportation system's inability to deliver the volumes of grain in demand in the 1970s led to major free-market reform of the system. The problems were essentially railway issues, but given the dependence every other system stakeholder has on the railway's ability to deliver on time – farmers, grain elevator companies and ports were all affected.

1998 – In 1998, The Estey Report stated that it had been impossible to come to any consensus with the various stakeholders – farmers, grain dealers, elevator companies, and railways.

Source: History of Agriculture – Manitoba Museum

Representing only 5% of Canada's farmlands, the Peace Country has little influence on national issues such as railcar allocations and grain elevator closures. Over the last three decades the farmers of the Peace Country, like all farmers in Canada, have been witnessing the decline of small family farms, the demolition of community grain elevators, and the abandonment of rail tracks. As national and international companies and governments negotiate, acquire, and direct the assets of agriculture and transportation services, the Canadian farmer, the most vulnerable in this matrix, must adhere to evolving rules, new procedures, and absorb the increasing costs to stay in the "business".

Press Release: March 2008

To ship their grain, most western Canadian farmers are forced to use either Canadian National or Canadian pacific rail lines, creating a virtual monopoly over western rail transportation. (In the Peace Country there is only rail service provider – Canadian National). Since 1992, the federal government has not conducted a full review of what it actually costs those railway companies to transport grains. As a result, railway costs used to calculate the revenue caps for grain freight are significantly out of date, failing to account for major reductions in grain elevators, rail track mileage, rail service, car supply, (and increasing trucking costs from the farm gate to the elevator) over the past 17 years. Canadian farmers are calling on the government to conduct a full cost review in conjunction with an upcoming railway service review, in order to get an accurate and up-to-date picture of the true cost of shipping grains to determine freight rates for farmers more fairly.

"The big railway companies are making over $100 million a year in unreasonably excessive returns at the expense of Canadian farmers. "It shows the railways earn far above what they would in a competitive rail market. As shippers, we need timely rail service but we also require that the cost for that service is reasonable since we face greater distances to port than all the other grain exporters in the world." Canadian Wheat Board - Ian McCreary

"Railway profits have gone up while the level of service to farmers has gone down. It's time to bring railway costs back to reality and rebalance the equation for farmers." Glen Blakley, President - Agricultural Producers Association of Saskatchewan

"It seems clear that railway earnings from grain transport are excessive, particularly when farmers have been burdened with additional storage and trucking costs – in effect paying twice for the railways' efficiency gains. The railways have externalized costs to farmers and reaped the profits." Terry Boehm, Vice President - National Farmers Union.

Over the past year, the federal government has taken a couple of steps to address the transportation issue facing farmers. The freight revenue cap was adjusted to take into account actual maintenance costs for the hopper car fleet. The government also passed Bill C-8, addressing service issues in rail transportation. "I want to thank the government for the steps it has taken so far to help restore fairness to western grain transportation …,"
Lynn Jacobson, 1st Vice President of Wild Rose Agricultural Producers -

"Farmers now need this government to take the next step and implement a full review of grain transportation costs."

Source: Estimated Contributions Earned by Railways from Handling of Statutory Grains and Grain Products 2005/2006 and 2006/2007. Edsforth, J. (2008)

Section 2 –Agricultural in Perspective

2.1 International Agriculture: Agriculture is an international industry. Since the 1980's the industry has become increasingly competitive and sophisticated. In 2006 there were over 120 countries producing and selling agricultural products on the international exchange markets. The Foreign Agricultural Service, a branch of the United Nations, monitors agriculture land use and production of six principle food crops - wheat, rice, corn, canola, barley, and oats. These crops form the basis of the diet for 95% of the global population and livestock. Wheat, corn, and rice alone provide over half of the global requirements for calories and protein (*Biodiversity International 2007*). The following collection of tables shows the overall value of the agricultural industry, production, exports and imports. Note Canada's position relative to the international markets …of which the Peace Country is a contributor.

Note: International agriculture is reported in imperial units. For the ease of comparison the imperial ton is presented in the tables in this section. The imperial ton weights more than the metric ton. The imperial ton is equal to 2240lbs The metric tonne is equal to 2205lbs.

Table 2.1. – Dollar Value for Top 10 World Exporters of Agricultural Products

Country	Exporters $B USD 2006	Percent of World Markets 2006	2000	1980
European Union	405.25	42.9	41.5	
United States	92.66	9.8	12.9	
Canada	44.23	4.7	6.3	
Brazil	39.53	4.2	2.8	
China	32.54	3.4	3.0	
Australia	22.18	2.3	3.0	
Thailand	21.58	2.3	2.2	
Argentina	21.33	2.3	2.2	
Indonesia	18.32	1.9	1.4	
Russian Federation	17.06	1.8	1.4	
Top 10	714.68	75.6	76.7	

Source: International Statistics - World Trade Organization

Table 2.2 - 2006 International Production of Principle Grains Imperial Tons '000s							Overall International Ranking
Country	**Rice**	**Wheat**	**Corn**	**Rye**	**Barley**	**Oats**	
Afghanistan	NA	4,270	NA	NA	NA	NA	
Algeria	NA	NA	NA	NA	NA	80	
Argentina	NA	14,500	15,800	55	800	350	
Australia	NA	25,367	NA	NA	9,563	1,695	10th
Bangladesh	28,758	NA	NA	NA	NA	NA	
Belarus	NA	NA	NA	1,150	1,800	600	
Brazil	7,874	NA	41,700	NA	NA	517	7th
Burma	10,440	NA	NA	NA	NA	NA	
Cambodia	3,780	NA	NA	NA	NA	NA	
Canada	NA	25,748	9,361	330	11,678	3,283	6th
Chile	NA	NA	NA	NA	NA	420	
China	126,414	97,450	139,365	NA	3,400	600	1st
Egypt	4,135	8,184	5,932	NA	NA	NA	
Ethiopia	NA	NA	4,000	NA	1,785	NA	
European Union	NA	132,356	61,158	7,688	54,752	7,968	3rd
India	91,790	68,640	14,710	NA	1,200	NA	4th
Indonesia	34,959	NA	6,500	NA	NA	NA	8th
Iran	NA	14,500	NA	NA	2,900	NA	
Iraq	NA	NA	NA	NA	754	NA	
Japan	8,257	NA	NA	NA	NA	NA	
Kazakhstan, RP	NA	11,000	NA	NA	1,500	140	
Korea, RP	4,768	NA	NA	NA	NA	NA	
Mexico	NA	NA	19,500	NA	753	NA	
Nigeria	2,700	NA	7,000	NA	NA	NA	
Norway	NA	NA	NA	NA	NA	360	
Pakistan	5,547	21,612	NA	NA	NA	NA	
Philippines	9,820	NA	5,884	NA	NA	NA	
Russian Federation	NA	47,700	NA	3,600	15,800	4,550	5th
South Africa	NA	NA	6,935	NA	NA	NA	
Thailand	18,200	NA	NA	NA	NA	NA	
Turkey	NA	18,500	NA	240	7,600	290	
Ukraine	NA	18,700	7,150	1,050	9,000	800	9th
United States	7,113	57,280	282,311	191	4,613	1,667	2nd
Uzbekistan, RP	NA	5,800	NA	NA	NA	NA	
Vietnam	22,772	NA	3,818	NA	NA	NA	
All others	30,224	50,048	65,245	188	8,730	546	
World Totals	**417,551**	**621,655**	**696,369**	**14,492**	**136,628**	**23,866**	

