Annual Report

2009-2010 Crop Year

Monitoring the Canadian Grain Handling and Transportation System

1 Summary Report

Government of Canada / Gouvernement du Canada

Quorum Corporation

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Additional copies of this report may be downloaded from the Quorum Corporation website.

Message from the Monitor

Quorum Corporation is rapidly approaching the tenth anniversary of its appointment by the federal government as the Monitor of Canada's Grain Handling and Transportation System (GHTS). In that time, Quorum Corporation has produced over 40 reports under the government's Grain Monitoring Program (GMP). Although these reports have been well received, the stakeholder community has offered a number of suggestions on how they could be made better.

In addition to the indicators themselves, many of these suggestions focused on the way they are structured and presented. The issuance of our tenth annual report seemed not only an appropriate juncture at which to restructure and reorganize the presentation of the reports, but also one where we could begin to build on some of these ideas for improvement.

With this in mind, the Monitor's report for the 2009-10 crop year has been completely revamped in an effort to make it more readable and informative. In addition to a new appearance, the report has been restructured as a means of making it easier to navigate.

We have also moved to enhance the electronic availability of the data assembled since the beginning of the GMP. Until now, such access has been restricted to the downloading of the data tables in a standard .PDF format. Stakeholders may now download these tables, which contain eleven years worth of quarterly data, as .XLSX spreadsheets.

We hope that these enhancements will meet with the favour of all stakeholders, and welcome any comments that you might wish to offer on how we can make it better.

QUORUM CORPORATION

Foreword

The following report details the performance of Canada's Grain Handling and Transportation System (GHTS) for the crop year ended 31 July 2010, and focuses on the various events, issues and trends manifest in the movement of Western Canadian grain during the past year. This is the tenth annual report submitted by Quorum Corporation in its capacity as the Monitor appointed under the Government of Canada's Grain Monitoring Program (GMP).

As with the Monitor's previous quarterly and annual reports, the report that follows is structured around a number of measurement indicators. Since the beginning of the GMP, these indicators have traditionally been subdivided into a five-group series defined by the Government of Canada. For the 2009-10 crop year, however, the indicators have been reorganized into a new six-group series, comprising:

Series 1 – Production and Supply
Series 2 – Traffic and Movement
Series 3 – Infrastructure
Series 4 – Commercial Relations
Series 5 – System Efficiency and Performance
Series 6 – Producer Impact

As in the past, each series builds on data collected by the Monitor from the industry's various stakeholders, and frames the discussion using year-over-year comparisons. To that end, activity in the 2009-10 crop year is largely gauged against that of the 2008-09 crop year. But the GMP was also intended to frame recent activity against the backdrop of a longer time series. Beginning with the 1999-2000 crop year – referred to as the GMP's "base" year – the Monitor has now assembled relatable quarterly data in a time series that spans eleven crop years. This data constitutes the backbone of the GMP, and is used widely to identify significant trends and changes in GHTS performance.

Although the data tables presented in Appendix 5 of this report can only depict a portion of this time series, the full series can be obtained as an .XLSX spreadsheet from the Monitor's website (www.quorumcorp.net). With the changes made from previous year, the index of data tables references both the current measures numbers with those used over the previous 9 years. Additional .PDF copies of this report, as well as all past reports, can also be downloaded from the Monitor's website.

QUORUM CORPORATION
Edmonton, Alberta
December 2010

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Executive Summary

PRODUCTION AND SUPPLY

From the outset, the 2009-10 crop year looked as though it would be a difficult one. Beginning with a dry spring, the abnormally cooler temperatures that followed led to widespread concerns over the size and quality of the crops that would be harvested in the fall. But an unusually warm September shielded the late plant development from the potential effects of a killing frost, largely preserving both the quantity and quality of grain harvested. Overall grain production for the 2009-10 crop year totalled 56.1 million tonnes, a 7.0% decrease from the previous crop year's record-setting output of 60.4 million tonnes.

The 2008-09 crop year's higher production precipitated an increase in the amount of grain carried forward into the 2009-10 crop year, which totalled some 9.5 million tonnes. When combined with 56.1 million tonnes of new production, the grain supply reached 65.7 million tonnes, a slight reduction of 0.5% from the previous crop year's 66.0 million tonnes. This constituted the third largest recorded during the GMP.

TRAFFIC AND MOVEMENT

Given a modest increase in the grain supply, the GHTS's total handlings in the 2009-10 crop year proved only moderately different from that of the previous year. However, there were a number of distinguishing features that arose from the distribution of production and prevailing market conditions.

- Country elevator throughput, as gauged by all road and rail shipments from the primary elevators situated across western Canada, decreased by 4.2%, falling to 33.9 million tonnes from the GMP record of 35.3 million tonnes. Much of the decrease could be traced to a drought-induced reduction in Alberta volumes, where shipments fell by 17.8%.

- The amount of grain moved by rail to western Canadian ports increased by 4.0%, with the total rising to a record 28.4 million tonnes from 27.3 million tonnes a year earlier. As in past years, the vast majority of this traffic, some 27.8 million tonnes, moved in covered hopper cars. The remaining 0.7 million tonnes moved in different forms of railway equipment, with the most predominant being containers. Much of the increase in volume was attributable to heavier railway movements in both the first and second quarters.

- The port of Vancouver remained the principal export destination for western Canadian grain, receiving 17.7 million tonnes, up from 15.7 million tonnes a year earlier. Prince Rupert also experienced an increase in volume, with total shipments climbing to 4.8 million tonnes from 4.7 million tonnes. The volume of traffic directed to Thunder Bay has largely been on the decline. A 17.2% decrease in the 2009-10 crop year reduced its rail volume to 5.4 million tonnes from 6.5 million tonnes a year earlier. In contrast, rail shipments to Churchill increased by 21.7%, to 0.5 million tonnes from 0.4 million tonnes.

- Port throughput, as measured by the volume of grain shipped from terminal elevator and bulk loading facilities located at these four ports, totalled 25.8 million tonnes. While this represented a gain of only 0.5% over the previous year's 25.6 million tonnes, it denoted the setting of a second consecutive GMP volume record. Vancouver accounted for 59.4% of this volume, with total marine shipments climbing to a record 15.3 million tonnes from the previous crop year's 14.3 million tonnes. This was complemented by another 4.7 million tonnes exported through Prince Rupert. Thunder Bay did not experience the same positive results as throughput decreased by 17.0%, to 5.2 million tonnes from 6.3 million tonnes a year earlier. Churchill saw its handlings increase by 24.4%, to 0.5 million tonnes from 0.4 million tonnes.

INFRASTRUCTURE

The infrastructure that defines the GHTS in western Canada has undergone significant change in the last eleven years. Much of this reflects the rationalization of the country elevator network, which by the end of the 2009-10 crop year had been reduced to just 365 facilities from 1,004. Much of this transformation took place in the first years of the GMP, with only modest changes having been made since then. Still, the evolution continues, with the following changes being noted in the 2009-10 crop year.

- The total number of country elevators was reduced by just one in the 2009-10 crop year, to 365 from 366 a year earlier. This brought the accumulated loss to 639 facilities, or 63.6%, since the beginning of the GMP. The limited scope of the changes made in the last several years continues to suggest that most grain companies have concluded their elevator rationalization programs. Much the same is true of the decline in grain delivery points, which have largely fallen in conjunction with the reduction in elevators. Despite this, the loss in terms of associated storage capacity has been significantly less, just 9.9%. This was due to the fact that while grain companies were methodically closing many of their smaller elevators, they were also opening and expanding larger ones. The expansion of several elevators in the 2009-10 crop year resulted in yet another 273,600 tonnes of storage capacity being added back into the system, with the overall total being raised to more than 6.3 million tonnes for the first time since the 2001-02 crop year.

- Although the railway network in western Canada has changed over the last eleven years, the scope of that change has proved comparatively modest in relation to the elevator system it serves. With no abandonment posted in the 2009-10 crop year, the total reduction in railway route-miles over this period amounts to just 8.0%, with 17,904.7 route-miles of the original 19,468.2 route-miles remaining. The largest share in this 1,563.5-route-mile reduction came from the abandonment of 1,363.1 route-miles of light-density, grain-dependent branch lines. Still, the 2009-10 crop year saw a further shift in the balance between the Class 1 and non-Class-1 carriers as a result of the creation of two new shortline operations, the Last Mountain Railway and the Battle River Railway. This served to reduce the infrastructure under CN and CP management to 15,403.7 route-miles, or 86.0%, while increasing that under shortline control to 2,501.0 route-miles, or 14.0%.

- With no changes to the terminal elevator network recorded in the 2009-10 crop year, the system remained comprised of 15 licensed facilities with 2.5 million tonnes of storage capacity. These values proved only marginally greater than those of the

GMP's base year, which were benchmarked at 14 elevators with 2.6 million tonnes of storage capacity. With seven of the elevators and 47.3% of the storage capacity, Thunder Bay continued to hold the largest share of these assets. Vancouver held second place with six facilities and 38.5% of the system's storage capacity. Prince Rupert and Churchill both followed with one terminal elevator each, and storage capacity shares of 8.5% and 5.7% respectively.

COMMERCIAL RELATIONS

The 2009-10 crop year witnessed significant change in the cost of most commercial services. Country and terminal elevator handling rates increased while the cost of railway freight generally declined.

- Despite the reduction in fuel costs that followed the collapse in crude oil prices in the latter half of 2008, commercial trucking rates for the movement of grain have remained largely unchanged since the first quarter of the 2008-09 crop year. They have been sustained by the comparatively large volumes of grain that have continued to move. As a result, the composite price index for short-haul trucking at the end of the 2009-10 crop year stood unchanged from the 132.2 attained eighteen months earlier.

- Railway freight rates moved generally lower in the early part of the 2009-10 crop year but rebounded substantially towards its close. Although much of this reflected the seasonal pricing initiatives introduced by the railways three years earlier, these actions also appeared to accentuate the price differentiations that had arisen in several corridors. To a large extent, these actions brought a greater degree of complexity to railway pricing, and underscored a possible heightening of the competition between CN and CP at specific points in the network. Taken altogether, these patterns continue to suggest that the railways are more favourably disposed towards the handling of westbound grain, and that they have become more willing to use price in an effort to shape that movement.

- The Canadian Transportation Agency (the Agency) determined that the statutory revenues derived from the movement of regulated grain by CN and CP, which totalled $918.0 million on a combined basis, fell $5.4 million below the legally prescribed limit. CN was responsible for the largest portion of this shortfall, with its revenues having fallen $3.7 million, or 0.8%, shy of its $467.6-million limit. The CP shortfall, which amounted to $1.7 million, denoted a narrower 0.4% undercutting of its $455.7-million limit.

- The per-tonne rates assessed by grain companies for a variety of primary elevator handling activities increased moderately in the 2009-10 crop year. Those assessed for the receiving, elevating and loading out of grain rose by an average of 0.6%; for the removal of dockage, 3.5%; and for elevator storage, 5.4%.

- Most of the GHTS's terminal elevators increased their per-tonne rates for the receiving, elevating and loading out of grain in the 2009-10 crop year. The only exception was found in the rates posted by Churchill, which remained unchanged for a sixth

consecutive year. On the whole, these pricing actions served to raise the composite price index by a further 1.2%. Storage charges also rose by about 1.9%,

Tendering

The CWB issued a total of 233 tenders calling for the shipment of approximately 2.4 million tonnes of grain during the 2009-10 crop year. This represented a 28.8% reduction from the 3.4 million tonnes put out to tender a year earlier. As in past years, the majority of this tonnage, 74.8%, related to wheat. This entailed a potential movement of 1.8 million tonnes, which stood 18.0% below the 2.2 million tonnes called a year earlier. Durum ranked second, with calls for over 0.4 million tonnes having been issued. This denoted 16.9% of the overall total compared to just 7.6% the year previous. Barley calls, which fell to an 8.3% share from the 27.5% share seen a year earlier, accounted for the remaining 0.2 million tonnes.

The CWB's tender calls were met by 759 bids offering to move 5.0 million tonnes of grain, slightly more than twice the amount sought. The majority of these bids, 71.2%, responded to calls for the movement of wheat. Another 26.8% responded to those issued for durum, while the remaining 2.0% answered those for barley. Ultimately, this resulted in the awarding of 342 contracts for the movement of 2.5 million tonnes of grain. This represented a gain of almost 0.3 million tonnes over the 2.2 million tonnes awarded a year earlier. The largest proportion, 52.5%, was directed to the port of Vancouver. This was followed in turn by Prince Rupert and Thunder Bay, which saw shares of 26.8% and 20.7% respectively. These shipments represented 16.4% of the total tonnage shipped by the CWB to western Canadian ports in the 2009-10 crop year.

Advance Awards

The total tonnage moved under the CWB's advance car awards program fell by 13.9% in the 2009-10 crop year, to 1.6 million tonnes from 1.9 million tonnes the year previous. This represented 10.8% of the total tonnage shipped to the four ports in western Canada by the CWB, against the 12.1% share produced a year earlier.

In conjunction with the 2.5 million tonnes that moved under the CWB's tendering program, a total of 4.1 million tonnes of CWB grain were moved under the auspices of these two programs. On a combined basis, this represented 27.2% of the CWB's total grain shipments to the four ports. This fell considerably short of the 40% that had been targeted, but slightly above the 26.5% that had been handled under these same two programs a year earlier. This marked the first upturn in the combined share in three years.

Commercial Developments

There were a number of commercial developments that impacted the GHTS in the 2009-10 crop year, these included:

- The restriction of various Canadian grain imports into the European Union, the United States and China as a result of the imposition of new non-tariff barriers, all of which were aimed at limiting the spread of genetically modified flaxseed or potentially contaminated canola and canola meal. By the close of the 2009-10 crop year, there was a growing recognition that

these issues could have far-reaching consequences for the entire GHTS. Moreover, the industry was becoming attuned to the fact that such trade barriers could arise quickly, leaving marketers with little lead time to develop alternative commercial strategies.

- The reaction of several producer groups to CN's decision to delist 53 producer-car loading sites was largely a negative one. Although a number of producers voiced objection, and one even challenged the railway's right to do so before the Canadian Transportation Agency, the Agency found that no railway was obligated to maintain and operate all of its existing sites, let alone any particular site requested by a producer. Rather, the railway need only furnish adequate and suitable accommodation for the traffic being offered.

- Although service complaints against the railways have diminished, they have not vanished altogether. In response to the concerns that had been raised by a wide number of shippers regarding the state of railway service in Canada, the federal government committed itself in early 2008 to a review of railway service. The general focus of this review was to examine the performance of the freight logistics system in Canada with an eye towards identifying any problems or issues respecting railway service. Representatives from all corners of the grain industry were actively involved in the review process, voicing anew the grain industry's long-standing concerns over the erratic nature of existing railway service and the need for stronger regulatory measures. Although this work was largely completed by the close of the 2009-10 crop year, the review panel's final report was not expected to be released until sometime towards the end of 2010.

SYSTEM EFFICIENCY AND PERFORMANCE

Although the grain supply declined by 0.5%, falling to 65.7 million tonnes from 66.0 million tonnes, the 28.4 million tonnes of grain moved in the 2009-10 crop year proved to be the largest in the GMP's history. As a result, the pressures brought to bear on the GHTS during this period proved to be the greatest yet experienced. This was reflected in generally heightened country elevator, railway and terminal elevator activity. With the exception of the country elevator system, each of these elements showed a modest improvement in efficiency and performance.

- The overall amount of time involved in moving grain through the supply chain rose by 4.6% in the 2009-10 crop year, to an average of 52.2 days from 49.9 days a year earlier. This was due primarily to the additional time spent by grain in storage in the country elevator system, which increased by an average of 2.8 days. Partially offsetting this was a 0.5-day reduction in the amount of time spent in terminal inventory. Despite the overall increase, the amount of time spent by grain in moving through the GHTS in the 2009-10 crop year remains one of the better values recorded since the beginning of the GMP.

- One area of weakness in the supply chain related to the average amount of time vessels spent in port, which increased by 34.8% in the 2009-10 crop year, rising to an average of 6.2 days from 4.6 days a year earlier. The most significant increases were registered by the west-coast ports, with Prince Rupert posting a 38.3% rise against a 24.2% increase at Vancouver. These were followed in turn by Churchill, which posted an increase of 18.4%, and Thunder Bay, which reported a 12.5% rise. This overall rise

was reflected in increases in both the amount of time vessels spent waiting to load, as well as in actual loading. Vessels spent an average of 3.0 days waiting to load, up 57.9% against the previous crop year's 1.9-day average. For loading, the increase proved a lesser 18.5%, rising to an average of 3.2 days from 2.7 days a year earlier.

PRODUCER IMPACT

All of the data assembled since the beginning of the GMP has consistently shown that the financial returns accruing to producers have been heavily influenced by the prevailing price of grain. While the export basis has unquestionably risen over time, it is the prevailing price of the commodity that continues to have the most sway over these returns. This was equally true of the 2009-10 crop year, where falling grain prices were chiefly responsible for reducing producer netbacks.

- The producer's netback for CWB grains declined sharply in the 2009-10 crop year, with a reduction of 28.5% on 1CWRS wheat producing a return of $181.05 per tonne, and a reduction of 51.9% on 1CWA durum yielding a return of $153.59 per tonne. To an extent, these lower returns were cushioned by modest reductions in the export basis of both commodities, with that of wheat falling by 1.3% to $65.86 per tonne, and that of durum declining by 9.2% to $79.52 per tonne.

- For non-CWB commodities, a reduction of 10.1% on 1 Canada canola lowered the producer's netback to $374.46 per tonne, and a 17.7% decline for large yellow peas reduced its yield to $183.40 per tonne. Changes in the export basis was mixed, with that of canola increasing by 2.3% to $49.73 per tonne, while that of large yellow peas declined by 22.9% to 78.32 per tonne.

Producer-car loading has increased substantially since the beginning of the GMP. This has come about as a result of many factors, not the least of which has been the formation of producer-car loading groups. These range from small groups loading cars with mobile augers on a designated siding, to more sophisticated organizations with significant investments in fixed trackside storage and carloading facilities. A number have even expanded beyond these operations, forging new shortline railways to connect them with the Class 1 carriers.

- The number of producer-car loading sites situated throughout western Canada has declined sharply since the beginning of the GMP, falling to 378 from 709. Still, the reduction rate had abated substantially in recent years. However, CN's decision to close 53 of its facilities in the 2009-10 crop year, and the closure of another six by other carriers, spurred a single-year reduction of 13.5%, the second largest recorded since the beginning of the GMP.

- Even with reduced producer-car-loading sites, producer-car shipments have almost quadrupled since the beginning of the GMP, reaching a height of 13,243 carloads in the 2008-09 crop year. Still, producer-car shipments slid 7.9% in the 2009-10 crop year, falling to 12,198 carloads from the GMP record set just a year earlier.

Section 1: Western Canadian Production and Supply

Indicator Description	Table	1999-00	2007-08	2008-09	2009-10 Q1	Q2	Q3	Q4	YTD	% VAR
Production and Supply										
Crop Production (000 tonnes)	1A-1	55,141.7	48,517.3	60,351.7	56,144.2				56,144.2	-7.0%
Carry Forward Stock (000 tonnes)	1A-2	7,418.2	7,450.6	5,646.6	9,515.3				9,515.3	68.5%
Grain Supply (000 tonnes)		62,559.9	55,967.9	65,998.3	65,659.5				65,659.5	-0.5%
Crop Production (000 tonnes) – Special Crops	1A-3	3,936.7	4,404.3	5,157.4	5,573.7				5,573.7	8.1%

PRODUCTION AND SUPPLY

From the outset, the 2009-10 crop year looked as though it would be a difficult one. Beginning with a dry spring, the abnormally cooler temperatures that followed led to widespread concerns over the size and quality of the crops that would be harvested in the fall. But an unusually warm September shielded the late plant development from the potential effects of a killing frost, and largely preserved both the quantity and quality of the grain that was harvested.

Drier-than-normal growing conditions were experienced across much of the prairie, but nowhere more acutely than in the central and northern regions of Alberta.[1] This served to reduce overall grain production for the 2009-10 crop year to 56.1 million tonnes, a 7.0% decrease from the previous crop year's record-setting output of 60.4 million tonnes. Even so, the crop still ranked as the second largest in the GMP's history, coming in well above the typical 50-million-tonne mark. [Table 1A-1]

Provincial Distribution

The reduction in grain production was concentrated largely in Alberta which, owing to poorer growing conditions, saw total production fall by 20.1%, to 16.0 million tonnes from 20.0 million tonnes a year earlier. Given its magnitude, this 4.0-million-tonne loss accounted for over 95% of the net decline in total prairie grain production. Manitoba's output declined by 300,000 tonnes to 10.1 million tonnes, (3.0%) accounting for much of the remainder.

Posted against these tonnage losses were some comparatively modest gains made by Saskatchewan and British Columbia. Saskatchewan, which remained the largest grain-producing province in western Canada, saw total output rise by just 0.3%, to 29.9 million tonnes from 29.8 million tonnes. Although British Columbia posted a production increase of

1 The comparison made here is based on historical data gathered by Agriculture and Agri-Food Canada for the 30-year period extending from 1961 to 1990.

Figure 1: Average Precipitation – 1 April to 31 August 2009

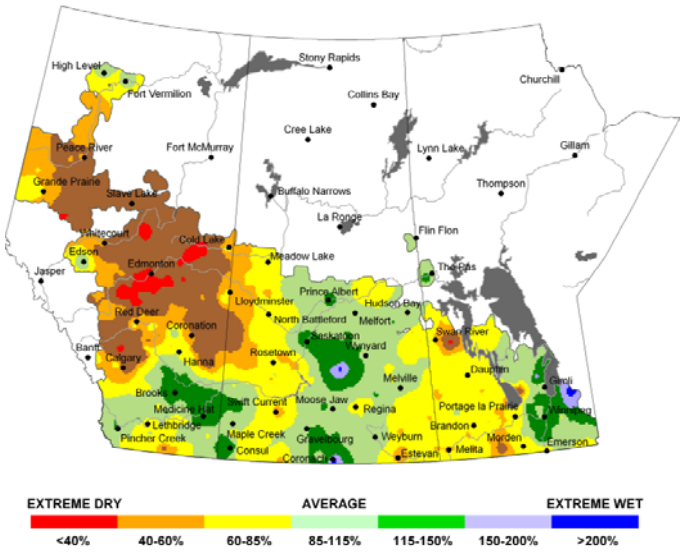
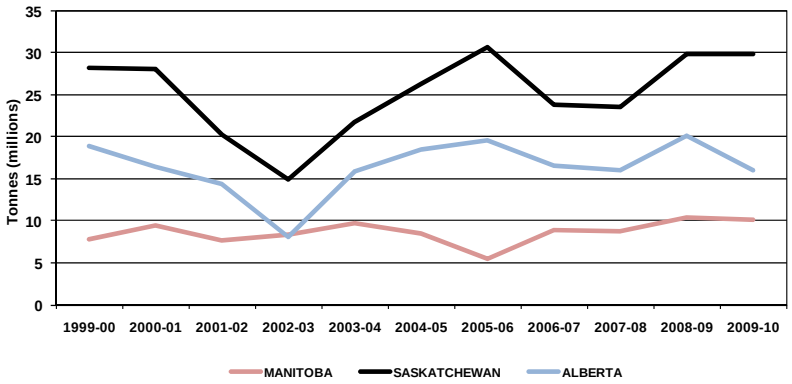


Figure 2: Provincial Grain Production



22.4%, which rose to 190,800 tonnes from 155,900 tonnes a year earlier, the incremental gain in tonnage amounted to just 34,900 tonnes.

Commodity Distribution

While the impact of the decline in production was geographically dispersed, with some areas harder hit than others, the decline in grain production was also reflected in the reduced output of all major crops, save that of flaxseed. CWB grains posted the largest relative loss, with a decrease of 8.5% as compared to 4.5% for non-CWB grains.[2] With total CWB grain production falling to 33.6 million tonnes from 36.7 million tonnes a year earlier, this sector accounted for 3.1 million tonnes of the overall loss in production. The decline in non-CWB grain production, which fell to 22.6 million tonnes from the previous crop year's GMP record-of 23.6 million tonnes, accounted for the remaining 1.1 million tonnes.

The 3.1-million-tonne decline in CWB-grain production was largely shaped by a 20.4% decline in the amount of barley harvested, which fell to 8.9 million tonnes from 11.2 million tonnes a year earlier. This was augmented by the effects of a 3.6% reduction in wheat production, which saw output fall to 19.3 million tonnes from 20.0 million tonnes the year previous. A 2.2% decrease in durum production contributed another 0.1 million tonnes to the shortfall.

With 12.4 million tonnes of production, canola accounted for slightly more than half of the 22.6 million tonnes of non-CWB grains harvested in the 2009-10 crop year. Still, a 0.2-million-tonne reduction in the size of the canola crop accounted for only one-sixth of the 1.1-million-tonne decrease in non-CWB grain production. This was a result arising from a broad series of output declines, which included a 0.4-million-tonne loss

2 The Canadian Wheat Board Act gives the CWB sole marketing authority for wheat and barley produced by western Canadian farmers for export and domestic human consumption. Those not specifically identified in the Act are designated as non-CWB grains under the Grain Monitoring Program.

Figure 3: Grain Production – CWB and Non-CWB Grains

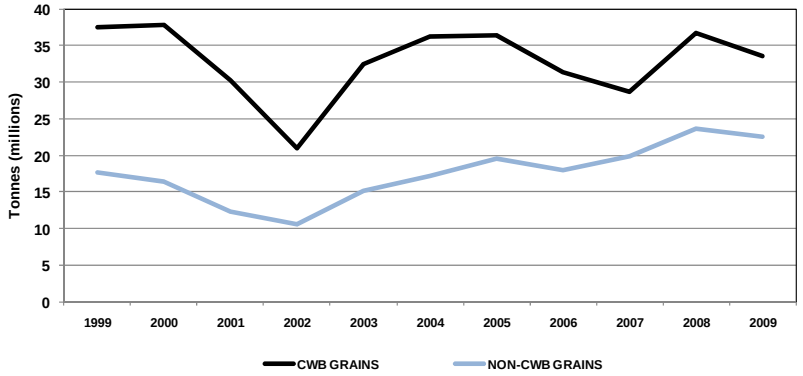
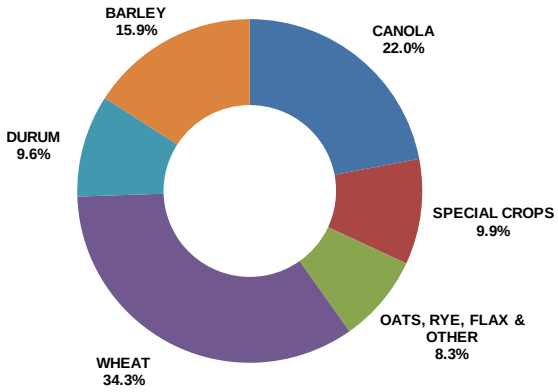


Figure 4: Major Grain Production – 2009-10 Crop Year



in oat production as well as a 0.2-million-tonne shortfall in the amount of dry peas harvested.

Special Crops

Running counter to this general trend was special-crop production, which posted an 8.1% increase, and rose to a GMP record of 5.6 million tonnes.[3] Much of this 0.4-million-tonne gain was derived from a 64.2% increase in lentil production, which climbed to a GMP record of 1.5 million tonnes from 0.9 million tonnes a year earlier. Although significant gains were also noted for the production of mustard seed, chickpeas and dry beans, these were largely offset by reductions in the output of other commodities. The most significant drawdown came from a 5.4% reduction in dry-pea production – the sector's largest crop – which contracted by 0.2 million tonnes to 3.4 million tonnes. [Table 1A-3]

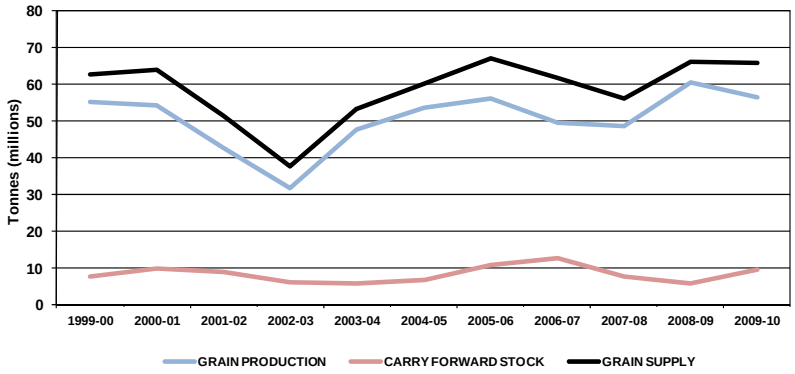
Carry-Forward Stock and Western Canadian Grain Supply

While grain production has the most immediate impact on the grain supply, it is also affected by the amount of grain held over in inventory from the previous crop year. In fact, these carry-forward stocks typically account for about one-sixth of the overall grain supply.[4] These stocks tend to move in conjunction with changes in grain production, albeit on a lagging basis.

3 For the purposes of the GMP, special crops are defined as including the following: dry peas; lentils; mustard seed; canary seed; chickpeas; dry beans; sunflower seed; safflower seed; buckwheat; and fababeans. An often referenced subset of special crops, known as pulse crops, encompasses dry peas, lentils, chickpeas, dry beans and fababeans.

4 Carry-forward stocks are defined as inventories on hand, be it on farms or at primary elevators, at the close of any given crop year (i.e., 31 July). As such, they are also deemed to be the stocks on hand as the new crop year begins (i.e., 1 August). The carry-forward stocks cited here are derived from data provided by Statistics Canada and the Canadian Grain Commission.

Figure 5: Western Canadian Grain Supply



Increased grain production in the 2008-09 crop year precipitated a rise in the amount of grain carried forward into the 2009-10 crop year. Totalling some 9.5 million tonnes, these stocks proved to be 68.5% greater than the 5.6 million tonnes that had been carried forward a year earlier. Much of the impetus for this 3.9-million-tonne increase came from mounting global grain supplies, which also contributed to the softening of commodity prices. When combined with 56.1 million tonnes of new production, the grain supply reached 65.7 million tonnes, a reduction of 0.5% over the previous crop year's 66.0 million tonnes. This constituted the third largest grain supply recorded since the beginning of the GMP. [Table 1A-2]

Increases were recorded in the carry-forward stocks of every province save that of British Columbia, which reported a 51.9% decline. The increases posted by the provinces of Manitoba and Saskatchewan proved the most substantive, rising by 82.8% and 85.7% respectively. With a gain of some 2.3 million tonnes, Saskatchewan accounted for just over 60% of the overall increase in carry-forward stocks. The next largest contributor was Alberta which, despite reporting a comparatively smaller 43.5% gain, added another 0.9 million tonnes to year-end inventories. This was followed by Manitoba's 0.6-million-tonne increase.

Section 2: Traffic and Movement

Indicator Description	Table	1999-00	2007-08	2008-09	2009-10 Q1	Q2	Q3	Q4	YTD	% VAR
Country Elevator Throughput										
Grain Throughput (000 tonnes) – Primary Elevators	2A-1	32,493.9	31,886.4	35,349.1	8,246.5	8,064.1	8,813.1	8,737.7	33,861.4	-4.2%
Railway Traffic										
Railway Shipments (000 tonnes) – All Grains	2B-1	26,439.2	22,766.3	27,338.4	7,345.0	6,467.1	6,776.7	7,855.0	28,443.8	4.0%
Railway Shipments (000 tonnes) – Hopper Cars	2B-1	25,664.6	22,115.9	26,792.6	7,252.1	6,336.9	6,574.3	7,614.6	27,777.8	3.7%
Railway Shipments (000 tonnes) – Non-Hopper Cars	2B-1	774.7	650.4	545.8	93.0	130.2	202.4	240.5	666.0	22.0
Special Crop Shipments (000 tonnes) – All Grains	2B-2	2,102.9	2,480.7	2,945.4	722.7	688.4	603.1	704.8	2,718.9	-7.7%
Special Crop Shipments (000 tonnes) – Hopper Cars	2B-2	1,844.1	2,353.6	2,851.8	711.1	672.7	588.7	692.8	2,665.3	-6.5%
Special Crop Shipments (000 tonnes) – Non-Hopper Cars	2B-2	258.7	127.2	93.6	11.6	15.6	14.4	11.9	53.5	-42.9%
Hopper Car Shipments (000 tonnes) – Origin Province	2B-3									
Hopper Car Shipments (000 tonnes) – Primary Commodities	2B-4	25,664.6	22,115.9	26,792.6	7,252.1	6,336.9	6,574.3	7,614.6	27,777.8	3.7%
Hopper Car Shipments (000 tonnes) – Detailed Breakdown	2B-5									
Hopper Car Shipments (000 tonnes) – Grain-Dependent Network	2B-6	8,685.9	6,653.1	7,597.9	2,358.6	1,995.7	2,044.5	2,343.0	8,741.9	15.1%
Hopper Car Shipments (000 tonnes) – Non-Grain-Dependent Network	2B-6	16,978.7	15,462.8	19,194.7	4,893.4	4,341.2	4,529.8	5,271.5	19,035.9	-0.8%
Hopper Car Shipments (000 tonnes) – Class 1 Carriers	2B-7	23,573.5	21,533.4	26,019.6	7,050.6	6,170.9	6,341.9	7,382.4	26,945.8	3.6%
Hopper Car Shipments (000 tonnes) – Non-Class-1 Carriers	2B-7	2,091.0	582.5	773.0	201.5	166.0	232.4	232.2	832.0	7.6%
Terminal Elevator Throughput										
Grain Throughput (000 tonnes) – All Commodities	2C-1	23,555.5	22,026.4	25,639.0	6,457.0	5,971.5	6,084.3	7,247.6	25,760.4	0.5%
Hopper Cars Unloaded (number) – All Carriers	2C-2	278,255	245,213	294,335	74,059	66,422	68,691	77,458	286,630	-2.6%
Hopper Cars Unloaded (number) – CN	2C-2	144,800	123,121	144,943	35,333	33,256	37,887	38,418	144,894	0.0%
Hopper Cars Unloaded (number) – CP	2C-2	133,455	122,092	149,392	38,726	33,166	30,804	39,040	141,736	-5.1%

COUNTRY ELEVATOR THROUGHPUT

Country elevator throughput, as gauged by all road and rail shipments from the primary elevators situated across western Canada, decreased by 4.2% in the 2009-10 crop year, falling to 33.9 million tonnes from the GMP record of 35.3 million tonnes set just a year earlier. With quarterly shipments closely tracking those of the previous crop year until the end of the first half, it appeared that a new volume record might well have been in the works for the 2009-10 crop year. However, the higher-than-normal throughputs of the 2008-09 crop year's third and fourth quarters were not to be repeated. This produced a comparative volume loss of 1.5 million tonnes. Even so, the 2009-10 crop year still saw the second largest movement recorded since the beginning of the GMP.