Source: Foreign Agricultural Services – USDA Office of Global Analysis

Table 2.3 - 2006 International Exports of Principle Grains Imperial Tons '000s							Overall International Ranking
Country	**Rice**	**Wheat**	**Corn**	**Rye**	**Barley**	**Oats**	
Afghanistan	NA	NA	NA	NA	NA	NA	
Algeria	NA	NA	NA	NA	NA	NA	
Argentina	487	8301	10,707	NA	309	1	3RD
Australia	NA	15,213	NA	NA	5,231	191	2ND
Bangladesh	NA	NA	NA	NA	NA	NA	
Belarus	NA	NA	NA	50	NA	NA	
Brazil	291	NA	2,826	NA	NA	NA	
Burma	47	NA	NA	NA	NA	NA	
Cambodia	350	NA	NA	NA	NA	NA	
Canada	NA	15,616	239	141	1,876	1754	4TH
Chile	NA	NA	NA	NA	NA	27	
China	1216	1397	3,727	NA	3	NA	9TH
Egypt	958	NA	NA	NA	NA	NA	
Ethiopia	NA	NA	NA	NA	NA	NA	
European Union	144	15,694	449	381	2,587	231	5TH
India	4537	NA	497	NA	NA	NA	10TH
Indonesia	NA	NA	NA	NA	NA	NA	
Iran	NA	NA	NA	NA	NA	NA	
Iraq	NA	NA	NA	NA	NA	NA	
Japan	200	NA	NA	NA	NA	NA	
Kazakhstan, RP	NA	3,817	NA	NA	100	5	
Korea, RP	91	NA	NA	NA	NA	NA	
Mexico	NA	NA	NA	NA	NA	NA	
Nigeria	NA	NA	NA	NA	NA	NA	
Norway	NA	NA	NA	NA	NA	NA	
Pakistan	3579	NA	NA	NA	NA	NA	
Philippines	NA	NA	NA	NA	NA	NA	
Russian Federation	NA	10,664	NA	NA	1,397	NA	6TH
South Africa	NA	NA	1,406	NA	NA	NA	
Thailand	7376	NA	NA	NA	NA	NA	8TH
Turkey	NA	2,900	NA	NA	NA	NA	
Ukraine	NA	6,461	2,464	49	NA	NA	7TH
United States	3307	27,424	56,084	1	4,926	40	1ST
Uzbekistan, RP	NA	NA	NA	NA	357	NA	
Vietnam	4705	NA	NA	NA	NA	NA	
All others	1,600	5,820	4,200	0	642	5	
World Totals	28,888	113,307	82,599	622	17,428	2,254	

Source: Foreign Agricultural Services – USDA Office of Global Analysis

In 2006 grain production and export was dominated internationally by three countries – China, the United Sates, and the European Union. Interestingly, the United States and the European Union are in the top three for exports of the grains they produce. Notice China however. Very little of its raw grain is exported. This is because in China land dedicated to food production is prioritized for domestic use. Following WW11 leading into the post-Cold War of the late 1970's countries began realizing that being dependent on other countries for "food" is a vulnerable position relative to international relations. As a result more and more countries began investing in "growing food for their own people" as a means to not only increase their position in international relations but more importantly to decrease their vulnerability to other nations. A point of interest from Table 2.3; note how Europe and Russia are among the top exporters. Thirty years ago Russia and Europe were two of the top importers of Canadian grains. Not only has Canada lost these markets; both of these regions have also have become major competitors.

In the 1970's Canada ranked 1st for many of the principle crops on the commodity market. Thirty years later, what were once lucrative international importers of Canadian principle crops are now competitors and surpassing Canadian production and taking over previous Canadian markets. The sad reality is that over the last three decades while Canadian agriculture has been challenged with privatization, abandoned short lines, railway running rights, port storage fees, community elevator demolitions, and subsidy decreases, the international market was being captured by regions that invested in agricultural on national levels through subsidies to their food producers and transportation infrastructure that facilitated export positioning to international markets. Combined with this is the reality of Canada's geography. Canadian farmers are land bound and must absorb the costs of long distances just to get to a seaport. This is not true for other competing countries such as Australia in which farms are located close to the sea with lesser travel distances required to get to export position.

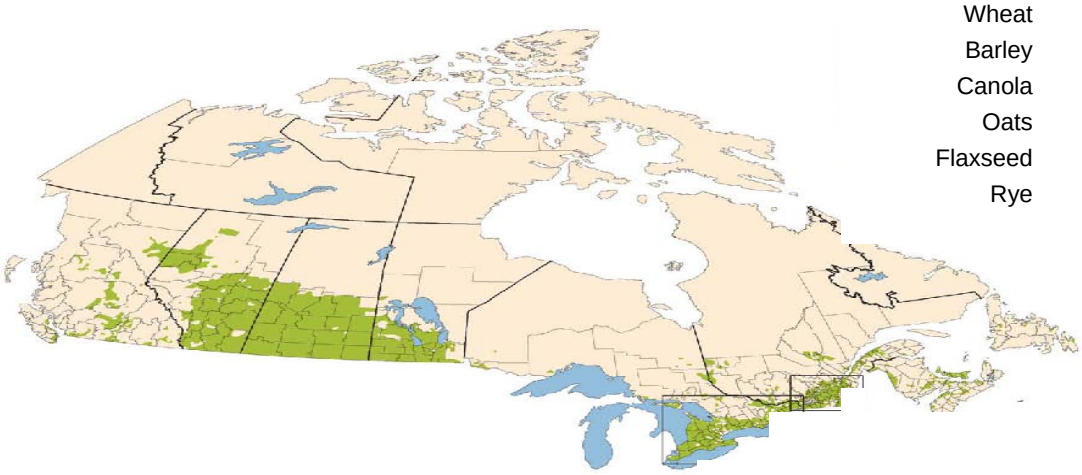
2.2 Canadian Agriculture:

67.5M Hectares = 167M Acres

7% of Canada's Total Landmass

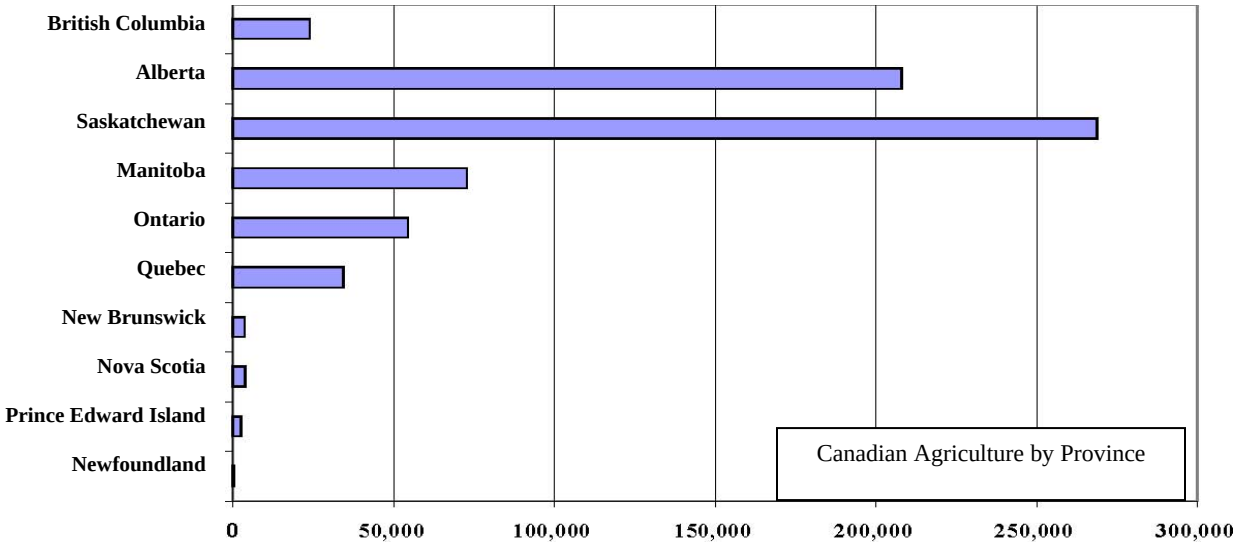
2006 Agriculture Exports = 44Billion

2006 Production Metric Tonnes	
Wheat	27,277,000
Barley	10,005,000
Canola	9,105,000
Oats	3,602,000
Flaxseed	1,041,000
Rye	302,000



Agricultural Non-Agricultural

239,373 Farms
327,060 Farmers
Average Farm Size – 728 Acres



Source Statistics Canada – 2006 Census of Agriculture – Released May 2008.

In 2006, Canada had 67.5M Hectares (relatively stable over the last 10 years) dedicated to agriculture. Of the 67.5M hectares, 36M is used as cropland: 53% of all farmland. The vast majority of Canadian grain production occurs in western Canada. As noted in Table 2.4 of the 36M hectares of croplands in Canada, 84% is located across Manitoba, Saskatchewan, Alberta and British Columbia.

		Table 2.4 Western Canada Hectares in Cropland					
All Field Crops	**Canada Hectares**	**MN**	**SK**	**AB**	**BC [1]**	**Total Western Canada**	**% of Canada**
Wheat	9,827,734	1,335,778	5,279,716	2,619,389	23,094	9,257,977	94%
Oats	2,065,216	383,068	938,300	514,038	32,828	1,868,234	90%
Barley	3,692,826	339,292	1,426,617	1,658,349	24,608	3,448,866	93%
Mixed grains	336,685	17,817	61,087	151,067	4,440	234,411	70%
Corn	1,393,181	94,265	8,438	30,268	13,252	146,223	10%
Rye	215,353	38,813	94,116	47,952	1,705	182,586	85%
Canola	5,031,549	922,850	2,420,795	1,647,747	26,038	5,017,430	100%
Soybeans	1,203,032	141,980	2,230	1,084	0	145,294	12%
Flaxseed	808,602	155,321	625,676	24,451	36	805,484	100%
Dry field peas	1,265,201	37,009	984,337	237,842	2,596	1,261,784	100%
Chick peas	129,712	188	112,659	16,503	0	129,350	100%
Lentils	522,358	992	516,687	4,384	0	522,063	100%
Dry white beans	78,977	36,537	1,782	3,084	0	41,403	52%
Other dry beans	106,008	43,910	4,404	22,041	0	70,355	66%
Alfalfa & Mixtures	5,079,503	686,829	1,593,443	1,593,684	202,176	4,076,132	80%
Tame Hay & Fodder	2,895,897	259,180	493,158	834,692	189,723	1,776,753	61%
Forage seeds	268,079	53,590	78,795	99,069	29,008	260,462	97%
Potatoes	162,641	32,656	4,511	22,177	3,442	62,786	39%
Mustard seed	136,501	2,208	108,616	25,328	0	136,152	100%
Sunflowers	85,469	77,043	6,431	726	15	84,215	99%
Canary seed	137,131	3,641	132,115	1,343	0	137,099	100%
Tobacco	12,928	0	0	0	0	0	0%
Ginseng	3,333	0	0	0	409	409	12%
Buckwheat	13,190	7,251	1,027	68	82	8,428	64%
Sugar beets	19,503	0	0	15,715	0	15,715	81%
Caraway seed	8,095	1,488	5,814	0	0	7,302	90%
Triticale[2]	61,934	2,622	26,432	30,901	417	60,372	97%
Other field crops	91,442	25,150	42,672	12,521	647	80,990	89%
Total	**35,652,080**	**4,699,478**	**14,969,858**	**9,614,423**	**554,516**	**29,838,275**	
% of Total	**100%**	**13%**	**42%**	**27%**	**2%**	84%	

Source: Field Crop Data Tables – Statistics Canada

There are more than 28 types of field crops harvested in Canada; reflecting a combination of food and non-food markets. The top food crops grown in Canada are wheat, canola, barley, and oats- collectively representing almost 60% of all the crop land in Western Canada. These four grains alone resulted in 50M tonnes produced in 2006 with over half destined for export. Table 2.5 shows the production values of these top grains in Canada. Table 2.6 shows the major export markets for these Canadian grains.

Table 2.5 Western Canada Principle Grain Production (Tonnes)

Grain	Canada PRD	Source: Field Crop Data Tables – Statistics Canada MN	SK	AB	BC
Wheat	27,277,000	4,085,000	12,482,000	7,818,000	41,000
Oats	3,602,000	979,000	1,527,000	671,000	28,000
Barley	10,005,000	1,146,000	3,471,000	4,625,000	31,000
Canola	9,105,000	1,827,000	3,962,000	3,266,000	27,000
Flaxseed	1,041,000	193,000	805,000	43,000	0
Dry field peas	2,806,000	91,000	2,127,000	586,000	2,000

Table 2.6 Canadian Grain Exports – Tonnes '000s

WHEAT				**CANOLA**		
Production	27,277,000			Production	9,105,000	
Exports – 55%	15,127, 300			Exports – 58%	5,308,800	
Major Buyers		**Port**		**Major Buyers**		**Port**
Japan	1,229,000	Pacific		Japan	1,955,000	Pacific
United States	1,178,000	Eastern / Prairie		Mexico	1,274,000	Pacific
South Korea	1,070,000	Pacific		China	614,000	Pacific
Sri Lanka	1,048,000	Pacific		Pakistan	590,000	Pacific
Indonesia	996,000	Pacific		United States	517,000	Prairie
Italy	911,000	Eastern / TB		**OATS**		
Mexico	886,000	Pacific		Production	3,602,000	
Peru	664,000	Pacific		Exports – 31%	1,126,400	
Morocco	548,000	Eastern		**Major Buyers**		**Port**
United Kingdom	386,000	Eastern		United States	1,095,000	Prairie/TB
Algeria	358,000	Eastern		**FLAX**		
BARLEY				Production	1,041,000	
Production	**10,005,000**			Exports – 42%	440,000	
Exports – 22%	**2,228,200**			**Major Buyers**		**Port**
Major Buyers		**Port**		Belgium	355,000	TB
Saudi Arabia	713,000	Pacific		**PEAS**		
China	537,000	Pacific		Production	2,806,000	
Japan	379,000	Pacific		Exports – 71%	1,998,500	
Iran	324,000	Pacific		**Major Buyers**		**Port**
United States	103,000	Prairie		Spain	837,000	Eastern/Pacific
				India	672,000	Pacific
				Pakistan	165,000	Pacific
Total Production: 58MMT			**Total Exported: 26MMT**			**Export Ratio 45%**

Source: Canadian Grain Exports - Canadian Grain Commission 2006

In the export process the location of the buyer dictates the direction of transport and shipping. As previously noted, over the last thirty years the eastern export markets (like Europe and Russia) for Canadian grains began declining. As the eastern markets for Canadian grains were decreasing there was a simultaneous growing demand for food grains coming from the west. Countries such as India, China and Japan; experiencing huge population growths and societal changes, began emerging as new key markets. Table 2.2.D shows the exports by port of clearance for Canadian grains in 2005/2006. The pacific export points – Vancouver and Prince Rupert, accounted for over 60% of all grains shipped out of Canada.