While positive market conditions encouraged high volume movement, there were also effects arising from reduced production. Much of the overall decrease in throughput could be traced to a reduction in Alberta volumes, where shipments fell by 17.8%, to 9.4 million tonnes from the record-setting 11.4 million tonnes reported in the previous year. All grain-producing provinces except Alberta reported an increase in primary-elevator shipments. Although British Columbia posted a 22.1% increase, the largest gains in tonnage were reported by Saskatchewan and Manitoba. Manitoba posted a 3.2% increase in throughput, shipping a total of 6.8 million tonnes as compared to 6.6 million tonnes the year before. Saskatchewan saw shipments increase by 1.7%, to 17.5 million tonnes from 17.2 million tonnes. [Table 2A-1]

RAILWAY TRAFFIC

The amount of regulated grain moved by rail to western Canadian ports increased by 4.0% in the 2009-10 crop year, with the total volume rising to a record 28.4 million tonnes from 27.3 million tonnes a year earlier. As in past years, the vast majority of this traffic, some 27.8 million tonnes, moved in covered hopper cars. The remaining 0.7 million tonnes moved in different forms of railway equipment, the most predominant being containers. Owing to the 22.0% increase in the movement of

Figure 6: Primary Elevator Throughput

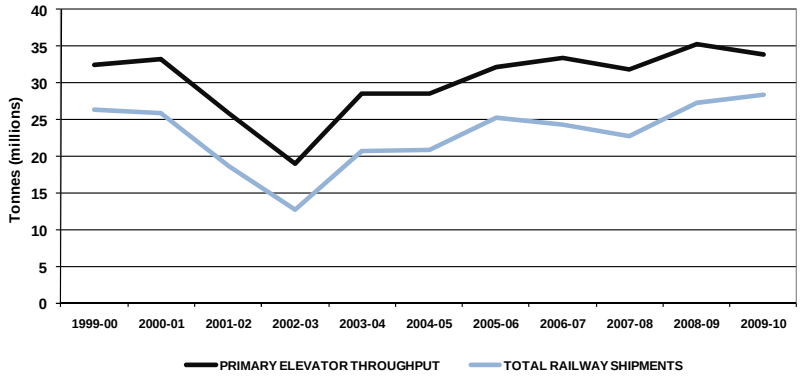
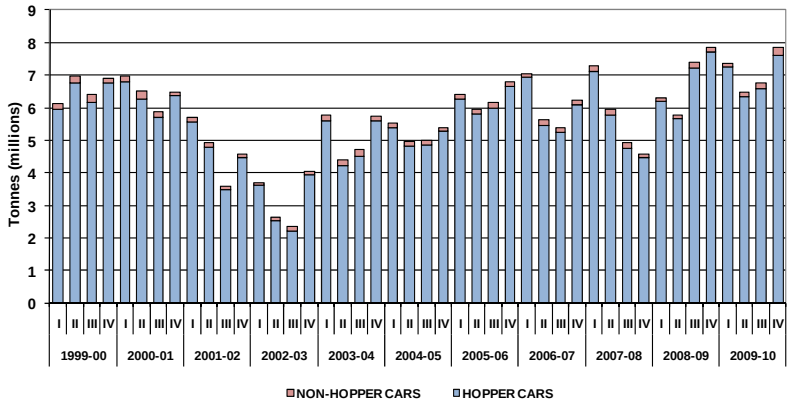


Figure 7: Railway Shipments – Hopper and Non-Hopper Cars



containers, their share of total railway shipments rose to 2.3% from 2.0% a year earlier. [Table 2B-1]

Special crops ran counter to the broader trends, with total shipments falling by 7.7% to 2.7 million tonnes from 2.9 million tonnes a year earlier. Non-hopper-car shipments accounted for a smaller portion of the overall movement, just 2.0%. Non-hopper car movements also experienced a more significant loss in volume, falling by 42.9% against a much lesser 6.5% decline in hopper-car movements. [Table 2B-2]

Hopper Car Movements

Western Canadian hopper-car shipments increased 3.7% in the 2009-10 crop year, rising to a GMP record of 27.8 million tonnes from 26.8 million tonnes a year earlier. This gain stood in contrast to a 7.0% decline in grain production and a 0.5% reduction in the overall grain supply. Much of this was attributable to comparatively strong movements in both the first and second quarters.

The largest nominal gain in tonnage, involving an additional 1.5 million tonnes, was derived from Saskatchewan, which saw shipments rise by 11.5% to a GMP record of 14.7 million tonnes. Another 0.2 million tonnes were gained from heightened Manitoba shipments, which increased by 5.3% to 3.7 million tonnes. British Columbia contributed a further 0.2 million tonnes, with shipments rising by a more substantive 120.4%. Running counter to these increases were movements from Alberta, which were reduced by 9.0%, or almost 0.9 million tonnes, to 9.0 million tonnes. [Tables 2B-3 through 2B-5]

Destination Ports

The port of Vancouver remained the principal export destination for western Canadian grain in the 2009-10 crop year. Traffic to Vancouver totalled 17.1 million tonnes, a gain of 12.6% against the 15.2 million tonnes directed there a year earlier. This constituted the largest volume yet witnessed since the beginning of the GMP, with the port's share of total rail shipments having increased to 61.6% from 56.7% the year

Figure 8: Railway Hopper Car Shipments – Destination Port

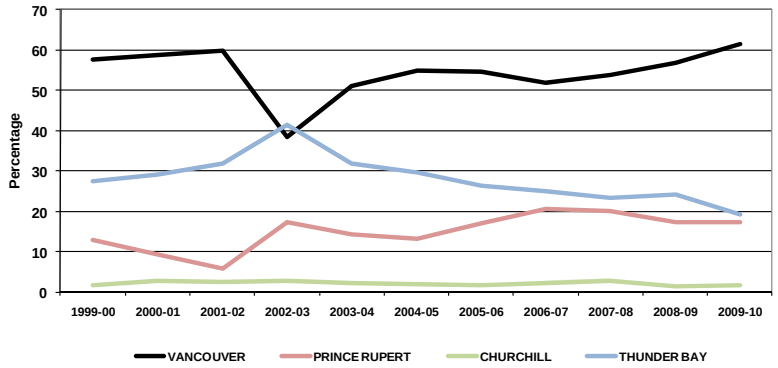
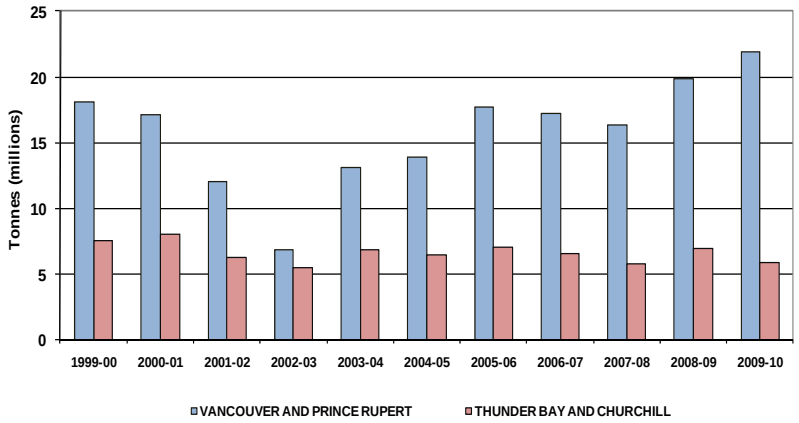


Figure 9: Railway Hopper Car Shipments – West-Coast Orientation



previous. Prince Rupert also experienced a 2.1% increase in volume, with total shipments to this northern port climbing to 4.8 million tonnes from 4.7 million tonnes. Owing to the lower growth rate, however, Prince Rupert's overall share declined marginally to 17.2% from 17.5%. Nevertheless, these two ports received a combined 78.8% of the grain moved to export position in covered hopper cars, a fairly substantive gain over the 70.6% share they secured in the GMP's base year.

Considering the gains made by the west-coast ports, the volume and share of traffic directed to Thunder Bay has largely been declining. Although the port saw a 17.2% decrease in rail shipments in the 2009-10 crop year, it still ranked as the second largest destination for export grain, receiving 5.4 million tonnes against 6.5 million tonnes a year earlier. In contrast, rail shipments to Churchill increased by 21.7%, climbing to 0.5 million tonnes from 0.4 million tonnes. This translated into a marginally greater proportion, which increased to 1.8% from 1.5% a year earlier.

Notwithstanding these year-over-year changes, the use of and market positions of these ports has begun to change. There can be little doubt that Prince Rupert has commercially benefited from the introduction of preferential railway freight rates and the better allocation of railcars to the corridor. Even so, there are overarching market influences, such as the shift of Canadian grain markets from a European centric to one centred on the Asian markets that have also had an important impact on west-coast shipments. As long as this demand remains sustained, the GHTS will continue to see the majority of its grain shipments being directed to export positions on the west coast.

Grain-Dependent and Non-Grain-Dependent Originations

Traffic moved by the GHTS continues to reflect the changes that have been made to both the elevator and railway networks. In the 2009-10 crop year, the tonnage originated by the non-grain-dependent network decreased 0.8%, to 19.0 million tonnes from 19.2 million tonnes a year earlier. At the same time, traffic originating at points on the grain-

Figure 10: Hopper Car Shipments – Change in Network Originations

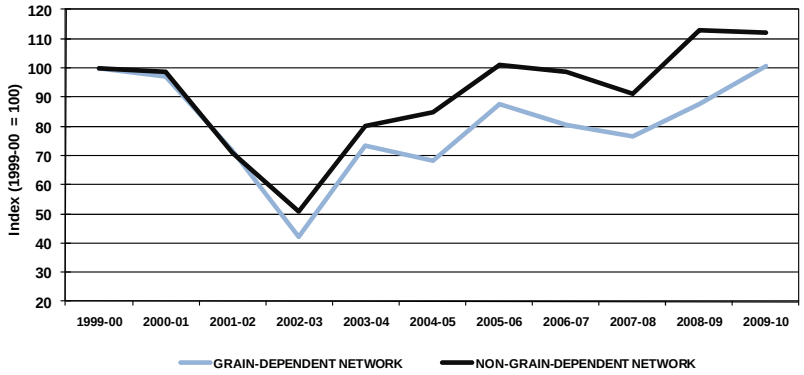
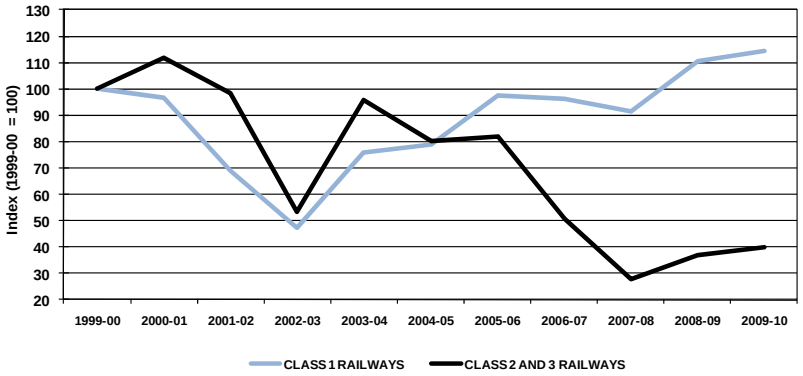


Figure 11: Hopper Car Shipments – Change in Railway Originations



dependent network increased by a 15.1%, to 8.7 million tonnes from 7.6 million tonnes.

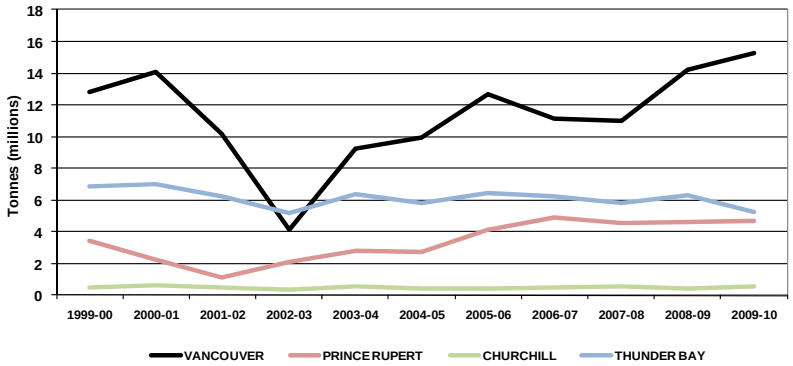
The latter gain has helped to narrow the gap opened between the two networks seven years earlier. With the close of the 2009-10 crop year, the tonnage forwarded from points along the non-grain-dependent network grew by 12.1% from what had been moved in the GMP's base year. In comparison, the volume originated by the grain-dependent network had increased by 0.6%. Consequently, the volume from the non-grain-dependent network has grown to reach 68.5% in the 2009-10 crop year as compared to 66.2% in the GMP's base year. [Table 2B-6]

Class 1 and Non-Class-1 Originations

The same structural influences are also apparent in the volumes of grain originated by the Class 1 and non-Class-1 railways. Nominally, the tonnage originated by the Class I carriers increased by 3.6% in the 2009-10 crop year, while the volume originated by the smaller, non-Class-1 carriers increased by a more substantive 7.6%. Much of the latter's gain was due to the emergence of several new shortline operations in the past two crop years. These included the previous crop year's establishment of the Great Sandhills Railway and the Boundary Trail Railway and the current crop year's formation of the Last Mountain Railway and the Battle River Railway. The creation and elimination of various shortline operations over the course of the GMP has tended to obscure the real change in traffic volume. Notwithstanding these recent gains, the tonnage originated by the shortlines has declined quite precipitously over the course of the last six crop years. In fact, shortline originations in the 2009-10 crop year were but 39.8% of what they had been at the beginning of the GMP, while those of the Class I carriers came in 14.3% higher. [Table 2B-7]

Even so, the amount of traffic originated by shortline railways has not fallen as sharply as the number of licensed elevators served by them, which were reduced by 75.6% in the same period. In fact, the data indicates that increased producer-car loading has helped replace a significant portion of the grain volume that would otherwise have been lost following the closure of these licensed facilities. This is evidenced by the fact that producer-car loadings accounted for an estimated 47.5% of the 0.8 million tonnes originated by shortline carriers in the 2009-10 crop year. This proportion represents an effective tripling of the 14.8% it constituted in the first year of the GMP, and underscores the emergence of producer cars as an important revenue source for these carriers.

Figure 12: Terminal Elevator Throughput



TERMINAL ELEVATOR THROUGHPUT

Port throughput, as measured by the volume of grain shipped from the terminal elevator and bulk loading facilities located at Canada's four western ports, totalled 25.8 million tonnes in the 2009-10 crop year. In addition to denoting a marginal gain of just 0.5% over the previous year's 25.6 million tonnes, it also represented the setting of a second consecutive volume record. [Table 2C-1]

Throughput increases were posted by three of the GHTS's four western ports. For the largest of these, Vancouver, total marine shipments climbed by 7.3%. This resulted in the setting of yet another throughput record for the port, which rose to 15.3 million tonnes from the previous

crop year's record-setting 14.3 million tonnes. Moreover, Vancouver accounted for a record-setting 59.4% of the system's total throughput. With a lesser 1.0% gain in volume, Prince Rupert's throughput rose to 4.7 million tonnes, its second largest since the beginning of the GMP. When combined, the tonnage passing through these two west coast ports represented 77.6% of the overall total. This marked the fourth consecutive year in which west coast's volume attained a new record high since the beginning of the GMP.

Of course, the gains made by the west coast ports had a negative impact on the shares accorded to the GHTS's other two ports. The combined share secured by the ports of Thunder Bay and Churchill declined to 22.4% from 26.3% a year earlier. Moreover, this share falls well below the benchmark 31.2% share set in the 1999-2000 crop year. At Thunder Bay, the dominant eastern gateway, throughput in the 2009-10 crop year decreased by 17.0%, falling to 5.2 million tonnes from 6.3 million tonnes the year before. Churchill, the port with traditionally the lowest volume, saw its throughput increase by 24.4%, to 529,600 tonnes from 425,600 tonnes.

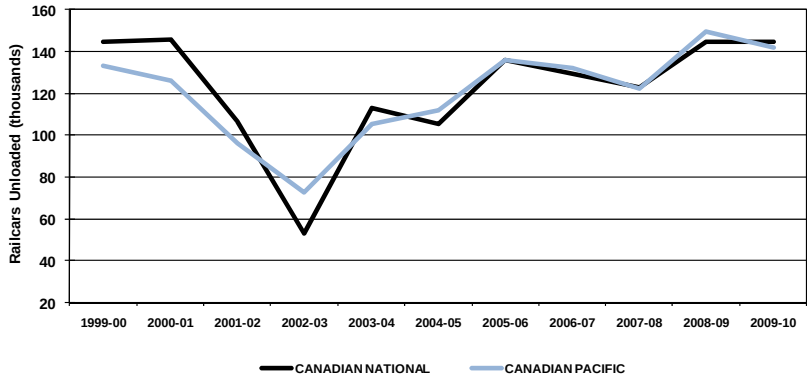
Terminal Elevator Unloads

The number of covered hopper cars unloaded at terminal elevators fell by 2.6% in the 2009-10 crop year, to 286,630 carloads from 294,335 carloads a year earlier. Much of the net reduction was attributable to lower handlings on the part of CP, which fell by 5.1% to 141,736 carloads. CN's total handlings remained largely unchanged, falling by a mere 49 carloads to 144,894. This made CN the largest grain handler in western Canada, with a share of 50.6% against 49.4% for CP.

The overall reduction in volume largely reflected the impact of sharply lower handlings into Thunder Bay, which fell by 21.3% to 57,015 carloads. It is worth noting that this denoted the lowest volume yet directed to the port since the beginning of the GMP. Prince Rupert also witnessed a decline in volume, although this amounted to just 0.9%. Countering these losses were gains for Vancouver and Churchill. With a 4.5% increase, Vancouver unloads reached yet another GMP record: 173,569 carloads. And while the 15.1% increase posted by Churchill proved significantly greater, the unloading of 5,407 carloads trailed well behind the record-setting 7,552 carloads noted in the 2000-01 crop year.

With both carriers feeling the effects of reduced volumes into Thunder Bay, the stronger showing by CN could largely be traced to an increase in its shipments to Vancouver, which grew by 8.8% to 72,220 carloads. And while CP also benefited from an increase in its handlings into Vancouver, the gain proved a comparatively lesser 1.7%. Even so, CP oversaw the largest handling of any carrier into the port since the beginning of the GMP, with some 101,349 cars being unloaded. Although CP maintained its dominance in the corridor, its share fell to 58.4% from 60.0% a year earlier. [Table 2C-2]

Figure 13: Terminal Elevator Unloads – Delivering Carrier



Section 3: Infrastructure

Indicator Description	Table	1999-00	2007-08	2008-09	2009-10 Q1	Q2	Q3	Q4	YTD	% VAR
Country Elevator Infrastructure										
Delivery Points (number)	3A-1	626	276	272	270	271	270	273	273	0.4%
Elevator Capacity (000 tonnes)	3A-1	7,443.9	5,952.5	6,059.0	6,133.1	6,239.4	6,290.8	6,332.6	6,332.6	4.5%
Elevators (number) – Province	3A-1									
Elevators (number) – Railway Class	3A-2	917	378	366	359	360	362	365	365	-0.3%
Elevators (number) – Grain Company	3A-3									
Elevators Capable of MCB Loading (number) – Province	3A-4									
Elevators Capable of MCB Loading (number) – Railway Class	**3A-5**	317	243	243	241	242	242	243	243	0.0%
Elevators Capable of MCB Loading (number) – Railway Line Class	3A-6									
Elevator Closures (number)	3A-7	130	3	30	16	3	1	1	21	-30.0%
Elevator Openings (number)	3A-8	43	10	18	9	4	3	4	20	11.1%
Delivery Points (number) – Accounting for 80% of Deliveries	3A-9	217	91	89	n/a	n/a	n/a	n/a	n/a	n/a
Railway Infrastructure										
Railway Infrastructure (route-miles) – Total Network	3B-1	19,390.1	17,978.0	17,904.7	17,904.7	17,904.7	17,904.7	17,904.7	17,904.7	0.0%
Railway Infrastructure (route-miles) – Class 1 Network	3B-1	14,503.0	15,683.0	15,493.4	15,455.2	15,455.2	15,455.2	15,403.7	15,403.7	-0.6%
Railway Infrastructure (route-miles) – Non-Class-1 Network	3B-1	4,887.1	2,295.0	2,411.3	2,449.5	2,449.5	2,449.5	2,501.0	2,501.0	3.7%
Railway Infrastructure (route-miles) – Non-Grain-Dependent Network	3B-1	14,513.5	14,319.2	14,313.1	14,313.1	14,313.1	14,313.1	14,313.1	14,313.1	0.0%
Railway Infrastructure (route-miles) – Grain-Dependent Network	3B-1	4,876.6	3,658.8	3,591.6	3,591.6	3,591.6	3,591.6	3,591.6	3,591.6	0.0%
Served Elevators (number)	3B-3	884	357	347	341	342	344	347	347	0.0
Served Elevators (number) – Class 1 Carriers	3B-3	797	343	328	323	323	325	327	327	-0.3
Served Elevators (number) – Non-Class-1 Carriers	3B-3	87	14	19	18	19	19	20	20	5.3%
Served Elevators (number) – Grain-Dependent Network	3B-3	371	117	113	115	116	116	118	118	4.4%
Served Elevators (number) – Non-Grain-Dependent Network	3B-3	513	240	234	226	226	228	229	229	-2.1%
Served Elevator Capacity (000 tonnes)	3B-3	7,323.0	5,868.7	5,981.9	6,060.5	6,162.2	6,213.0	6,254.7	6,254.7	4.6%
Served Elevator Capacity (000 tonnes) – Class 1 Carriers	3B-3	6,823.2	5,792.0	5,861.7	5,947.2	6,048.8	6,093.5	6,130.8	6,130.8	4.6%
Served Elevator Capacity (000 tonnes) – Non-Class-1 Carriers	3B-3	499.7	76.7	120.2	113.3	113.4	119.5	123.9	123.9	3.1%
Served Elevator Capacity (000 tonnes) – Grain-Dependent Network	3B-3	2,475.4	1,593.9	1,611.1	1,662.3	1,713.9	1,715.5	1,742.7	1,742.7	8.2%
Served Elevator Capacity (000 tonnes) – Non-Grain-Dependent Network	3B-3	4,847.6	4,274.7	4,370.8	4,398.3	4,448.2	4,497.5	4,512.0	4,512.0	3.2%
Terminal Elevator Infrastructure										
Terminal Elevators (number)	3C-1	15	15	15	15	15	15	15	15	0.0%
Terminal Elevator Storage Capacity (000 tonnes)	3C-1	2,678.6	2,475.6	2,475.6	2,475.6	2,475.6	2,475.6	2,475.6	2,475.6	0.0%

COUNTRY ELEVATOR INFRASTRUCTURE

The decline in the number of licensed country elevators in western Canada remains one of the most visible facets of the GHTS's continuing evolution. At the outset of the 1999-2000 crop year, there were 1,004 licensed primary and process elevators on the prairies. By the end of the 2008-09crop year, that number had fallen by 63.5% to 366.[5] [Table 3A-1]

The rate of decline exhibited in the first three years of the GMP proved to be an accelerating one, with a total of 87 facilities removed from the network in its first year, followed by 136 in the second, and 281 in the third. But this pace began to show signs of abating significantly in the 2002-03 crop year, when only 84 elevators were removed from the system. Over the course of the next six crop years, the network was reduced by just 50 more.

With a net reduction of but one elevator, the 2009-10 crop year saw little material change to the elevator network in western Canada. Still, this reduced the total number of remaining elevators to 365, with an accumulated loss of 639 facilities, or 63.6%, since the beginning of the GMP. The limited scope of the changes made in the last several years continues to suggest that most grain companies have concluded their elevator rationalization programs.

Much the same is true of the decline in grain delivery points, which have largely fallen in conjunction with the reduction in licensed elevators. By the close of the 2008-09 crop year the scope of this network had been reduced by 60.3%, to 272 delivery points from the 685 that had been in place at the beginning of the GMP. The 2009-10 crop year actually produced a single-point gain in this system, with the overall number

5 The reduction in licensed elevators cited here reflects the net change arising from elevator openings and closures over a given period. This net reduction should not be construed as elevator closures alone. Elevator closures and openings are discussed elsewhere in this report, and the statistics relating to them are presented in Tables 3A-7 and 3A-8 respectively.

Figure 14: Licensed Grain Elevators and Delivery Points

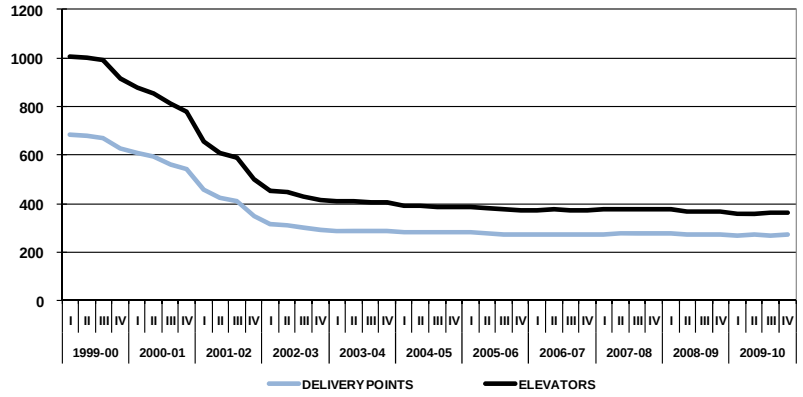
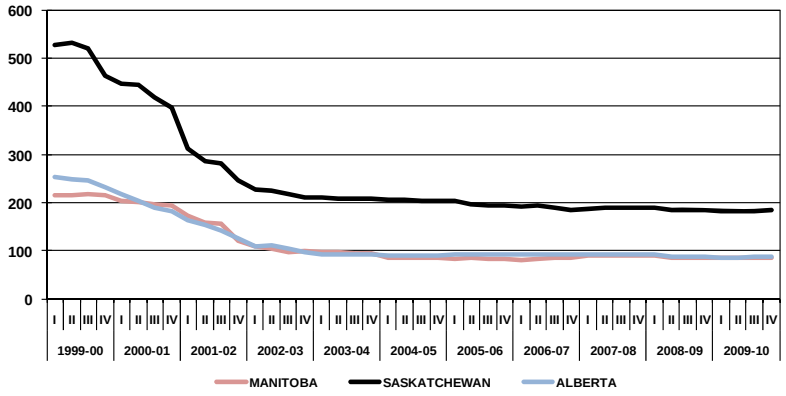


Figure 15: Licensed Grain Elevators – Provincial Distribution



increasing to 273. This trimmed the net reduction in delivery points over the last eleven years to 60.1%.

Provincial Distribution

With the close of the 2009-10 crop year, 185 of western Canada's licensed elevators were situated in Saskatchewan. This constituted 50.7% of the system's active total, and proved to be consistent with the proportion held by the province at the beginning of the GMP. This was followed in succession by Alberta and Manitoba, whose respective 88 and 85 elevators each accounted for about another one-quarter. The GHTS's remaining seven facilities were divided between British Columbia and Ontario.[6]

Although Saskatchewan posted the greatest numerical reduction in licensed facilities, with the closure of 342 elevators, this represented only the second largest relative decline since the beginning of the GMP, 64.9%. In comparative terms, Alberta's 164-elevator reduction proved slightly greater, having fallen by 65.1% over the course of the GMP. Manitoba followed with a 60.6%, or 131-elevator, reduction in its facilities. The comparable nature of these reductions indicates that elevator rationalization has been broadly based, and that the facilities of any single province have not been unduly targeted.

Elevator Storage Capacity

Despite a 63.6% decline in the overall number of elevators, the network's storage capacity fell by a comparatively modest 9.9%. This lower decline rate simply reflects the fact that while grain companies were

6 There were seven CGC licensed elevators located outside the provinces of Manitoba, Saskatchewan, and Alberta as at 31 July 2010. Specifically, these included one in Ontario, and six in British Columbia. Changes in the elevator infrastructure of these provinces are generally not highlighted given their limited influence, but are included in the wider statistics pertaining to the GHTS as a whole.

Figure 16: Change in Licensed Elevators and Storage Capacity

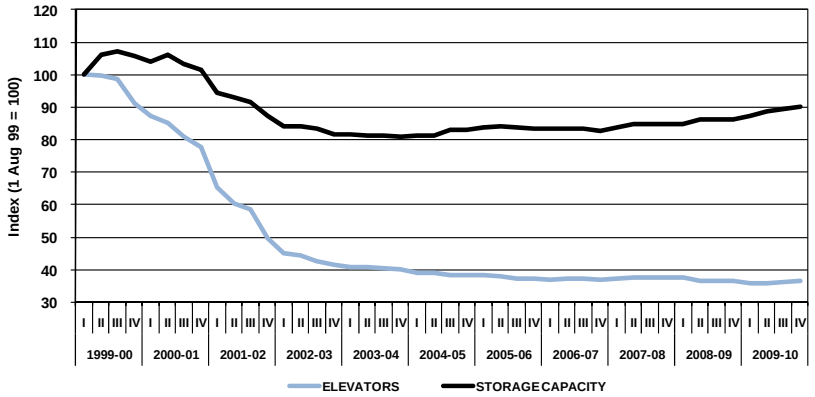
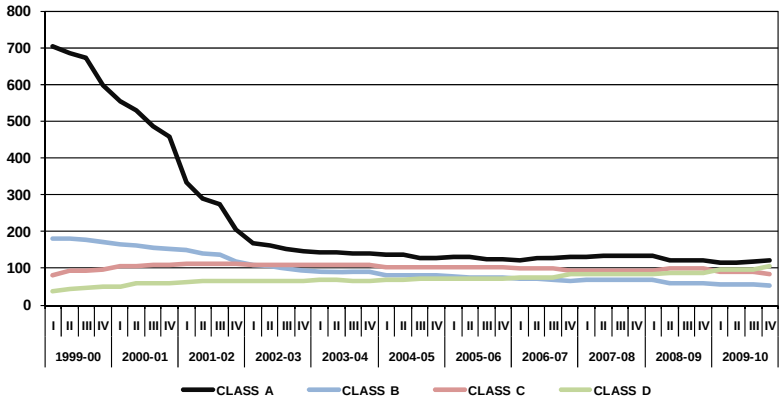


Figure 17: Licensed Elevators – Facility Class



methodically closing their less-efficient smaller elevators, they were also opening and expanding larger ones. In fact, during the first year of the GMP, the capacity added through investment in larger facilities actually outpaced that removed by the closure of smaller elevators. This initially produced an increase in storage capacity, which climbed from the benchmark level of 7.0 million tonnes at the beginning of the GMP to a peak of 7.5 million tonnes in the third quarter of the 1999-2000 crop year.

Over the course of the next four crop years, however, the system's storage capacity fell largely in concert with the general decline in elevators, dropping at a rate of about 3,500 tonnes per facility closed. By the end of the 2003-04 crop year, total GHTS storage capacity had fallen by 19.0% to 5.7 million tonnes. This trend began to reverse itself in the 2004-05 crop year when the system posted an increase of 157,000 tonnes.[7] By the close of the 2008-09 crop year, the system's total storage capacity had risen to almost 6.1 million tonnes. The expansion of several elevators in the 2009-10 crop year resulted in another 273,600 tonnes of storage capacity being added. This constituted a 4.5% gain that raised the system's overall storage capacity to more than 6.3 million tonnes for the first time since the 2001-02 crop year.

Facility Class

For comparative purposes, the GMP groups elevators into four classes. These classes are based on the loading capability of each facility, which is in turn defined by the number of car spots each possesses. Those with less than 25 car spots are deemed to be Class A facilities; those with 25-49, Class B; those with 50-99, Class C; and those with 100 or more, Class D.[8] In addition, the GMP deems Class C and D facilities to be high-throughput elevators given their ability to load railcars in larger numbers. Within this framework, the composition of the elevator network can be seen to have changed significantly over the course of the GMP. The most striking aspect has been the 83.0% decline in the number of Class A facilities, which dropped to 120 from the 705 in place at the beginning of the GMP. This was followed closely by a 70.0% reduction in Class B facilities, which fell to 54 from 180 over the same period. Juxtaposed against this was the trade's pronounced shift towards the use of high-throughput elevators. During this same period the number of Class C facilities grew by 4.9%, to 85 from 81, while the number of Class D facilities almost tripled, increasing by 178.9%, to 106 from 38.

These statistics illustrate that the primary target in elevator rationalization has been the conventional wood-crib facility. Of the 898 elevator closures recorded since the beginning of the GMP, 688 related to the shutdown of Class A facilities.[9] To a large extent, this was because the economic efficiency of the high-throughput elevator had rendered these facilities obsolete. But they had also been undermined by the financial incentives that the railways used to encourage grain to move in blocks of 25 or more railcars at a time.

These same forces also disfavoured the Class B facilities, albeit not to the same degree. More particularly, even though grain movements from these facilities were eligible to receive discounted freight rates, they were not as generous as those accorded shipments from high-throughput

7 As was the case in the first year of the GMP, this increase is explained by an expansion in high-throughput storage capacity that more than offset the reduction that came from the closure of smaller facilities.

8 The facility classes employed here mirror the thresholds delineated by Canada's major railways at the beginning of the GMP for the receipt of discounts on grain shipped in multiple-car blocks. At that time, these thresholds involved shipments of 25, 50 or 100 railcars. First introduced in 1987, these incentives were aimed at drawing significantly greater grain volumes into facilities that could provide for movement in either partial, or full, trainload lots.

9 Statistics associated with elevator closures and openings are gross measures and do not distinguish between licensed facilities that may have been closed by one operator but, as a result of its subsequent sale, later reopened by another.

elevators. Moreover, these smaller block discounts were later reduced and ultimately eliminated.[10] As a result, over the course of the GMP, a total of 144 Class B facilities also closed. Together, Class A and B facilities account for 92.7% of all recorded elevator closures. [Table 3A-7]

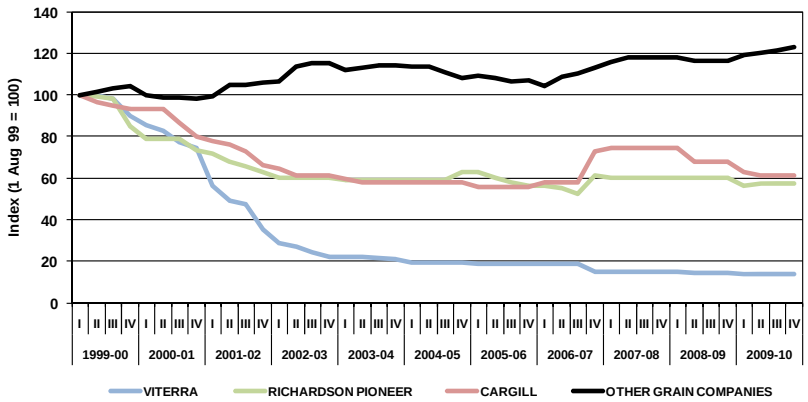
In contrast to their share of elevator closures, only 145 of the 259 elevators opened during this period were Class A and B facilities. This differential calls attention to the fact that high-throughput facilities accounted for a much greater proportion of elevator openings than closures, 44.0% versus 7.3% respectively. Class C and D elevators were the only ones to have posted net increases since the 1999-2000 crop year. [Table 3A-8]

Since the close of the 2008-09 crop year high-throughput elevators have represented the majority of GHTS facilities. More importantly, these facilities have claimed the lion's share of the system's storage capacity since the 2000-01 crop year. By the close of 2009-10 crop year, high-throughput facilities accounted for 52.3% of system elevators and 82.1% of its storage capacity. Both values differ considerably from the 11.9% and 39.4% shares they respectively held at the beginning of the GMP.

Grain Companies

For a number of grain companies, the key to improving the economic efficiency of their grain-gathering networks has been to rationalize their elevator assets. With the cornerstone of this strategy being the replacement of smaller elevators by larger high-throughput facilities, it follows that this would better lend itself to those grain companies having the largest physical networks. The largest grain companies in existence at the beginning of the GMP proved to be the primary practitioners of elevator rationalization. In fact, the 603 elevators closed by the

Figure 18: Change in Licensed Elevators – Grain Company



predecessors to today's Viterra Inc. accounted for 94.4% of the 639-elevator decline.[11]

Although the first two years of the GMP saw the closure of 180 of the company's 700 heritage elevators, the largest reduction came a year later when Viterra's predecessor companies culled 273 facilities from those that remained. By the close of the 2001-02 crop year, the company had effectively shaken off two-thirds of its network. And while further declines were noted through to the 2004-05 crop year, the scope of these reductions strongly suggested that the rationalization process was

10 With the commencement of the 2003-04 crop year, CN eliminated the $1.00-per-tonne discount that had been given to movements from Class B facilities since the beginning of the GMP, while CP reduced it to $0.50 per tonne. By the close of the 2005-06 crop year, CP had also eliminated its discount on movements in blocks of 25-49 cars.

11 Viterra Inc. was formed in 2007 following Saskatchewan Wheat Pool's purchase of Agricore United, which was itself the product of a merger between Agricore Cooperative Ltd. and United Grain Growers Limited in 2001. Given this heritage, Viterra Inc. is the corporate successor to the three largest grain companies in existence at the beginning of the GMP. The 603 closures cited here represent the net reduction posted by Viterra's predecessor companies, which had a total of 700 elevators at the outset of the GMP.

coming to an end.[12] The next most significant reduction came in the 2006-07 crop year when, in order to gain support for its acquisition of Agricore United, precursor Saskatchewan Wheat Pool agreed to the transfer of 24 elevators to Richardson Pioneer Limited and Cargill Limited.[13] This resulted in the company's network being reduced to 106 facilities.

Elevator closures since the formation of Viterra have abated significantly, with the company's network having been reduced by nine facilities to 97 elevators at the close of the 2009-10 crop year. In general terms, this meant that 86.1% of the facilities in place to receive grain on the company's behalf eleven years earlier had been closed.

Amongst the remaining grain companies, Richardson Pioneer and Cargill posted the next deepest cuts in their elevator networks. However, with reductions of 42.9% and 39.0% respectively, their rationalization efforts proved substantially smaller in scale than that of Viterra. More importantly, these reductions were also tempered by the acquisitions made in the wake of Saskatchewan Wheat Pool's purchase of Agricore United. Paterson Grain and Parrish and Heimbecker followed suit with reductions of 26.0% and 19.2% respectively.

Notwithstanding these company-specific reductions, not all elevators were closed permanently. In a number of instances, these surplus facilities were sold to smaller, independent grain companies, including: Delmar Commodities; Farmers Grain Dealers Inc. (FGDI); Providence Grain Group; and Westlock Terminals.[14] Many of these transfers figured into specific facilities. Some of these are now operated by these smaller grain companies.