Table 2.7 Canadian Grain Exports by Port of Clearance 2005-2006
(000's Tonnes)

Loaded At	Wheat	Oats	Barley	Flax	Canola	Soy	Peas	Corn	Total	%
Prince Rupert	3520.8	0.0	527.3	0.0	63.1	0.0	0.0	0.0	4,111.2	15
Vancouver	5263.6	7.1	1,557.1	14.6	4,169.6	0.0	1,496.2	0.0	12,508.2	46
Churchill	327.6	0.0	0.0	0.0	25.2	0.0	88.3	0.0	441.1	2
Thunder Bay	388.6	181.6	0.3	355.9	490.7	0.1	206.6	0.0	1,623.8	6
Quebec	1329	0.0	11.1	0.0	0.0	82.0	0.0	21.4	1443.4	5
Baie Comeau	1011.8	0.0	0.0	0.0	0.0	24.0	0.0	0.0	1,035.7	4
ON Elevators	45.3	0.0	0.0	0.0	0.0	155.1	0.0	0.0	200.5	1
Owen Sound	52.7	0.0	0.1	0.0	0.0	0.0	0.0		52.8	*
Prescott	0.5	0.0	0.6	0.1	0.0	0.0	0.0	0.1	1.4	*
Goderich	32.1	0.0	0.0	0.0	0.0	87.1	0.0	0.0	119.2	*
Sarnia	146.9	0.0	0.0	0.0	0.0	0.0	0.0	0.4	147.3	1
Montreal	515.8	0.0	29.9	0.0	0.0	118.4	0.0	102.9	767.0	3
Port Cartier	1082.5	0.0	0.0	0.0	0.0	70.9	155.5	11.1	1320.1	5
Sorel	134.7	0.0	0.0	11.5	15.1	229.0	37.1	25.5	455.8	2
Trois-Rivières	20.6	7.2	0.0	0.0	0.0	65.3	0.0	0.0	93.1	*
Halifax	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	*
Prairie Elevators	953	526.9	101.9	58.5	545.2	0.1	14.7		2603.8	10
Total exported	14,832.4	1126.4	2228.2	440.6	5308.8	832.0	1998.5	164.4	26,931.3	

Source: Canadian Grain Exports - Canadian Grain Commission 2006 Note - * = less than 50 tonnes or Percentage <.1%

2.3 Alberta Agriculture Descriptive: The 2006 Census of Agriculture:

The 2006 Census of Agriculture recorded 49,431 farms in Alberta, an 8% decrease since 2001. Alberta accounts for 22% of Canada's 229,373 farms, ranking second to Ontario. In 2006 Alberta reported 71,660 farm operators, a 6% decline from 2001. Of the 71,660 farm operators, 30% were women (up from 28% in 2001), 44% worked more than 40 hours a week on their farm operations (down from 46% in 2001), and 55% also worked at off-the-farm jobs (up from 49% in 2001).

Farm area

Alberta accounted for 31% of the total farm land area in Canada in 2006, reporting 52M acres. Almost half of Alberta's 52M acres of farm land are used as cropland. Cropland is the total area in field crops (wheat, oats, barley, etc ...), fruits, vegetables, etc... Farmers reported 24M acres of cropland in Alberta in 2006, representing 27% of all cropland area in Canada. Farms in Alberta averaged 1,055 acres of land in 2006, up from 970 acres in 2001

Farm finance

Alberta's total gross farm receipts were $10B in 2005, while operating expenses reached $9B. The prices farmers had to pay for the inputs they purchased rose 10% while the prices they received for the products they sold dropped 3%. In essence, Alberta farm operators spend an average of $.90 cents in expenses for each $1.00 earned.

The number of farms with less than $250,000 (at 2005 constant prices) of gross farm receipts declined by 11% since 2001, while those with $250,000 or more increased by 12%. There were 7,497 of these larger farms in Alberta in 2006, and while they only represented 15% of farms in the province, they accounted for 76% of total provincial gross farm receipts reported for 2005.

Highlights of Alberta Agriculture:

- Alberta remains the top province for barley in the country. However, the province experienced a 17% drop in barley acreage to just under 4M acres. The decrease was commonly seen throughout Canada as barley area declined 21%.
- Corn for silage has seen a 91. % increase in area in the province. Total acreage increased from 36,814 acres to 70,411 acres.
- Canola has been of growing interest to producers in Alberta. The crop has increased 53%, with total acreage rising from 3M acres in 2001 to 4M acres in 2006.
- Soybeans are another crop on the rise. Alberta experienced a significant increase in soybean acreage, up from 88 acres in 2001 to 2,677 acres in 2006.
- Flaxseed in Alberta went up 50% since 2001 to 60,372 acres in 2006.
- Alberta remains the top province for alfalfa with 31% of the national area. The 2006 Census counted just over 4M acres of alfalfa and alfalfa mixtures in Alberta.
- Sugar beets in Alberta experienced a 31% increase since 2001, for a total area of 38,803 acres in 2006 – 81% of the Canada total.
- In the past, Alberta has been known as the largest cattle-producing province in the country and in 2006 this remained the case. However, despite its top rank, the province experienced a 4% decrease in total cattle inventories, down to 6M heads. Cattle inventories experienced fluctuations throughout all provinces and nationally there was a slight increase of 1%.
- The Canadian bison herd has increased 35% since 2001. Alberta had a 21% increase in bison inventories, to 97,366 heads. With 50% of the Canadian herd, Alberta is the top bison province in the country.
- There were 2,629 farms reporting organic production, 5% of all farms in Alberta. Of the 2,629 farms reporting organic products 92% indicated they were not certified. The predominant group of organic products grown in Alberta was hay or field crops (wheat, canola, barley etc ...). They were reported on 61% of the province's organic farms.

2.4 British Columbia Agriculture Descriptive – 2006 Census of Agriculture:

The 2006 Census of Agriculture recorded 19,844 farms in British Columbia, a 2% decrease since 2001. British Columbia accounts for 9%of Canada's 229,373 farms, ranking fifth in Canada. In 2006 British Columbia reported 29,870 farm operators, a 2% decline from 2001. Of the 29,870 farm operators, 37% were women (unchanged from 2001), 31% worked more than 40 hours a week on their farm operations (unchanged from 2001), and 55% also worked at off-the-farm jobs (up from 53% in 2001).

Farm area

British Columbia accounted for 4% of the total farm land area in Canada in 2006, reporting 7M acres. Of the total 7M acres of farm land, 1.4M acres are used as cropland, accounting for 1.6% of all cropland area in Canada. Cropland is the total area in field crops (wheat, oats, barley, etc ...), fruits, vegetables, etc… Farms in British Columbia averaged 353 acres of land in 2006, up from 315 acres in 2001

Farm finance

British Columbia's total gross farm receipts were $3B in 2005, while operating expenses reached $2.5B. The prices farmers had to pay for the inputs they purchased rose 10% while the prices they received for the products rose only 4%. In essence, British Columbia farm operators spend an average of $.90 cents in expenses for each $1.00 earned.

The number of farms with less than $250,000 (at 2005 constant prices) of gross farm receipts declined by 3% since 2001, while those with $250,000 or more increased by 5%. There were 2,019 of these larger farms in British Columbia in 2006, and while they only represented 10% of farms in the province, they accounted for 81% of total provincial gross farm receipts reported for 2005.

Highlights of British Columbia Agriculture

- Approximately 90% the principle grains grown in British Columbia are produced the Peace River region (i.e... wheat, canola, barley, oats, etc ...) - *BC Agriculture 2007*
- In 2006 British Columbia had the largest area in the country for apricots, raspberries and cranberries.
- Greenhouse area grew to 57M square feet, a 15 increase since 2001. The province holds close to a quarter (24.0%) of the total greenhouse area in Canada.
- Nursery area rose 7% since 2001 to 11,132 acres. British Columbia has 18% of all nursery area in Canada.
- British Columbia is third in terms of total acres of vegetables, behind Ontario and Quebec. The province reported 17,192 acres in 2006 down 4% since 2001.
- With 2M square feet of mushrooms, British Columbia has 36% of Canada's area of mushrooms.
- The number of bison rose by 41% in British Columbia between censuses to 12,656 head. British Columbia had 7% of Canada's bison.
- Dairy cows rose 2% to 72,756 head in 2006. They make up 7% of dairy cows in Canada. Newfoundland and Manitoba were the only other provinces to show increases in dairy cows.
- Total cattle and calves in the province declined 2% to 800,855 head in 2006. They represent 5% of total cattle and calves in Canada.
- There were 3,232 farms reporting organic production, 16% of all farms in British Columbia. Of the 3,232 farms reporting organic products 86% indicated they were not certified. The predominant group of organic products grown in British Columbia was animal or animal products (milk, eggs, etc …). They were reported on 56% of the province's organic farms.

2.5 Peace Country Agriculture:

The Peace Country is one of many regions that contributes to Canada's overall performance on the international commodity grain markets. With a total of 3.8M hectares of farmland, the Peace Country accounts for 5% of Canada's farmlands: 45% of which is dedicated to field crops. Table 2.8 shows hectares of cropland dedicated across the Peace Country. Eighty-five percent (85%) of the cropland in the Peace Country is located on the Alberta side of the region.

Table 2.8 - 2006 Canada Peace Country Principle Field Crop Hectares – By Municipality

AB – PC	Canola	Alfalfa & Mixes	Wheat	Tame Hay	Barley	Oats	Forage Seeds	Field Peas	Flax	Rye	Total HA
NRT. Sunrise	22,667	10,214	17,170	20,287	1,871	2,049	4,934	1,229	0	0	80,421
Big Lakes	7,141	19,690	5,618	23,987	6,409	6,739	0	0	0	330	69,914
Lesser Slave	738	5,612	770	4,671	1,016	2,319	0	0	0	0	15,126
Clear Hills	22,392	19,042	10,113	21,037	10,894	11,125	8,487	3,416	0	0	106,506
NRT. Lights	31,053	24,209	24,052	18,014	13,060	7,729	4,085	2,608	952	279	126,041
Mackenzie	40,728	21,424	26,728	7,214	5,425	8,648	1,986	4,923	548	155	117,779
Greenview	15,778	26,349	15,025	30,546	5,772	12,924	6,479	1,538	0	152	114,563
Grande Prairie	49,610	49,061	35,918	27,744	29,528	14,890	11,396	4,939	223	243	223,552
Smoky River	76,506	34,412	53,112	6,450	7,791	8,273	7,953	3,867	1,813	0	200,177
Birch Hills	45,606	16,323	36,267	4,170	11,748	4,270	5,681	1,579	128	0	125,772
Spirit River	15,417	6,759	16,488	3,784	2,119	2,214	2,923	821	0	0	50,525
Saddle Hills	23,709	22,208	25,367	20,306	6,416	13,199	12,365	1,808	0	292	125,670
Fairview	25,050	8,988	18,646	4,745	8,490	4,835	4,964	2,908	185	71	78,882
MD Peace	13,511	7,604	14,982	4,824	3,594	2,731	1,010	2,838	190	0	51,284
Unspecified	0	210	0		0	0	1,398	1,112	347	329	1,998
AB – PC	**389,906**	**272,105**	**300,256**	**197,934**	**114,133**	**101,945**	**73,661**	**33,586**	**4,386**	**1,851**	1,488,210
BC-PC	**Canola**	**Alfalfa & Mixes**	**Wheat**	**Tame Hay**	**Barley**	**Oats**	**Forage Seeds**	**Field Peas**	**Flax**	**Rye**	
PR-B	3,347	33,944	4,268	40,103	5,418	10,808	20,803	1,080	0	0	119,771
PR-C	0	5,643	1,966	4,714	656	1,023	0	296	0	0	14,298
PR - D	16,498	21,208	12,708	14,759	6,861	9,829	3,208	905	0	152	86,128
PR-E	0	15,754	144	6,446	842	2,462	0	0	0	0	25,648
NRT Rockies	0	0	0	1,090	0	0	0	0	0	0	1,090
Unspecified	3,481	792	0	52	0	0	2,681	0	36	166	4,527
BC – PC	**23,326**	**77,341**	**19,086**	**67,164**	**13,777**	**24,122**	**26,692**	**2,281**	**36**	**318**	250,462
Grand Total Peace Country	**413,232**	**349,446**	**319,342**	**265,098**	**127,910**	**126,067**	**100,353**	**35,867**	**4,422**	**2,169**	**1,738,672**
Peace Country Other	Other farmland (e.g... other crops, livestock, summer fallow etc ...)										2,100,000
Percent of Canada	8%	7%	3%	9%	3%	6%	36%	3%	1%	1%	

Table 2.9 - Peace Country Grain Production – 2006 Source: Small Area Crop Data – Statistics Canada By Request							
		Canadian Grain Commission Crops (Tonnes '000)					
Production Tonnes	**Region**	**Canola**	**Wheat**	**Barley**	**Oats**	**Peas**	**Flax**
	Peace Country- AB	693.1	823.7	341.5	212.2	91.5	4.9
	Peace Country - BC	63.5	35.1	24.1	25.0	2.3	0
	Total Production	**756.6**	**858.8**	**365.6**	**237.2**	**93.8**	**4.9**
Percent of Canada		8%	3%	4%	7%	3%	<1%

Sources: Alberta Agriculture and Rural Development and Peace Region Production – Statistics Canada

Table 2.9 shows the production of six principle food crops for 2006. In 2006 the Peace Country produced 2,316,900 tonnes of six of the principle grains monitored by the Canadian Grain Commission. Ninety-four percent (94%) of this production occurred on the Alberta side of the Peace Country.