Figure 19: Licensed Elevators and Capacity – 2009-10 Crop Year

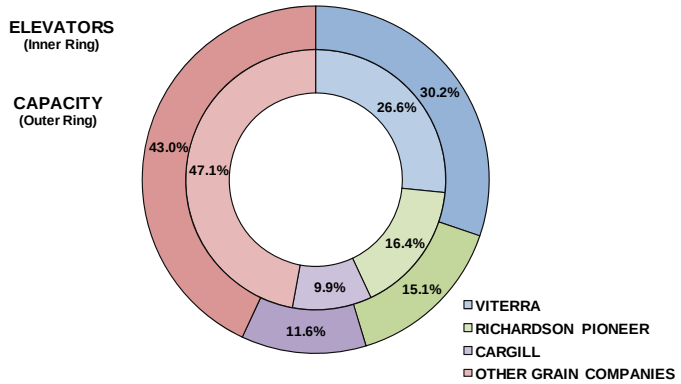
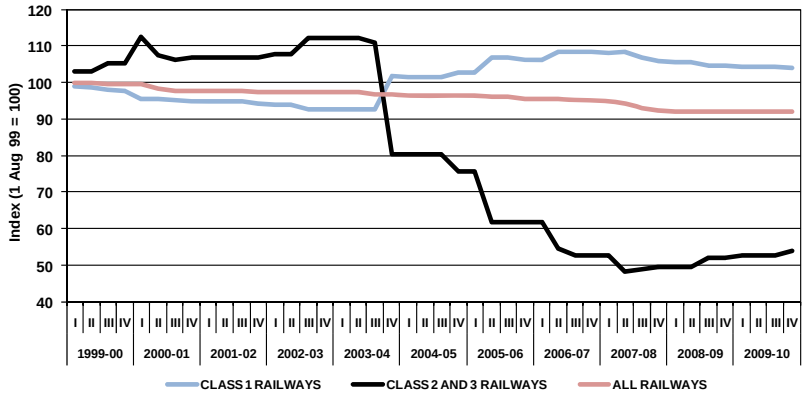


Figure 20: Change in Route-Miles – Railway Class



12 The elevator reductions posted by Viterra's predecessor companies in the 2002-03, 2003-04 and 2004-05 crop years amounted to 91, 8 and 14 respectively.

13 Richardson Pioneer acquired 15 of the 24 elevators sold by SWP while Cargill purchased the other nine.

14 In some cases, such as in the merger that led to the creation of Agricore United, Canada's Competition Bureau mandated that the company divest itself of

the 85.7% increase in the number of elevators operated by smaller companies, which climbed to 104 from 56.

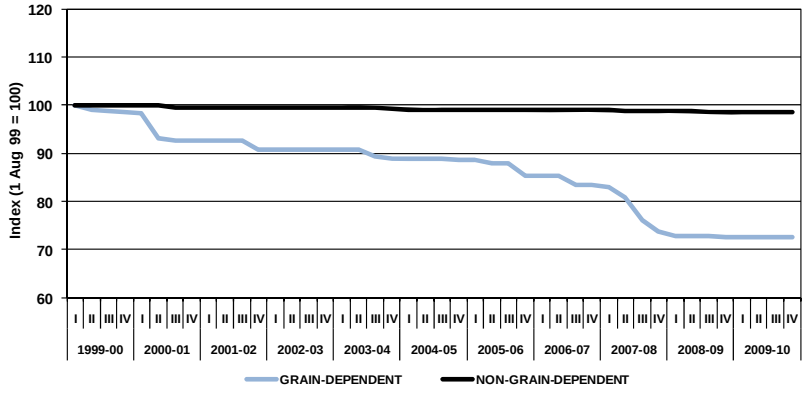
The collective number of elevators operated by companies other than Viterra has fallen by only 11.8% over the course of the entire GMP, to 268 from 304. Given the deeper cuts made by Viterra, these companies now account for over two-thirds of the GHTS's total elevators and associated storage capacity. The shares attributable to Viterra have fallen correspondingly during this same period, with the company accounting for 26.6% of all elevators and 30.2% of the associated storage capacity. Despite this reversal, Viterra still remains the dominant handler of grain in western Canada. [Table 3A-3]

Even with this rationalization of the elevator network, the vast majority of grain continues to be delivered at a comparatively small number of locations. In the 2008-09 crop year – the last for which statistics are available – about 80% of the grain drawn into the prairie elevator system was made at 89, or 40.3%, of the GHTS's 221 active delivery points. This share is greater than the 33.5% recorded in the GMP's base year and, to a large extent, reflects the general effects of a reduction in the elevator network itself. [Table 3A-9]

RAILWAY INFRASTRUCTURE

At the outset of the 1999-2000 crop year, the railway network in western Canada encompassed 19,468.2 route-miles of track. Of this, Class 1 carriers operated 76.2%, or 14,827.9 route-miles, while the smaller Class 2 and 3 carriers operated the remaining 23.8%, or 4,640.3 route-miles.[15] Although the railway network has changed over the last decade, the scope of this change has proved comparatively modest when gauged against

Figure 21: Change in Route-Miles – Railway Network



that of the elevator system. By the end of the 2008-09 crop year, the net reduction in western Canadian railway infrastructure amounted to just 8.0%, with the network's total mileage having been reduced to 17,904.7 route-miles overall. The largest share of this 1,563.5-route-mile reduction came from the abandonment of 1,363.1 route-miles of light-density, grain-dependent branch lines.[16]

In addition to the reduction in overall mileage, there were other changes to the makeup of the railway network. Much of this related to the transfer by CN and CP of various branch line operations to a host of new shortline railways. This practice, which began in the mid 1990s, was one

15 The classes used here to group railways are based on industry convention: Class 1 denotes major carriers such as the Canadian National Railway or the Canadian Pacific Railway; Class 2, regional railways such as the former BC Rail; and Class 3, shortline entities such as the Great Western Railway.

16 The term "grain-dependent branch line", while largely self-explanatory, denotes a legal designation under the Canada Transportation Act. Since the Act has application to federally regulated railways only, grain-dependent branch lines transferred to provincially regulated carriers lose their federal designation. As a result, the legally defined grain-dependent branch line network is a continuously declining. For comparison purposes only, the term has been affixed to those railway lines so designated under Schedule I of the Canada Transportation Act (1996) regardless of any subsequent change in ownership or legal designation.

of the cornerstones in a wider industry restructuring that effectively resulted in slightly more than one-quarter of the railway network in western Canada being operated by smaller regional and shortline carriers.

The first significant variation in this restructuring strategy came in 2004 when CN acquired the operations of what was then western Canada's only Class 2 carrier, BC Rail Ltd. In addition, the waning financial health of most shortline carriers led many to either sell or rationalize their own operations. This resulted in a number of shortline operations reverting back to the control of the Class 1 carrier that had spun them off in the first place. The most significant of these reversals came in January 2006 when RailAmerica Inc. sold most of its holdings in western Canada back to CN. This was followed later that same year by CN's reacquisition of what had evolved into the Savage Alberta Railway, and in late 2007, the Athabasca Northern Railway.

Many of these shortline operations had been established with an eye towards preserving railway service on what the Class 1 carriers had come to regard as uneconomic branch lines. While many of these were dependent on the movement of grain, most shortline railways proved incapable of reshaping the economics that gave rise to the grain industry's broader elevator-rationalization programs. Although these smaller carriers could point to some success in attracting new business – much of which has been tied to increased producer-car loading – they could not prevent the grain companies from continuing to close the smaller elevators that remained critical to their commercial success.

The effect of these shortline closures could be seen in the division of the railway network itself. Whereas, non-Class-1 carriers had controlled 23.8% of the western Canadian system at the outset of the GMP, by the close of the 2008-09 crop year that share had fallen to 13.7%. The shortline infrastructure still being operated by these carriers had fallen by 48.0%, to 2,411.3 route-miles from 4,640.3 route-miles a decade earlier. Moreover, even with abandonments, the infrastructure under CN and CP control actually increased by 4.2% during this same period, climbing to 15,493.4 route-miles from 14,827.9 route-miles.

The 2009-10 crop year brought still more examples of the changing face of shortline operations in western Canada. After more than a decade of service, the Okanagan Valley Railway suspended operations altogether in September 2009. But the failure of the OVR stood in contrast to the creation of two others. The first of these involved the establishment of yet another Saskatchewan-based shortline, the Last Mountain Railway, which began operating over an 84.5-mile stretch of former CN track extending southward from Davidson to Regina in October 2009. Following the model created by the Great Western Railway several years before, the takeover was spearheaded by a consortium of local municipal and business interests led by Mobil Grain Ltd.

The second came midway through the fourth quarter, with the formation of the Battle River Railway. Like the LMR and the other shortlines that preceded it, the BRR arose out of a community effort aimed at preserving local railway service along a 51.5-mile section of CN track located due southeast of Edmonton, Alberta, known as its Alliance subdivision. Although originated traffic amounted to just a few hundred carloads per year, the line's volumes had been increasing fairly steadily since 2003, thanks to the coordinated efforts of local farmers to expand the scope of producer-car loading in the area. Having secured the $5.0 million needed to make the purchase, this producer-group spearheaded the reintroduction of shortline railway service to Alberta.

These transfers had a modest impact on the division between Class 1 and non-Class-1 operations. Railway infrastructure under CN and CP management fell to 15,403.7 route-miles by the end of the 2009-10 crop year, with their share of the western Canadian network falling to 86.0% from 86.5% the year before. This, however, still proved to be greater than the 76.2% share these carriers held at the beginning of the GMP. In comparison, the portion of the network operated by shortline carriers increased to 2,501.0 route-miles from 2,411.3 route-miles a year earlier. Even so, their share of the infrastructure proved to be little more than half of what it once had been, accounting for 14.0% of the total compared to 23.8% a decade earlier. [Table 3B-1]

Local Elevators

As discussed earlier, while the railway network has changed modestly over the course of the past eleven years, the elevators it serves have declined significantly. In broad terms, these facilities have decreased by 64.6% in number, to 347 from 979, and by 9.8% in terms of associated storage capacity, to 6.3 million tonnes from 6.9 million tonnes.[17]

Moreover, the collapse of several shortline railways changed the nature of the decline in elevators tied to both the Class 1 and non-Class 1 railways. Until about the 2001-02 crop year, the major carriers were witnessing the closure of comparatively more elevators than their smaller counterparts. But this pattern was later reversed, with shortline-served elevators declining at a comparatively faster rate. By the close of the 2009-10 crop year, the number of elevators served by the Class 1 carriers had fallen by 63.5%, to 327 from 897, while those affiliated with the non-Class 1 carriers had declined by 75.6%, to 20 from 82. The differential proved even more significant when gauging the decline in storage capacity: only 5.0% in the case of elevators local to Class 1 carriers versus 74.0% for those tied to non-Class 1 carriers.

Even with the benefit of recent line transfers, it has been clear for some time that the grain companies have been investing in facilities served by CN and CP rather than the shortlines. To a large extent, this is reflected in the industry's decision to situate virtually all of its high-throughput elevators along the primary routes of both major railways.[18] [Table 3B-3]

Still, these net declines ignore some of the intermittent gains that were made by the non-Class 1 carriers over the course of the GMP. Specifically, they fail to recognize that the number and storage capacity of elevators tied to shortline railways actually increased in the first two

17 The reductions cited here relate only to the facilities directly served by rail.

18 As at 31 July 2010 95.8%, of the GHTS's 191 high-throughput elevators were served by CN and CP.

Figure 22: Change in Local Elevator Capacity – Serving Railway Class

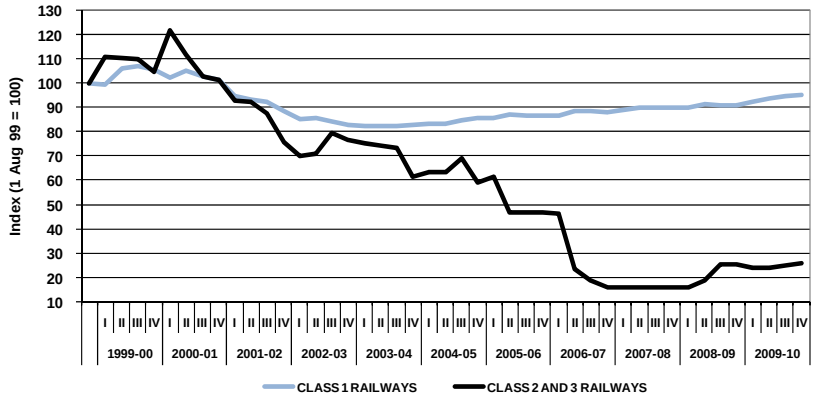
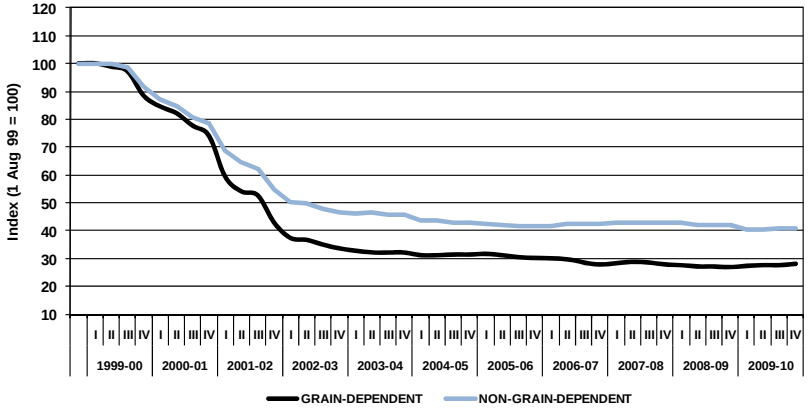


Figure 23: Change in Local Elevators – Railway Network



years of the GMP, before later starting to fall. This was due chiefly to the establishment of new entrants, including the Southern Manitoba Railway, Red Coat Road and Rail, and the Great Western Railway. And while the elevator network served by these smaller railways shrank considerably over the course of the next seven crop years, the emergence of four new shortlines has fostered a small resurgence in the number of facilities they now serve.

Differing rates of decline are also evident between facilities local to the grain-dependent, and non-grain-dependent, railway networks. Elevators situated along the grain-dependent network fell by 71.9% over the course of the past eleven crop years, to 118 from 420. In the case of those situated along the non-grain-dependent network, the decline was 59.0%, having fallen to 229 from 559. On the whole, these patterns clearly indicate that the elevators tied to the grain-dependent railway network have been diminishing at a noticeably faster pace.

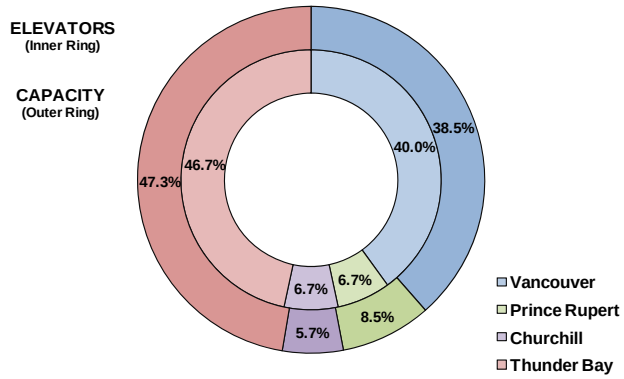
Even so, the 2009-10 crop year saw a small aberration in this trend, with the number of elevators serviced by the grain-dependent network actually increasing by 4.4%, to 118 from 113 a year earlier. At the same time, the non-grain-dependent network posted a further 2.1% reduction, declining to 229 from 234.

TERMINAL ELEVATOR INFRASTRUCTURE

There were no changes to the licensed terminal elevator network in the 2009-10 crop year. As a result, it still comprised 15 facilities with an associated storage capacity of 2.5 million tonnes. These values are only marginally greater than those of the GMP's base year, which sat at 14 elevators with 2.6 million tonnes of storage capacity.[19] With seven of the elevators and 47.3% of the storage capacity, Thunder Bay held the largest share of these assets. Vancouver held second place with six facilities and 38.5% of the system's storage capacity. Prince Rupert and Churchill both followed with one terminal elevator apiece, and storage capacity shares of 8.5% and 5.7% respectively. [Table 3C-1]

And while the physical scope of the changes in this network has been minimal, there have been a number of significant changes in terminal ownership. Each of these was rooted in the various corporate mergers and acquisitions that have taken place since the GMP began.[20] With no further changes to the licensed terminal elevator network recorded in the 2009-10 crop year, it remained comprised of 15 facilities with 2.5 million tonnes of storage capacity.

Figure 24: Terminal Elevators – 2009-10 Crop Year



19 The expansion noted here is somewhat illusionary since the changes were the product of licensing three pre-existing facilities and de-licensed two others. The last actual physical addition to the network came in 1985 with the opening of Prince Rupert Grain Ltd.

20 Those with the most direct bearing on terminal ownership involved the merger of Agricore Cooperative Ltd. and United Grain Growers Limited, which combined to form Agricore United in 2001, and the subsequent purchase of Agricore United by Saskatchewan Wheat Pool to form Viterra Inc. in 2007.

Section 4: Commercial Relations

Indicator Description	Table	1999-00	2007-08	2008-09	2009-10 Q1	Q2	Q3	Q4	YTD	% VAR
Trucking Rates										
Composite Freight Rate Index – Short-haul Trucking	4A-1	100.0	125.5	132.2	132.2	132.2	132.2	132.2	132.2	0.4%
Country Elevators Handling Charges										
Average Handling Charges – Country Delivery Points	4B-1									
Railway Freight Rates										
Composite Freight Rates ($ per tonne) – Rail	4C-1									
Multiple-Car Shipment Incentives ($ per tonne) – Rail	4C-2									
Effective Freight Rates ($ per tonne) – CTA Revenue Cap	4C-3	n/a	$30.45	$30.92	n/a	n/a	n/a	n/a	28.76	-7.0%
Terminal Elevator Handling Charges										
Average Handling Charges – Terminal Elevators	4D-1									
Tendering Program										
Tenders Called (000 tonnes)	4E-1	n/a	1,891.2	3,416.2	678.3	716.6	592.9	443.5	2,431.4	-28.8%
Tender Bids (000 tonnes)	4E-3	n/a	4,396.7	5,622.1	1,384.4	1,322.5	1,683.9	578.9	4,969.6	-11.6%
Total CWB Movements (000 tonnes)	4E-5	n/a	13,332.3	15,612.8	4,181.7	3,384.7	3,258.6	4,350.0	15,175.0	-2.8%
Tendered Movements (%) – Proportion of Total CWB Movements	4E-5	n/a	14.3%	14.4%	13.9%	23.0%	19.3%	11.6%	16.4%	13.9%
Tendered Movements (000 tonnes) – Grain	4E-5	n/a	1,900.0	2,246.6	580.9	780.0	629.9	504.4	2,495.2	11.1%
Average Tendered Multiple-Car Block Size (railcars) – Port	4E-17	n/a	57.5	59.7	61.4	65.1	72.3	56.7	64.8	8.5%
Railway Car Cycle (days) – Tendered Grain	4E-18	n/a	13.9	11.8	10.3	11.2	11.4	11.6	11.1	-5.9%
Railway Car Cycle (days) – Non-Tendered Grain	4E-18	n/a	15.2	13.0	13.0	13.6	12.5	13.0	13.1	0.8%
Maximum Accepted Tender Bid ($ per tonne) – Wheat	4E-19	n/a	-$23.78	-$23.01	-$21.28	-$18.37	-$15.62	-$12.51	-$21.28	-7.5%
Maximum Accepted Tender Bid ($ per tonne) – Durum	4E-19	n/a	-$10.52	-$14.95	-$21.13	-$21.76	-$23.56	-$8.73	-$23.56	57.6%
Market Share (%) – CWB Grains – Major Grain Companies	4E-20	n/a	74.3%	72.9%	76.3%	73.0%	73.4%	74.5%	74.3%	1.9%
Market Share (%) – CWB Grains – Non-Major Grain Companies	4E-20	n/a	25.7%	27.1%	23.7%	27.0%	26.6%	25.5%	25.7%	-5.2%
Advance Car Awards Program										
Advance Award Movements (%) – Proportion of Total CWB Movements	4F-1	n/a	13.7%	12.1%	8.3%	10.6%	11.0%	13.0%	10.8%	-10.7%
Advance Award Movements (000 tonnes) – Grain	4F-1	n/a	1,831.0	1,896.5	348.7	360.1	358.6	565.8	1,633.3	-13.9%
Railway Car Cycle (days) – Advance Award Grain	4F-6	n/a	14.4	12.2	11.1	13.1	12.5	12.0	12.3	0.8%

TRUCKING RATES

Short-haul trucking rates have risen substantially since the 2004-05 crop year. By the end of the 2008-09 crop year, they had increased by 32.2% from what they had been a decade earlier. For the most part, this reflected the effects of higher fuel and labour costs. The heightened demand for carrying capacity for larger grain volumes gave service providers a greater degree of latitude in passing these costs onto their customers.

Despite the reduction in fuel costs that followed the collapse in crude oil prices in the latter half of 2008, grain related commercial trucking rates have remained largely unchanged since the first quarter of the 2008-09 crop year. Moreover, they have been sustained by the comparatively large volumes of grain that have continued to move. As a result, the composite price index for short-haul trucking at the end of the 2009-10 crop year stood unchanged from the 132.2 attained eighteen months earlier. [Table 4A-1]

COUNTRY ELEVATOR HANDLING CHARGES

The per-tonne rates assessed by grain companies for a variety of primary elevator handling activities are the primary drivers of corporate revenues. Comparatively, those assessed for the receiving, elevating and loading out of grain are the most costly for producers. These are in turn followed by the charges levied for the removal of dockage (cleaning) and storage. These rates vary widely, reflecting not only the different services offered, but the diversity of grains involved as well as the province in which the service is provided.

Given the wide variety of tariff rates, the GMP necessarily uses a composite price index to track changes in them. Since the beginning of the GMP, the rates for all of these services have risen considerably. The smallest increases have been in those tied to the receiving, elevating and loading out of grain. Through to the end of the 2008-09 crop year, these costs had risen by 22.5%. During the 2009-10 crop year they increased by a further 0.6%, bringing the cumulative increase over the last eleven years to 23.3%.

Figure 25: Change in Composite Freight Rates – Short-Haul Trucking

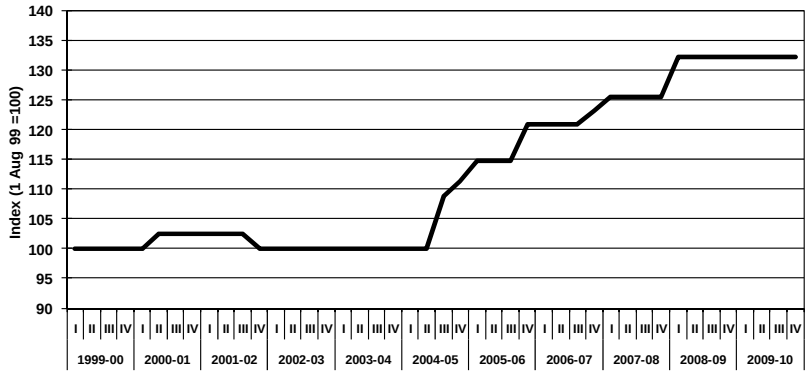
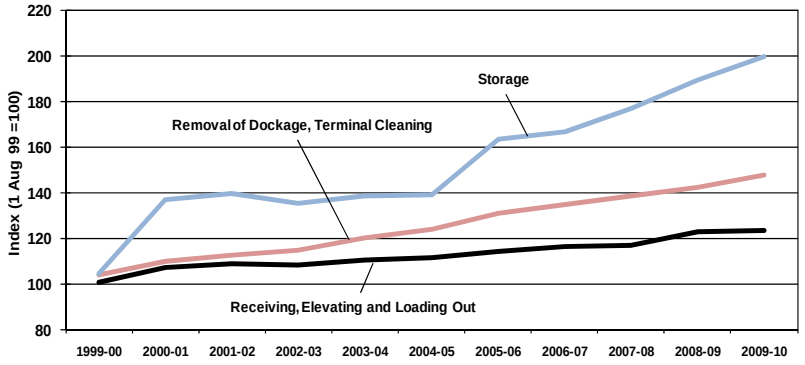


Figure 26: Change in Primary Elevator Handling Charges



The rates associated with the removal of dockage have increased at a faster pace. Through to the end of the 2008-09 crop year, these index on these rates had already increased by 42.3%. With the close of the 2009-10 crop year, the composite price index had risen another 3.5%, reaching 47.3%.

The most substantive rate escalations observed thus far have related to elevator storage. Much of the initial price shock came towards the end of the 2000-01 crop year, when these rates were raised by a factor of almost one-third. Although these rates pulled back moderately in the 2002-03 crop year, they have continued to climb. The 2009-10 crop year witnessed a further 5.4% increase in these costs, with the cumulative increase since the beginning of the GMP amounting to 99.6%. [Table 4B-1]

RAILWAY FREIGHT RATES

The single-car freight rates assessed by CN and CP for the movement of regulated grain have changed substantially since the beginning of the GMP. Rail freight rates have evolved from what were largely mileage-based rates into a less rigidly structured set of market-responsive rate structures. This became evident in the rate differentials that arose between specific grains and the ports to which they were destined. Much of this began to take shape at the beginning of the 2006-07 crop year when CN initiated a partial changeover to commodity-specific, per-car charges. With CP closely following suit, a wholesale conversion in the rate structures of both carriers was completed by the close of the 2007-08 crop year. [Table 4C-1]

This restructuring also resulted in more substantive rate increases being applied against shipments to Thunder Bay and Churchill rather than those to the west coast. Even within this broader initiative, CN widened the financial advantage it had begun giving single-car shipments to Prince Rupert. Not to be overlooked was an initial move towards seasonal pricing, which attempted to link freight rates to the rhythmic demand change for railway carrying capacity.

Figure 27: CN Single-Car Freight Rates – Primary Corridors

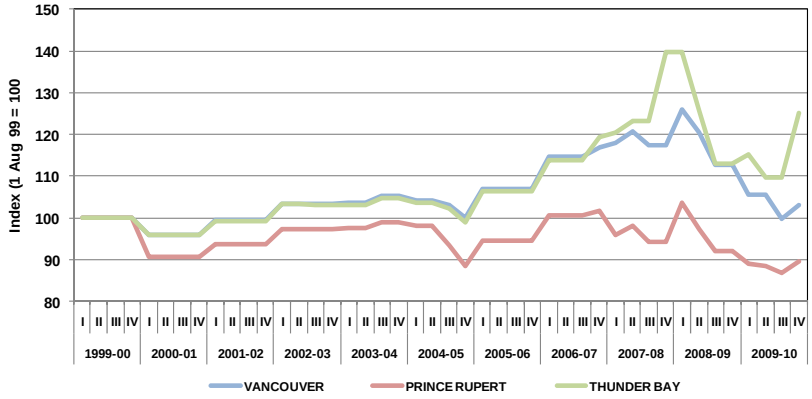
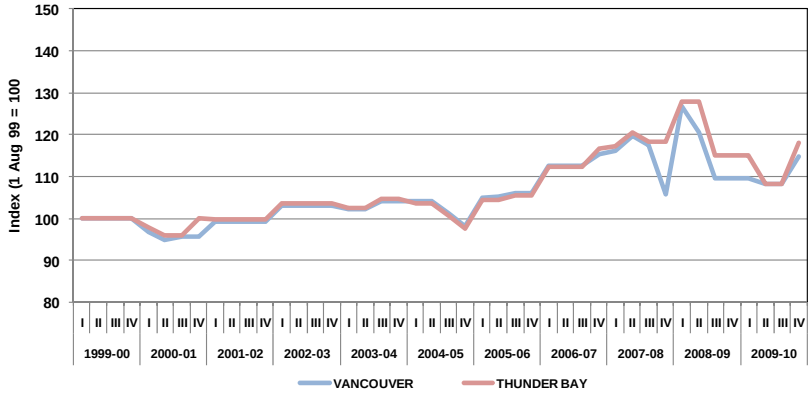


Figure 28: CP Single-Car Freight Rates – Primary Corridors



The 2009-10 crop year saw still more complexity introduced when CN advanced a mix of rate increases and reductions in the first quarter.[21] In addition to accentuating the pricing differentials already found in specific corridors, these adjustments varied geographically. By way of example, single-car rates for the movement of wheat over CN lines to Vancouver were reduced by an average of 6.1% in early October 2009. Yet the constituents in this rollback varied noticeably: 2.9% if the movement originated in Alberta; 5.8% if in Saskatchewan; and 10.7% if in Manitoba. The same was true of the rate changes on shipments to Prince Rupert, which fell collectively by an average of 3.5%, but which incorporated an increase of 1.7% on Alberta-originated shipments, along with reductions of about 3.1% and 10.6% respectively on movements from Saskatchewan and Manitoba.

Complementing this was a reduction in the single-car rates to Churchill, which were cut by an average of 14.3% at the outset of the crop year. Here too, the reductions varied according to distance, ranging from a low in the area of 10% to a high of about 22%. The smaller reductions were tied to rates from points in northern Manitoba and Saskatchewan, while the steepest were associated with points in southern Saskatchewan.

In contrast to the aforementioned reductions, CN increased the single-car rates applicable on movements to Thunder Bay at the beginning of the crop year. And, again, there was evidence of geographic price differentiation. For the most part, the rates on movements from much of Manitoba incurred no increase at all, while those from points in northern Manitoba and northeastern Saskatchewan sustained increases of about 5%, and those from points in western Saskatchewan and Alberta experienced hikes in the area of 10%. Even with a mid-October 2009 rollback of about 6.5%, by the close of the first quarter the rates in this corridor stood about 2.1% higher than at the end of 2008-09 crop year.

21 There were no changes to the single-car rates posted by CP at that time since the carrier chose to extend its rates from the close of the previous crop year through to December 2009.

For the most part, these latter reductions reflected changes brought on through CN's seasonal pricing initiative. This caused both CN and CP to reduce their rates even further in the second quarter. Still, much of the focus remained centred on the Thunder Bay rates, with CN posting cuts that averaged about 5.1%, while CP reduced its rates by 6.0% across the board.

The changes applied to the carriers' westbound rates during this period proved far more selective. In the case of CN, the carrier only reduced the single-car rates on shipments to Prince Rupert from points in British Columbia and Alberta by an average of 2.8% and 2.3% respectively. All other rates, including those applicable on movements to Vancouver, remained unaltered. CP appeared to be moving in much the same direction, choosing only to reduce its single-car rates on movements to Vancouver from Alberta and Saskatchewan by an average of 2.1% and 1.7% respectively.

The third quarter saw much of the focus shift towards the west coast. The most substantive changes in this period were advanced by CN, which rolled back its Vancouver rates by about 5.7%, and its Prince-Rupert rates by about 1.9%. Despite the price cuts advanced by its competitor, the rates posted by CP remained largely unaltered.

The rate reductions that had been accumulated through to the end of April 2010 were substantively reversed in the fourth quarter. Once again, CN applied comparatively lower increases on movements to the west coast than it did on those to Thunder Bay, with the average increase on Vancouver and Prince Rupert movements being 3.3% and 3.5% respectively, while the average Thunder Bay increase amounted to 14.3%. Despite the approaching 2010 shipping season, the increase applied on CN's rates to Churchill amounted to only 2.3%. To much the same effect, CP preceded an across-the-board rate increase on 1 July 2010 with a 3.0% hike in its Thunder Bay rates some two months earlier, which effectively produced a 6.0% increase in its Vancouver rates against a 9.2% rise in its Thunder Bay rates.

The compound effect of these pricing actions, as well as those registered earlier in the GMP, provides some insight into the orientation of today's

single-car freight rates. By the close of the 2009-10 crop year, the single-car rates applicable on the movement of grain to the jointly served ports of Vancouver and Thunder Bay had both increased, albeit by substantially different margins: 8.8% and 21.7% respectively. The difference was even more significant for the ports of Prince Rupert and Churchill, which actually declined by 10.3% in the case of the former, and increased by 22.3% in the case of the latter. Taken together, these patterns suggest that the railways favour handling westbound grain and that they use price to influence that movement.

Multiple-Car-Block Discounts

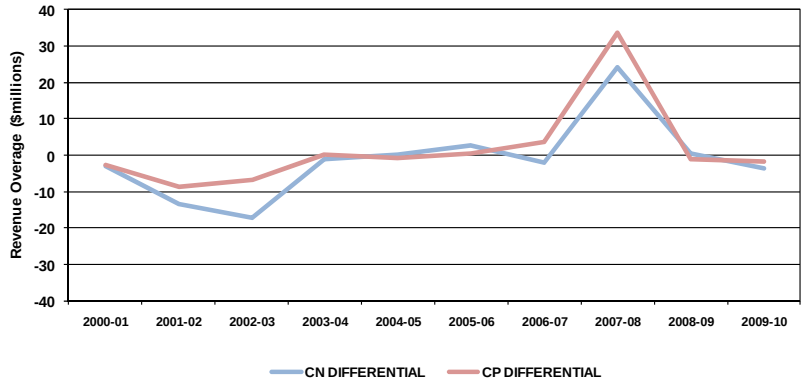
There have been equally significant changes to the structure of the freight discounts both carriers use to promote the movement of grain in multiple car blocks. The most noteworthy aspect of this evolution was the gradual elimination of the discounts applicable on movements in blocks of less than 50 cars, along with a progressive escalation in the discounts tied to blocks of 50 or more cars. Over the course of the last eleven crop years, the discount applicable on the largest of these has risen by a factor of 60%, to $8.00 per tonne from $5.00 per tonne. More importantly, there can be little doubt that this has been a central force in the rationalization of the western Canadian elevator system and in the expansion of high-throughput facilities.

These discounts remained largely unchanged in the 2009-10 crop year. CN continued to offer discounts on movements in blocks of 50-99 cars that equated to $4.00 per tonne, and to $8.00 per tonne on movements of 100 or more cars. And while the maximum discount offered by CP for shipments in blocks of 112 cars also remained unaltered at $8.00 per tonne, the carrier effectively cut its discount on movements in blocks of 56-111 cars late in the fourth quarter, to the equivalent of $4.00 per tonne from $5.00 per tonne. [Table 4C-2]

The Revenue Cap

Under the federal government's revenue cap, the revenues that CN and CP are allowed to earn in any given crop year from the movement of regulated grain cannot exceed a legislated maximum of $348.0 million and $362.9 million respectively.[22] But these limits are not static. Rather, they are adjusted annually to reflect changes in volume, average length of haul, and inflation. With the exception of the inflationary component, these adjustments are determined by the Canadian Transportation Agency following a detailed analysis of the traffic data submitted to it by CN and CP at the end of any given crop.[23] For the 2009-10 crop year, the revenue caps for CN and CP were set at $467.7 million and $455.7 million respectively, or $923.4 million on a combined basis.[24] [Table 4C-3]

Figure 29: Revenue Cap Compliance



22 The maximums cited here are expressed in constant 2000 dollars, and were developed using an estimated annual movement of 12.4 million tonnes for CN and 13.9 million tonnes for CP, with average haulage distances of 1,045 miles and 897 miles respectively.

23 The Volume-Related Composite Price Index (VRCPI), which provides for an inflationary adjustment to carrier revenues, is determined by the Canadian Transportation Agency in advance of each crop year. For the 2009-10 crop year, the Agency determined the value of the VRCPI to be 1.0638, which represented a year-over-year reduction of 7.4%. See Canadian Transportation Agency Decision Number 176-R-2009 dated 30 April 2009.

24 See Canadian Transportation Agency Decision Number 512-R-2010 dated 21 December 2010.

At the same time, the Agency determined that the statutory revenues derived from the movement of regulated grain by CN and CP amounted to $463.9 million and $454.0 million respectively, or $918.0 million on a combined basis. This meant that total carrier revenues fell $5.4 million below the legally prescribed limit. CN generated the largest portion of this shortfall, with its revenues having fallen $3.7 million, or 0.8%, shy of its limit. The CP shortfall, which amounted to $1.7 million, denoted a narrower 0.4% undercutting of its revenue limit.

Notwithstanding the nominal forfeitures that these sums entailed, it must be remembered that both carriers retained over 99% of the revenues they were entitled to earn under the revenue cap. That has been the case throughout much of the preceding decade. In fact, these results continue to point to the skill with which the railways have been able to maximize their revenues within the current regulatory framework.