Section 3 – From Farm Gate to Export Position

The transportation of grain to export has many players involved in the handling process. Figure 3.1 outlines the typical flow process involved in transporting grain from the farm gate to export position. Using Peace Country 2006 production and export data, the flow process outlined also quantifies the volume of production that is not captured through the Canadian Grain Commission / grain elevator tracking systems.

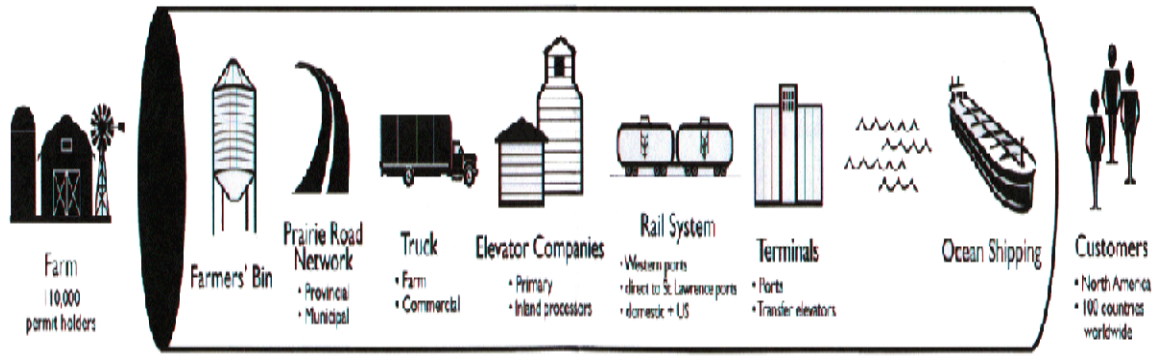


Figure 3.1 Grain Handling and Transportation

Table 3.2 shows the recorded Canadian Grain Commission grain deliveries to the primary elevators throughout the Peace Country. Overall 79% of the above production is captured through deliveries to these primary grain elevators. Note that the three primary elevators in Rycroft collectively received 45% of the deliveries within the Peace Country.

Table 3.2 Peace Country Producer Deliveries of Principle Grains to Primary Elevators
(Tonnes)

Elevator	Storage Capacity #	CAP	% of PC Cap	Canadian Grain Commission Crops Canola	Wheat	Barley	Oats	Field Peas	Flax	Usage
Albright	1	6.1	2%	11,100	24,400	9,600	0.0	2,000	0.0	3%
Dawson Creek 1	2	27.6	11%	95,200	106,300	28,400	12,600	3,200	0.0	13%
Dawson Creek 2	2	15.7	6%	10,600	1,600	1,500	0.0	600	0.0	1%
Falher	1	5.7	2%	158,200	108,700	21,800	3,400	0.0	2000	16%
Fort St. John	2	13.0	5%	14,900	12,500	10,100	12,600	1,700	0.0	3%
Grande Prairie	1	8.1	3%	8,000	43,900	15,300	3,600	3,100	0.0	4%
High Level	1	6.5	2%	18,700	33,800	10,100	2,400	6,800	100	4%
High Prairie	1	1.1	<1%	0.0	9,900	1,000	5,700	2,600	0.0	1%
Hythe	1	4.4	2%	11,700	7,200	15,400	2,000	2,600	0.0	2%
La Crete	1	5.1	2%	4,100	15,700	2,600	1,300	0.0	0.0	1%
Nampa	1	77.2	29%	67,500	43,100	1,3003	6,900	5,700	0.0	7%
Rycroft	3	91.7	35%	413,300	350,400	48,000	700	7,900	0.0	45%
Total Delivered	**16**	**262.2**		**813,300**	**757,500**	**165,100**	**51,200**	**36,200**	**2,100**	**1,824,.900**
% Production Delivered to Primary Elevators				**107%**	**88%**	**45%**	**22%**	**39%**	**43%**	**79%**

Elevator Location	#	Canadian Grain Commission Licensed Grain Handling Companies in Canada Peace Country Company	TY	CAP	Company	TY	CAP	Company	TY	CAP
Albright	1	Cargill Limited	PRI	6.1						
Dawson Creek 1	2	Louis Dreyfus	PRI	21.3	Parrish & Heimbecker	PRI	6.3			
Dawson Creek 2	2	ARGO Source	PRI	2.0	SK Wheat Pool / Viterra	PRI	13.7			
Fort St. John	2	Cargill Limited	PRI	4.4	SK Wheat Pool / Viterra	PRI	8.6			
Grande Prairie	1	SK Wheat Pool / Viterra	PRI	8.1						
High Level	1	SK Wheat Pool / Viterra	PRI	6.5						
High Prairie	1	SK Wheat Pool / Viterra	PRI	1.1						
Hythe	1	SK Wheat Pool / Viterra	PRI	4.4						
La Crete	1	Parrish & Heimbecker	PRI	5.1						
Nampa	1	Great Northern Grain	PRI	77.2						
Rycroft	3	Cargill Limited	PRI	25.7	Louis Dreyfus	PRI	24.0	Pioneer Grain	PRI	42.0

Source: Producer Deliveries - Canadian Grain Council Note: Falher, Sexsmith, and Grimshaw are license exempt

The elevator deliveries noted above reflect 79% of the total production (2.3MMT) of the six grains listed in Table 2.9 Note the row titled **"% of Production Delivered to Primary Elevators".** The difference between produced vs. delivered reflects production that is used on the farm, sold to local markets, or transported directly to buyers / process elevators. Also note, the significant difference among the six grains on how much is delivered to the primary elevator system. As indicated, more Canola was delivered to the primary elevators than was produced. This most likely reflects the addition of surplus from the previous harvest year. Yet, significantly less barley (< ½) and oats (< ¼) were delivered to the primary elevators.

Perhaps the biggest reason for the difference between production vs. delivery is that the Canadian Grain Commission tracks "food grains" whereas many producers in the Peace Country have built lucrative markets selling to the animal industry. Peace Country oats, for example, which is known for its superior nutrient levels, are frequently graded as "pony oats" by producers and sold directly to horse breeders in the United States. Overall most grains grown in the Peace Country (whether they are graded as food or non-food) have a superior quality because of the "northern advantage" (see Section 1.3). Oat producers have defined "the superior characteristic" and matched this superiority to a niche market. Sales and contracts are negotiated directly between the producer and the buyer. Transportation of the harvest is typically by specialized containers that are trucked / shipped directly to the buyer. Graded as non-food, the sales of these grains by-pass the Canadian Grain Commission's tracking system.

As noted previously in Table 3.2, overall 79% (1.8MMT) of the principle grains produced in the Peace Country 2006 was delivered into the primary elevator system. Table 3.3 shows how much of the total delivered to the primary elevators (1.8MMT) was transported to terminal elevators in Canada – i.e. positioned for export.

Table 3.3 – 2006 Peace Country Grain Deliveries to Terminal Elevators Tonnes

To Vancouver

Point of Origin	Canola	Wheat	Barley	Oats	Field Peas	Flax	Total
Albright	3,978	1650	413	0	269	0	6,310.00
Beaverlodge	0	0	0	0	1,146	0	1,146.00
Dawson Creek	79,350	80,925	22,425	9450	2850	0	195,000.00
Falher	144,517	20,227	16,242	734	2,409	818	184,947.00
Fort St. John	11,175	9,375	7,575	945	1,275	0	30,345.00
Girouxville	707	1,320	0	0	0	0	2,027.00
Grande Prairie	7,053	88	4,694	557	3,060	0	15,452.00
Grimshaw	316	1,512	0	0	279	0	2,107.00
Hawk Hills	0	624	487	0	0	0	1,111.00
High Level	18,761	4,058	2,379	615	6,395	0	32,208.00
High Prairie	0	0	0	0	1,958	0	1,958.00
Hythe	11,285	0	8,600	132	2,579	0	22,596.00
Keg River	0	0	0	0	264	0	264.00
Nampa	66,047	6,491	0	0	3,911	0	76,449.00
Rycroft	389,210	34,087	29,614	0	8,965		461,876.00
Smoky River	80	0	0	0	0	0	80.00
Sturgeon	0	90	0	0	91	0	181.00
Van Total	732,479	160,447	92,429	12,433	35,451	818	1,034,057

To Prince Rupert

Point of Origin	Canola	Wheat	Barley	Oats	Field Peas	Flax	Total
Albright	0	7,498	1,715	0	0	0	9213
Dawson Creek	15,870	16,185	4,485	1890	570	0	39000
Dimsdale	0	2,521	0	0	0	0	2521
Donnelly	0	161	0	0	0	0	161
Falher	0	88,403	8,013	0	0	0	96416
Fort St. John	2,235	1,875	1,515	1,890	255	0	7770
Girouxville	0	64,486	337	0	0	0	64823
Grande Prairie	0	12,563	1,688	0	0	0	14251
Grimshaw	0	14,986	2,107	0	0	0	17093
Hawk Hills	0	15,420	0	0	0	0	15420
High Level	0	17,149	0	0	0	0	17149
Hythe	0	2,795	4,269	0	0	0	7064
Judah	0	87	0	0	0	0	87
Keg River	0	933	0	0	0	0	933
Manning	0	3,281	0	0	0	0	3281
McLennan	0	349	0	0	0	0	349

Nampa	0	26,890	79	0	0	0	26969
Peace River	0	501	0	0	0	0	501
Reno	0	427	0	0	0	0	427
Rycroft	18,996	129,956	12,900	0	0	0	161852
Sexsmith	0	1,921	0	0	0	0	1921
Spirit River	0	513	0	0	0	0	513
Sturgeon		2,655	0	0	0	0	2655
Wanham	0	6,713	0	0	0	0	6713
Wembley	0	3,914	0	0	0	0	3914
PR Total	37,101	422,182	37,108	3,780	825	0	500,996

To – Other

Point of Origin	Canola	Wheat	Barley	Oats	Field Peas	Flax	Total
Grande Prairie-TB	0	966	0	0	0	0	966
Falher-CRH	0	4317	0	0	0	0	4317

2006 Peace Country Grain Deliveries to Terminal Elevators

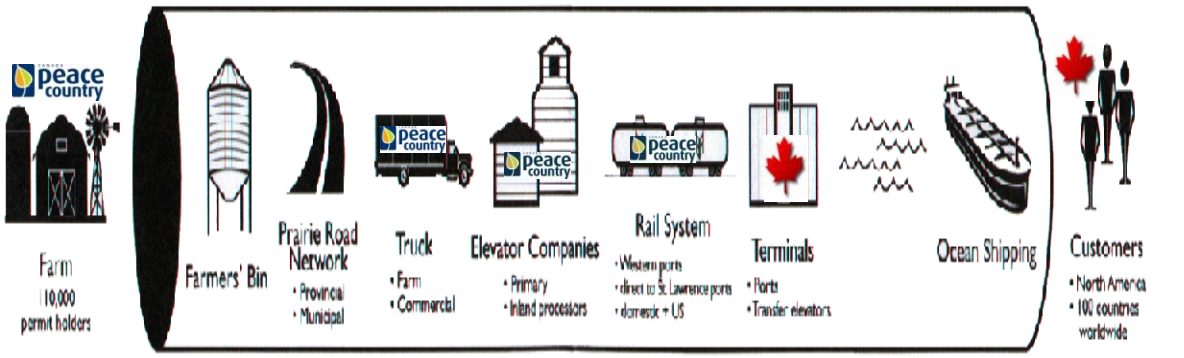
	Canola	Wheat	Barley	Oats	Field Peas	Flax	Total
Export Positioned	**769,580**	**587,912**	**129,537**	**16,213**	**36,276**	**818**	**1,540,336**
% Production	**102%**	**68%**	**35%**	**7%**	**39%**	**17%**	**66%**

Source: Canadian Grain commission – Point of Origin Export Tables

Of particular interest; note that 1.5 MMT of the 2.3MMT of food grains produced in the Peace Country in 2006 has been tracked to export position, reflecting 66% of the total produced. Also, Peace Country identity is maintained through the grain transportation and handling system to the point of drop off for export. The identity of "place of origin" is easily accessible from the current data collection process of the Canadian Grain Commission; hence no investment of resources to maintain regional identity is required – thus far.

However, as shown in Figure 3.4, once Peace Country grains are dropped off at the terminal elevators, regional identity is lost. At the terminal elevators grains that are delivered from across the country are typically pooled together and shipped to international buyers as a "Product of Canada". To the international buyer, the *Canadian Maple Leaf* is the visual marker of the brand they are purchasing

Diagram 3.4 – The Loss of Peace Country Identity from Farm Gate to Export



2.3MMT Produced → 1.8MMT Delivered → 1.5MMT Exported

66% of Production Tracked from the Farm Gate to Port for Export
MMT = Million Metric Tonnes

> *At terminal elevators, the Canadian Grain Commission (CGC) captures grain deliveries on a railcar/truck basis by commodity and origin (i.e. country elevator location). That is unfortunately where traceability of the movement ends with respect to CGC data. . As grain is shipped from the terminal elevator, the CGC only captures the destination info (i.e. export, domestic, transfers).*
>
> Source: Anh Phan, Chief Statistician anh.phan@grainscanada.gc.ca

Section 4 - Recommendations

With 3.8M hectares (9.3M acres) of farmlands, Canada Peace Country represents 5% of Canada's agriculture lands. In 2006 the Peace Country contributed 4% (2.3MMT) towards Canada's total production (58MMT) of six of the principle grains that feed 95% of the global population. Internationally Canada ranks in 6th place for production and 4th in volume exported (top exporters – United States, Australia, and Argentina).

Canadian farmers are land-locked. To position for export to the growing Asian markets Canadian grains are transported a long distance that includes passing through the Rockie Mountains. On average Canada exports 45% -50% of the principle grains it produces. In the Peace Country the export ratio is closer to 66%; making the region significantly more export dependent.

In 2006 the Peace Country exported 100%+ of its canola production; the port of choice being Vancouver (97%). The Port of Prince Rupert was the port of choice for wheat; with 72% delivered for export positioning (technically the port of "choice" for Peace Country wheat is largely under the direction of the Canadian Wheat Board). One of many contributors to the overall Canadian export trade of principle food grains, Peace Country food grain deliveries are pooled with other food grain deliveries from across the country and shipped out under the umbrella of "Canada". A vested practice that has served farmers well over the generations and has made possible the awarding to Canada of key trade agreements requiring large, predictable supplies of the food grains.