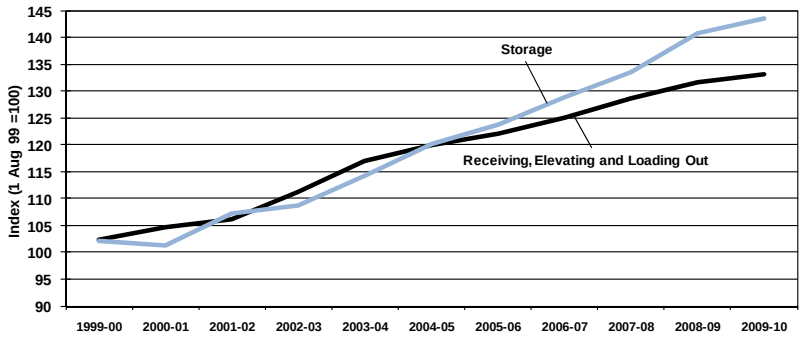
TERMINAL ELEVATOR HANDLING CHARGES

At terminal elevators, rates posted for the receiving, elevating and loading out of grain are the system's most costly. As in other measures, an examination of price movement is best performed using a composite index. At the end of the 2009-10 crop year these ranged from a low of about $8.08 per tonne for wheat delivered at Churchill, to a high of $14.62 per tonne for canola and flaxseed shipped to Vancouver.

Increases were noted for virtually all terminal elevators in the 2009-10 crop year. At Vancouver, these ranged from a reduction of 0.2% on barley to an increase of 2.1% on rye. For Prince Rupert, the increases topped out at 4.1%. At Thunder Bay, they ranged from 1.5% to 2.3%. The only exception was found in the rates posted by Churchill, which remained unchanged for a sixth consecutive year. On the whole, these pricing actions served to raise the composite price index by a further 1.2%, bringing the combined value of all increases made since the beginning of the GMP to 33.2%. [Table 4D-1]

As with the cost of elevation, the daily charge for storage also varied widely, reaching from a low of about $0.07 per tonne on the majority of commodities held at Churchill to a high of $0.15 per tonne on oats

Figure 30: Change in Terminal Elevator Handling Charges



maintained in inventory at Vancouver. These costs also rose in the 2009-10 crop year, with the overall gain amounting to about 1.9%. It should be noted, however, that this increase was tempered by the fact that both Prince Rupert and Churchill chose to extend their storage rates for another year. Among those that did not hold the line, Vancouver reported the largest year-over-year gain, with an increase of 3.7%. The terminals at Thunder Bay followed with increases that averaged 1.7%. These actions brought the accumulated price increase over the last eleven years to 43.5%.

TENDERING PROGRAM

The 2009-10 crop year denoted the tenth for the Canadian Wheat Board's tendering program. Initially established with a three-year life under a Memorandum of Understanding between the Minister Responsible for the Canadian Wheat Board and the CWB, the program has evolved significantly since the MOU expired at the end of the 2002-03 crop year. The most notable change involved the development of a tacit agreement between the CWB and its agents to combine tendering with advance car awards to move about 40% of the grain shipped by the CWB to the four ports in western Canada.

While the amount of grain shipped under these two programs never reached much beyond a third of the overall movement, this proportion has been drifting steadily lower in recent years. Much of this is due to the CWB's adoption of a less rigid target, and one that gives it a greater degree of flexibility in moving grain.

Tender Calls

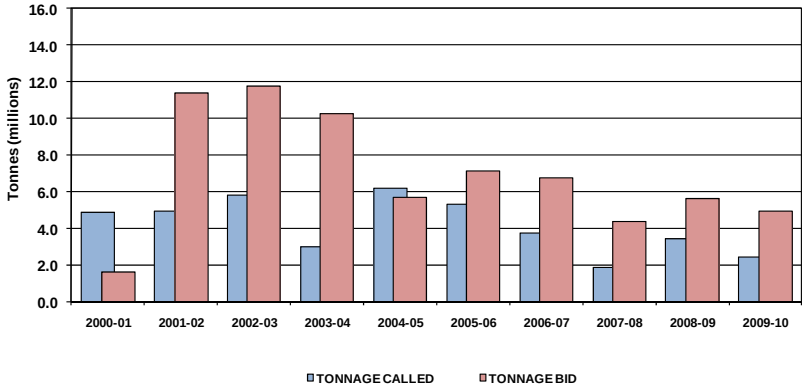
The CWB issued a total of 233 tenders calling for the shipment of approximately 2.4 million tonnes of grain during the 2009-10 crop year. This represented a 28.8% reduction from the 3.4 million tonnes put out to tender a year earlier. As in past years, the majority of this tonnage, 74.8%, related to the movement of wheat. For the 2009-10 crop year this entailed a potential movement of 1.8 million tonnes, which stood 18.0% below the 2.2 million tonnes called a year earlier. Durum ranked second in terms of overall size, with calls for over 400,000 tonnes having been issued. This denoted 16.9% of the overall total compared to just 7.6% the year previous. Barley calls, which fell to an 8.3% share from the 27.5% share seen a year earlier, accounted for the remaining 200,000 tonnes.

The CWB sought to move the majority of this grain through the west coast ports, with 77.0% of the tonnage called intended for export through Vancouver and Prince Rupert. This was marginally below the 79.7% share observed a year earlier. There was also another noticeable shift in the allocation between these two ports. Vancouver's share rose to 37.0% from the previous crop year's 26.9%, while Prince Rupert's declined to 40.0% from a record-setting 52.8%. Thunder Bay showed a modest gain considering the west coast's reduced allocation, climbing to a 23.0% share from 20.3% a year earlier. For the fifth consecutive year, no calls were issued in favour of Churchill. [Tables 4E-1 and 4E-2]

Tender Bids

The CWB's tender calls were met by 759 bids offering to move 5.0 million tonnes of grain, slightly more than twice the amount sought. The majority of these bids, 71.2%, responded to calls for the movement of wheat. Another 26.8% responded to those issued for durum, while the remaining 2.0% answered those for barley. When examined with respect to the port specified in the tender call, 42.9% of the bids were directed to Vancouver, 30.4% to Prince Rupert, and 26.7% to Thunder Bay. With no calls having been issued for Churchill, no bids were received. [Tables 4E-3 and 4E-4]

Figure 31: Tendered Grain – Tonnage Called and Tonnage Bid



The relative strength of the grain companies' response to this segment of the CWB's business can be gauged through the ratio derived from comparing the number of tonnes bid against the number of tonnes called. Driven by the activity surrounding durum, overall bidding proved more intense than in the preceding crop year. In fact, the intensity of the bidding on durum tenders proved second only to that of the 2003-04 crop year, with the response rate rising by 147.1%, to a ratio of 3.2 against 1.3 a year earlier. The increase in the response rate on wheat tenders proved significantly less, with a gain of just 8.7% raising the associated ratio to 2.0 from the 2008-09 crop year's 1.8 value. Only barley showed a marked decrease in bidding activity, with the ratio falling by 64.5%, to 0.5 from 1.4 a year earlier.

Changes in the response rates for the port specified in the tender calls were also evident. Of particular interest was the ratio associated with grain intended for delivery at Thunder Bay, which nearly doubled, climbing to 2.4 from 1.3 a year earlier. Vancouver's ratio saw a smaller 32.7% gain, rising to 2.4 from the previous year's 1.8. Only Prince Rupert saw a reduction, with an 8.8% decline reducing the ratio to 1.6 from 1.7.

For the most part, the heightened response rates reflected the competition that had been spurred as a result of the reduced amount of grain put out for tender. However, durum showed a disproportionate upturn as a result of a 58.3% increase in the amount of grain called. Owing not only to the stocks carried forward from the previous crop year but to that arising from a large harvest as well, the grain companies appeared intent on clearing as much durum from their elevators as possible. This was reflected in steeper discounts being offered on the durum the CWB was directing to both Vancouver and Thunder Bay, which rose to a high of $23.56 per tonne from $14.95 per tonne a year earlier.

Contracts Awarded

A total of 342 contracts were subsequently signed for the movement of 2.5 million tonnes of grain.[25] This represented a gain of almost 300,000 tonnes over the 2.2 million tonnes awarded a year earlier. And although this denoted 16.4% of the tonnage shipped by the CWB to western Canadian ports during the 2009-10 crop year, it still fell short of the 20% target that the CWB stated would govern the tendering program. [Tables 4E-5 and 4E-6]

Unlike the tonnage specified in the tender calls, the largest proportion of the grain contracted for movement under the tendering program, 52.5%, was directed to the port of Vancouver. This was followed by Prince Rupert and Thunder Bay, which saw shares of 26.8% and 20.7% respectively. In addition to showing a newly enhanced role for

25 The volumes cited as moving under the CWB's tendering program also extend to tendered malting barley – which is administered independent of other tendered CWB grains.

Figure 32: Ratio of Tonnage Bid to Tonnage Called

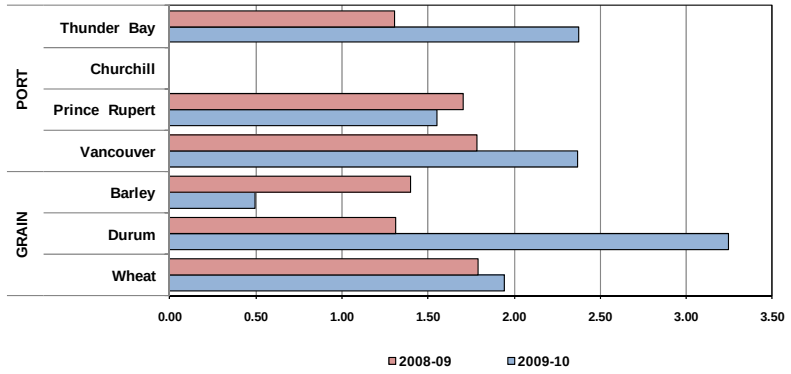
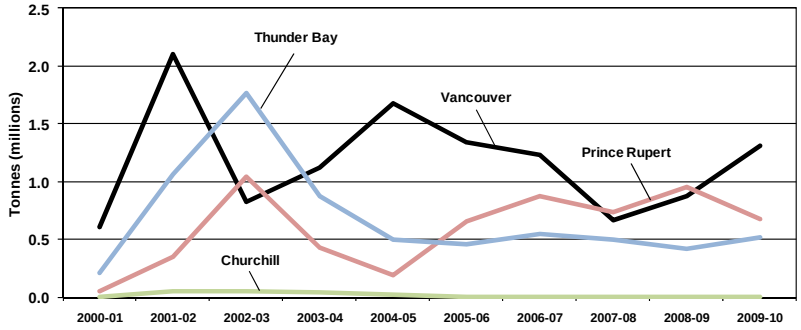


Figure 33: Tendered Grain – Destination Port



Vancouver in the movement of tendered grain, these results marked the fifth consecutive year in which Thunder Bay had been demoted to the third largest destination.

Although broader market forces had a significant role in shaping these results, the reduction in CN's freight rates to Prince Rupert cannot be disregarded. Supported by a better allocation of cars within this corridor, the CWB has clearly been trying to direct a larger proportion of its tendered grain shipments through this export gateway. This redirection has effectively served to elevate Prince Rupert to a first or second place ranking in each of the last five crop years.

Malting Barley

Fifteen tenders were issued by the CWB in the 2009-10 crop year for the movement of malting barley. In response, a total of 90 bids were received. This resulted in the awarding of 18 contracts for the shipment of 484,700 tonnes to Vancouver, an amount that stood well above the 284,900 tonnes handled a year earlier. As has been the case throughout the GMP, malting barley constituted the sole grain to have been sold Free on Board (FOB). All other tendered grain shipments were sold on an "in-store" basis. Malting barley constituted 37.0% of the overall tonnage moved under tender to the port of Vancouver, and a lesser 19.4% of the total tonnage directed to all four ports in western Canada. [Table 4E-9]

Originating Carrier

CP secured 57.9% of the volume that moved under tender in the 2009-10 crop year. This denoted a significant gain over the 41.8% share the carrier moved a year earlier, and marked a return to the top-ranked position following the loss of that title to CN two years earlier.[26] [Table 4E-11]

26 CN originated 52.4% of the tendered grain shipped in the 2007-08 crop year and 58.2% of that shipped in the 2008-09 crop year.

Figure 34: Tendered Grain – Share of Western Canadian CWB Shipments

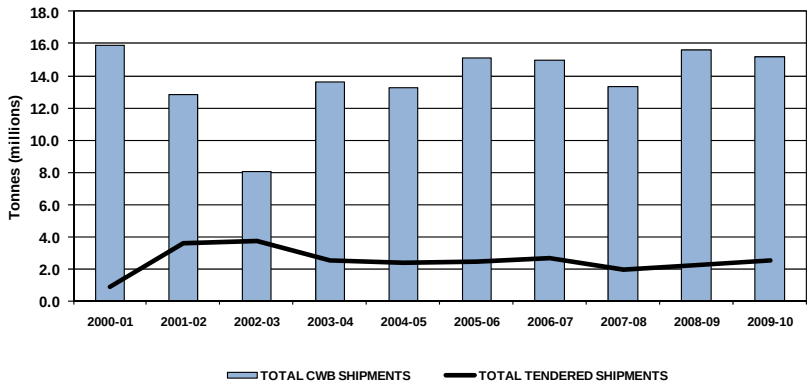
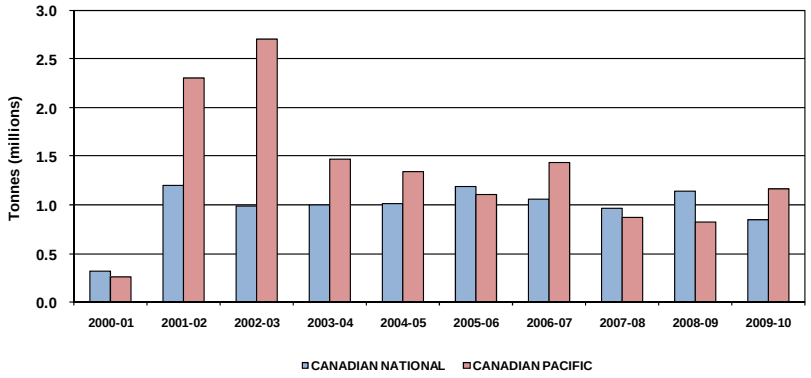


Figure 35: Tendered Grain – Originating Carrier



It should be noted that CP has been the largest originator of tendered grain in six of the last ten crop years. Much of this dominance can be traced not only to what has historically been the better availability of higher-quality grains in CP's service area, but to the larger number of high-throughput elevators served directly by the carrier. CP serves 101 of the 191 such facilities situated across western Canada, while the number served by CN amounts to 82.[27]

Multiple-Car Blocks

A large share of the grain shipped under tender moves in multiple-car blocks. In fact, since the beginning of the CWB's tendering program, the proportion moving in blocks of 25 or more railcars has never fallen below 85.9%.[28] This again proved to be the case in the 2009-10 crop year, when 92.2% of the tendered grain volume moved in such blocks, up moderately from 91.0% a year earlier.

In addition to a reduction in the proportion of grain moved in less than 25-car blocks, which fell to 7.8% from 9.0% the year before, there were a number of other shifts. Chief among these was a sharp decrease in the proportion moving in blocks of 25-49 cars, which fell to 19.9% from 29.1% a year earlier. This decline was reflected in correspondingly greater proportions for larger-block movements. Shipments in blocks of 50-99 cars commanded a 52.5% share against 50.0% the previous year. Movements in blocks of 100 or more cars showed an even larger gain, taking a 19.8% share as compared to 10.0% a year earlier. [Table 4E-12]

27 Shortline railways provide service to the remaining eight high-throughput facilities.

28 This proportion was recorded in the 2000-01 crop year, the first for the CWB's tendering program.

Figure 36: Tendered Grain – Multiple-Car Blocks

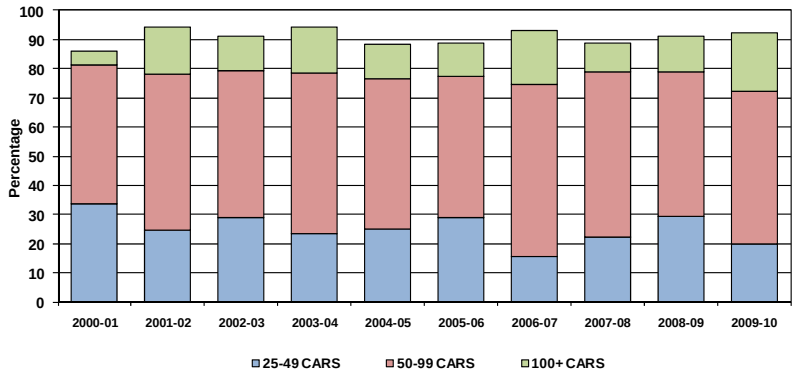
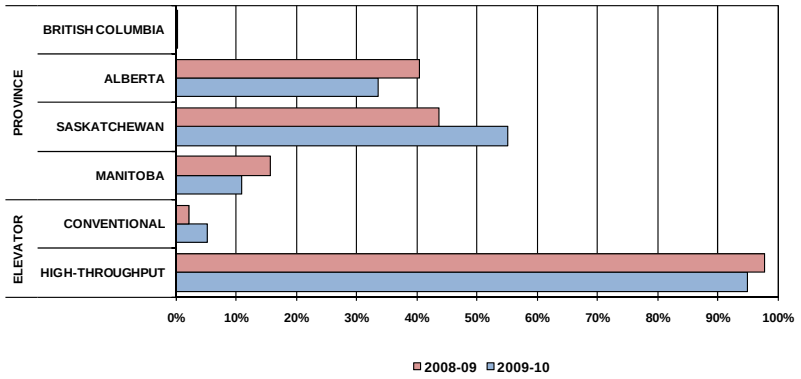


Figure 37: Tendered Grain - Originations



Tendered Origins

With almost 1.1 million tonnes of grain shipped, Saskatchewan was again the largest originator of tendered grain in western Canada, taking a 55.1% share against 43.7% in the preceding crop year. Although a portion of this gain was due to an expansion in the province's tonnage, a measure of the increase also came from reductions in the volumes originated by Manitoba and Alberta.

Alberta was the second largest originator of tendered grain, shipping almost 700,000 tonnes, or 33.6% of the total, against a 40.4% share earned the year previous. This was followed by Manitoba, which originated 200,000 tonnes and saw its share slip to 11.0% from 15.8% a year earlier.