The Peace Country is internationally renowned for the superior quality of its agricultural products, yet the principle grains tracked in this report lose their Peace Country identity once delivered to port for export positioning because of pooling under the "Canada" brand. Under what conditions does the Peace Country have the opportunity to stand out to be internationally recognized as superior? The answer to this question is vital to the vision of Branding the Peace Country Association.

The vast majority of the "superiority" claim for Peace Country agricultural products is leveraged from non-food grains and honey! One of the reasons for this is because Canada invests a huge amount of resources into monitoring, cross-checking, protecting, and tracking food grain exports. This system contributes to the "Canada" brand value on the international markets - "i.e. … consistent quality. Canada does not need to identify regional location to international buyers. In reality the only way a region would be regionally identified is if the region does the branding campaign themselves (e.g Branding the Peace Country).

The following recommendations are intended to help Branding the Peace Country achieve its vision of having Peace Country agricultural products recognized for its superior quality while taking into consideration the transportation challenges and information presented in this report.

Recommendation #1: Reconsider the Expense of Positioning for Export:

In any given year, the Peace Country spends millions of dollars to transport principle food grains to export position while losing regional identity to the international buyer. The Peace Country represents only 4% of the principle food grains that are exported from Canada. An alternative to expensing the transportation of bulk food grains to export could be to redirect resources that concentrate on garnering sales contracts equivalent to (preferably higher) the monies received from export sales minus the cost of international shipping. Though many Peace Country producers already do this, the Peace Country region as whole might want to incorporate this as a strategy – domestic processing and value-added agri-foods opportunities should considered.

Recommendation # 2: Increase Free-Market Crop Production

Peace Country land dedicated to wheat and barley accounts for almost more than 25% of all the cropland in the Region. These garins are the most heavily monitored and controlled food-grains in the country which place limitations on marketing, costs, and transportation options. The Peace Country should consider alternative crops that offer greater flexibility in marketing and control of buyer relations/contracts. Proven regional growing advantages have been shown in canola, flax, alfalfa, oats, fescue, and timothy hay.

Recommendation # 3: Build Niche Markets and Transport in Smaller Containers

Because of the small volume produced in the Peace Country and its' already being world renowned for its superior agricultural products, the Peace Country should consider decreasing its bulk transportation dependence on the rail system and increasing its niche market transports with containerized truck transporters/sea shippers to pre-contracted buyers.

An added leverage would be for Peace Country producers to know the chemical/ nutritional/ and /or growing advantages of their products in comparison to other producers (provincial, national, and international) so they can negotiate higher prices.

Recommendation # 4: Merge Regional with National Branding Logo

Approximately 455-50% of Canadian domestic food and agricultural production is exported either directly as primary products or indirectly as part of processed products; amounting to $32B in revenues to the National economy. The Canada Peace Country logo currently used by Branding the Peace Country should be reassessed for its utility for agricultural commodity producers that want to sell their harvests/products to international buyers. Internationally the Canadian Maple leaf has developed visual identity with a respected assumption of "quality & safety" to the buyer.

Canada's food and agriculture is a dynamic sector clearly poised for more success. Recent market research shows that Canada already has a positive image around the world. We're known to be a trustworthy, reliable and competent people. Our land is thought of as pristine, fresh and environmentally friendly. Our food and agriculture products are considered safe, fresh, and natural. *Source: Branding Canada - Agriculture Canada*

Branding Canada for the Food and Agriculture Sector - Branding Canada for short - was developed in close partnership with industry and provincial governments and is based on solid research. This initiative is designed to help take Canada's strong international image and leverage it to increase the sales and profile of Canadian food and agriculture products. The national branding initiative allows for incorporation of regional identity in the design of a logo that merges with the national logo. It would be prudent for Branding the Peace Country to leverage off these national investments and resources. Diagram 4.1 shows a possible merger of both efforts that capitalizes on the "power of Canada" while maintaining "Peace Country identity".

Figure 4.1 Merging Branding Canada with Branding the Peace Country

Recommendation # 5: Advocate for Ingredient Identity in Food Products

Increasingly consumers want to know where the ingredients in their food products were grown. Recent events creating consumer non-confidence in the 'Product of Canada" label are forcing Canadian processors and manufacturers to identify the ingredient suppliers in their retail products. Branding the Peace Country should adopt a protocol similar to the Agriculture Canada's response to these demands. Namely, Peace Country agri-food products should contain a minimum of 51% Peace Country grown agricultural ingredients in order to be endorsed under the Canada Peace Country logo.

Accordingly, Branding the Peace Country needs to be a supporter and advocate of a Canadian consumer-friendly traceability system that identifies the producer of the main ingredients in retail consumer food products. This advocacy can only benefit Branding the Peace Country in the long term as regional identity must first be accomplished before producer identity can be captured in national marketing and labeling systems.

Recommendation #6: Avail of the Peace River Waterways to Transport Grains:

Canada Peace Country should assess the feasibility of re-opening a water-way barging system along the Peace River for the transportation of its grains. This concept is not new and was very viable in the early 1900's. The Peace River was, a generation ago, a very viable means of transporting goods to and from the northern regions.

> *Numerous steamboats plied the waters of the Peace, but none more famous or as large as the D.A. Thomas, which after 15 years of service, sank in 11 feet of water in 1929. With the end of the steamboat era, rail transport became the most important link to the south, leaving behind the greatest natural transportation route for the north.*
> *Source:* A Very Brief History of the Peace River; Clare. G.

The barging of grains to export position has been renewed along the Mississippi in the United States and along river towns in Argentina. Table 6.1 shows the diversification of transportation intermodal usage by farmers in the United States. The biggest increase in barging has been from the northwest farmers accessing, via barging, the exit ports of the Seattle region to the Asian markets. Over 20% of the grains positioned for export are barged through the waterways of the United States.

Table 4.2 Average Annual Tonnage - by Mode – USA to Export ('000 tonnes)

Grain	Motor	Rail	Barge	Total
Corn	84,779.	63,351.	36,673.	184,803.
Wheat	13,965.	42,872.	13,188.	70,025.
Soybeans	29,789.	15,356.	17,632.	62,777.
Other	13,516.	13,053.	3,223.	29,792.
Total	**142,049.**	**134,632.**	**70,716.**	**347,397.**

Source: Comparing Grain Transportation in the United States and Argentina. Goldsby, T.J. (2000)

The unavailability of rail service in Argentina and its relatively poor service have limited its use as a primary means of grain transport. Progressive barge carriers in Argentina are already achieving considerable efficiencies within the nation's network of navigable waterways. So much so that foreign investment has dramatically expanded barge and towing capacity. The Peace Country, wrapped up in rail and truck transport challenges, may be over-looking the Peace River watershed system as a potential transporter of grains from the Region.

Section 5 - Resources

Note: The following resources were reviewed for literature review, data collection, and/or direct references in this report. If not otherwise identified in the research report, exact location of specific tables, graphs, and/or pages contributing to the information presented in this report are available from the researcher. All requests must be directed through the commissioner of this report – Branding the Peace Country Association.

Branding the Peace Country reserves the right to decline access to detailed information and data gathered for the purpose of this research report.