Since the beginning of the CWB's tendering program, high-throughput elevators have been the principal facilities used in moving tendered grain. It was found that 90.3% of the volume originated in the initial year of the program came from these facilities. Even when faced with a drought, this proportion never fell below 83.0%.[29] In more recent years, this proportion has moved steadily higher, reaching a record 97.6% in the 2008-09 crop year. Although the 2009-10 crop year saw this reduced to 94.9%, the basic tenet remains unaltered. Much the same is true of the tonnages originated by each of the provinces, save that of British Columbia, which originated all of its tendered grain at conventional elevators.[30] [Table 4E-14]

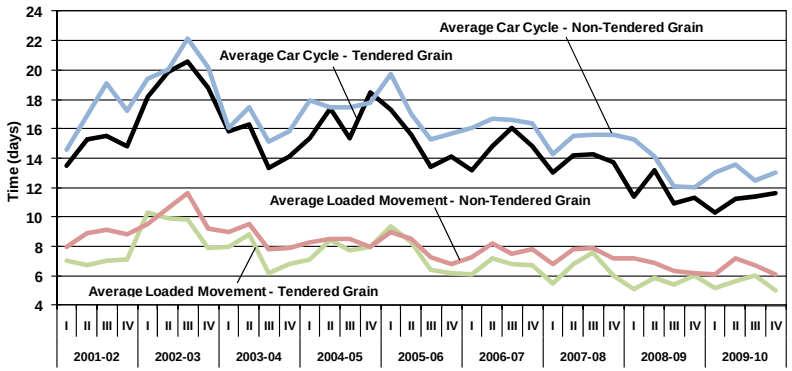
Car Cycles

The average car cycle for tendered grain shipments fell by 5.9% in the 2009-10 crop year, to 11.1 days from 11.8 days a year earlier. This was the fifth consecutive reduction in the annualized average, which resulted

29 The low cited here was recorded in the 2002-03 crop year, the third for the CWB's tendering program.

30 There are no high-throughput elevators situated in British Columbia.

Figure 38: Car Cycles – Tendered and Non-Tendered Grain



in the setting of yet another record low since the beginning of the GMP. It is worth noting that this average continues to stand substantially below that for all hopper car movements, which itself reached a new GMP low of 13.2 days. [Table 4E-18]

A similar distinction can be drawn between the car cycles associated with the movement of tendered as well as non-tendered CWB grain. The average car cycle for tendered grain was 15.3% below that of non-tendered CWB grain, 11.1 days versus 13.1 days respectively. Over the course of the last nine crop years, the time advantage enjoyed by tendered grain shipments has proven fairly consistent, amounting to about 1.3 days, or 8.1%, less than that of non-tendered CWB grain movements. This advantage was manifest in both the loaded as well as the empty portions of the movement.

While the statistics presented here continue to indicate that tendered grain movements have a structural advantage over non-tendered ones, there is still an overarching commonality to the railway service they both receive. It must be remembered that railway operations have the most direct bearing on car cycles, and that the gains made during the 2009-10

crop year appear to have been derived from the provision of generally better railway service.

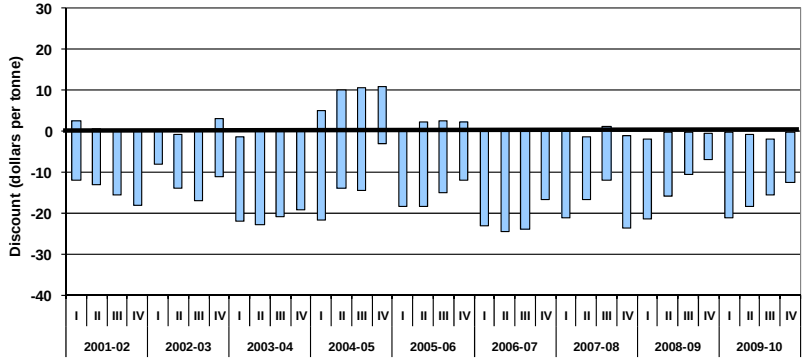
Accepted Bids

Although the actual winning bids remain confidential, the CWB discloses the range of bids received for each tender it issues. As "price takers," it is in the CWB's best interest to accept the highest bid put forward.[31] As a result, the maximum discount offered by grain companies, and generally accepted by the CWB, provides a reasonable basis by which to compare differences in the bidding behaviours of both the major, and non-major, grain companies.[32]

The maximum discounts put forward by both groups show a significant degree of variation over the course of the last nine crop years, be it on a quarterly or an annual basis. To a large extent, these fluctuations reflected their response to changing marketplace conditions. Even so, the maximum discounts offered by the major grain companies typically exceeded those advanced by their smaller competitors, although there were numerous instances where the latter outbid their larger rivals. [Table 4E-19]

Bidding in the 2009-10 crop year saw a pattern similar to those observed in previous crop years, with the deepest discounts occurring in the first quarter, followed by a gradual diminishment throughout the remainder of the year. Although the maximum discounts advanced for wheat fell back marginally in the first quarter, to $21.28 per tonne from $23.01 per tonne a year earlier, they proved more resilient in the latter part of the crop year, eventually dropping to $12.51 per tonne as compared to the previous crop year's $7.11 per tonne.

Figure 39: Maximum Discount from Initial Price - Wheat



Despite changing market conditions, the major grain companies have retained their position as the industry's overall price leaders. Whether offering deeper discounts, or demanding higher premiums, the bidding patterns of the major grain companies continue to suggest that they have taken a more aggressive approach to tendering than their non-major counterparts. Moreover, what ultimately appears to distinguish the two groups is the non-majors' proclivity to respond more selectively to the tender calls issued by the CWB.

31 The bids submitted are expressed as a per-tonne discount to the CWB's initial price for wheat, durum and barley.

32 As used here, the term "major grain companies" refers specifically to Viterra Inc., Cargill Limited and Richardson Pioneer Limited. These companies effectively constitute the three largest firms sourcing grain within western Canada.

Market Share

The best indicator of dominance remains the market shares held by the major and non-major grain companies. The share secured by the larger grain companies in the movement of CWB grain, be it tendered or non-tendered, has not changed all that significantly over the course of the last nine crop years. Over this timeframe, the major grain companies have seen their share of tendered grain shipments fall to 82.4% from 84.6%. Likewise, the majors' share on non-tendered CWB grain shipments has fallen to 73.2% from 74.4%. [Table 4E-20]

Necessarily, the market shares held by the non-major grain companies showed corresponding increases: rising to 17.6% from 15.4% on tendered grain; and to 26.8% from 25.6% on non-tendered grain. These differentials are clearly more significant to the non-majors, but are too limited in scope to be indicative of a meaningful change in overall business activity.

To an extent, these results can be explained by the heightened competition that has existed between the grain companies themselves. But a larger factor relates to the fact that tendered grain movements are effectively capped at 20% of the CWB's shipments to the four ports in western Canada. In effect, the position of the smaller grain companies respecting the CWB's remaining traffic volume has been partially shielded by its general car allocation mechanisms.

Financial Savings

Considering an increase in tendered grain shipments as well as the deeper discounts bid by the grain companies, the transportation savings accruing to the CWB – which is ultimately passed back to producers through its pool accounts – increased by 17.7% in the 2009-10 crop year, rising to $40.6 million from $34.5 million a year earlier. It must be remembered, however, that while the freight discounts seen from the movement of tendered grain figure prominently in the calculation of the CWB's overall transportation savings, they are but one component of the transportation savings as calculated by the CWB. Freight and terminal

Figure 40: Market Share – CWB Grains

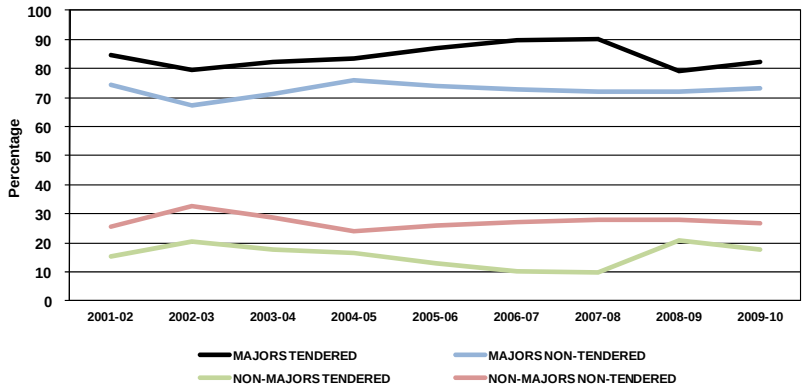
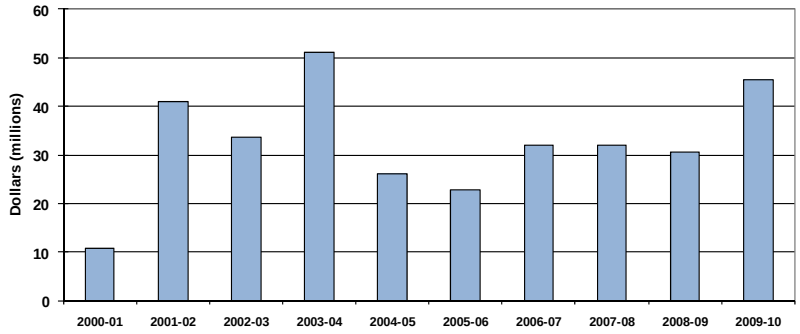


Figure 41: CWB Transportation Savings



rebates, as well as any financial penalties for non-performance, also figure into this calculation.

ADVANCE CAR AWARDS PROGRAM

The total tonnage moved under the CWB's advance car awards program fell by 13.9% in the 2009-10 crop year, to 1.6 million tonnes from 1.9 million tonnes the year previous.[33] This represented 10.8% of the total tonnage shipped to the four ports in western Canada by the CWB, against the 12.1% share garnered under the same program a year earlier. In conjunction with the 2.5 million tonnes that moved under the CWB's tendering program, a total of 4.1 million tonnes of CWB grain were moved under the auspices of these two programs. On a combined basis, this represented 27.2% of the CWB's total grain shipments to the four ports. This fell considerably short of the 40% that had been targeted, but slightly above the 26.5% that had been handled under these same two programs a year earlier. This marked the first upturn in the combined share in three years.

Traffic Composition

Grain shipped under the advance car awards program often parallels that moved under the tendering program, but frequently differs in a number of respects. Foremost among these differences is the exact makeup of the movement, with 1.4 million tonnes, or 84.8%, of the 1.6 million tonnes shipped being comprised of wheat. This proved to be a substantially greater proportion than the 64.8% share of wheat under the tendering program. These shipments were complemented by another 200,000 tonnes of durum, which accounted for the remaining 15.2% of the program's total tonnage. This left no barley being handled under the program for a second consecutive year. [Table 4F-1]

33 Advance car awards are administered on the same basis as the CWB's general car awards program, but with an additional two-week lead time, and an early indication of the grains and grades required, in order to provide shippers with increased flexibility in managing their logistics programs.

Figure 42: Grain Shipments – Tendered and Advance Car Awards

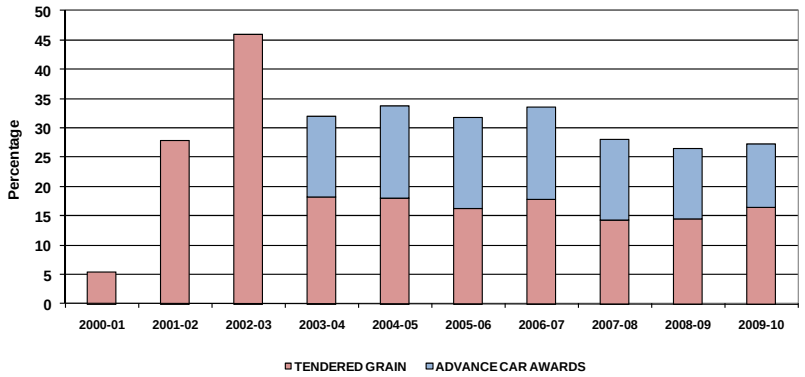
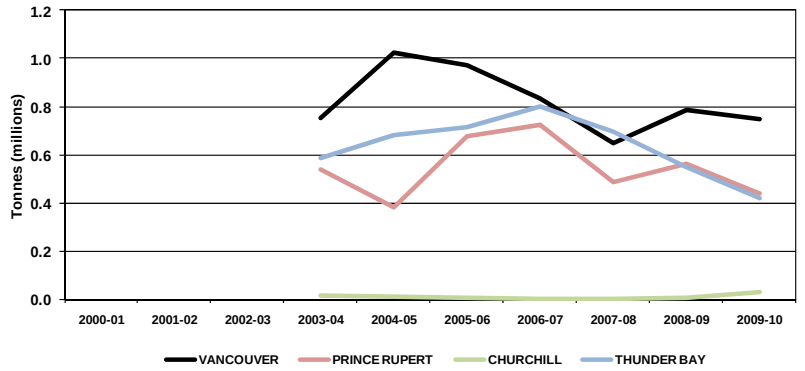


Figure 43: Advance Car Awards – Destination Port



The largest portion of the volume that moved under the advance car awards program, 700,000 tonnes, or 45.8%, was destined to the port of Vancouver. Although their rankings did not differ, the port's traffic share fell noticeably short of the 52.5% seen in the movement of tendered grain. This was in turn followed by Prince Rupert with 400,000 tonnes, and a 26.7% share; Thunder Bay with another 400,000 tonnes, and a 25.7% share; and Churchill with 30,000 tonnes, and a 1.8% share. In addition to another second-place showing by Prince Rupert, it is worth noting that the tonnage directed to Churchill proved to be the largest yet observed under the advance car awards program, increasing six fold from the 4,600 tonnes directed there a year earlier. [Table 4F-2]

Originating Carrier

Well over half, 59.4%, of the volume moved under the advance car awards program in the 2009-10 crop year originated at points local to CP. This was virtually identical to the 59.8% share the carrier secured a year earlier, and only marginally greater than the 57.9% obtained as its share of the tendered grain movement. More worthy of note is the fact that both values are substantially greater than the 49.4% share carried by CP in the overall movement of western Canadian grain. [Table 4F-3]

Traffic Origination

As with tendered grain, the majority of the tonnage moved under the CWB's advance car awards program came from Saskatchewan. Amounting to just over 900,000 tonnes, these shipments accounted for slightly more than half, 55.4%, of the program's total volume. This was consistent with the 55.1% share in the province's movement of tendered grain. Alberta and Manitoba followed with corresponding originations of 600,000 tonnes and 100,000 tonnes, and shares of 35.9% and 8.2% respectively. A further 7,500 tonnes, representing 0.5% of the overall volume, was also shipped from British Columbia. None of these latter provincial shares differed materially from those obtained under the CWB's tendering program. [Table 4F-4]

The majority of the grain shipped under the advance car awards program, 95.2%, also came from high-throughput elevators. This proved

Figure 44: Advance Car Awards – Originations

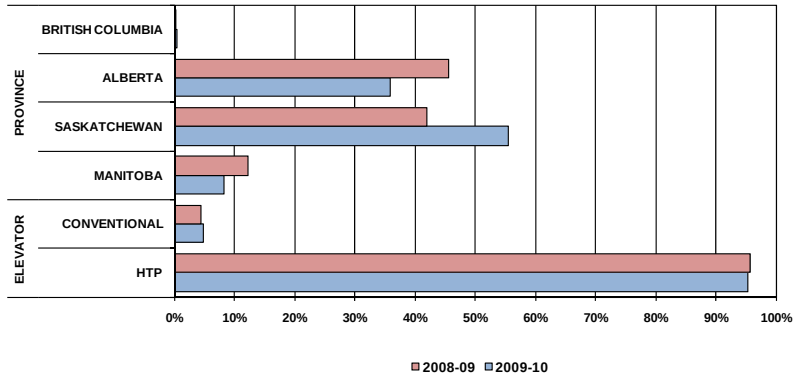
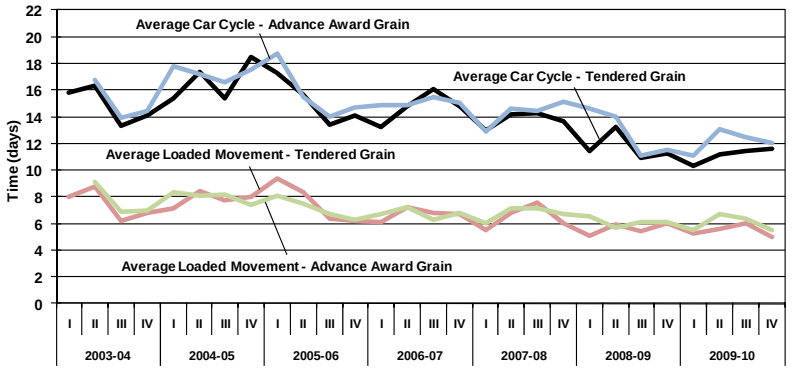


Figure 45: Car Cycle – Advance Car Awards



only marginally below the 95.6% share secured by these facilities a year earlier. There was little substantive difference between their usage on a provincial basis, with originations of 92.2% in Alberta, 97.1% in Manitoba, and 97.7% in Saskatchewan. In contrast, only grain shipped from British Columbia came exclusively from conventional elevator facilities.

Car Cycles

The average car cycle for grain shipped under the CWB's advance car awards program amounted to 12.3 days in the 2009-10 crop year. Although this value proved to be only 0.8% greater than the 12.2-day average recorded a year earlier, it stood noticeably higher than the 11.1-day average observed in the case of tendered grain shipments. This was unusual in as much as the averages for both groups typically track within half a day of each other. Much of the widening in this spread was occasioned by an elongation in the second and third quarter averages. [Table 4F-6]

These comparatively longer times were equally evident in the loaded and empty portions of the movement, with the advance-car-award program's 6.0-day loaded average movement proving 11.1% longer than the 5.4-day average on tendered grain shipments. Similarly, the average empty movement showed an analogous gap, with a 6.3-day average for advance-car-awards movements set against 5.7 days for tendered grain.

Although the average cycle for advance-car-awards movements was higher than that of tendered grain, it also stood 6.1% below that posted for non-tendered CWB movements in general, which averaged 13.1 days. These relationships lend further support to the observation that grain shipped under the CWB's tendering and advance car awards programs move largely in concert.

COMMERCIAL DEVELOPMENTS

Market Access Issues Impact the GHTS

The commercial dangers of being overly reliant on foreign markets was brought into sharp focus early in the 2009-10 crop year when a German laboratory discovered a telltale marker from genetically modified (GM) Canadian flaxseed in European food products. With the European Union (EU) having already adopted a zero tolerance on unapproved GM traits, the discovery led to the immediate suspension of all Canadian flaxseed sales to Europe, and the loss of its largest flaxseed market.

Triffid in Flax

The gene marker in question was ultimately traced back to a GM flaxseed variety known as Triffid, which had been developed by the University of Saskatchewan's Crop Development Centre in the late 1980s. Although developed further in the 1990s, Triffid was ultimately deregistered in 2001 over growing concerns that European regulators would not approve its GM traits. Triffid never actually went into commercial production, and the grain industry believed that all traces of the variety had been expunged through pedigreed seed recovery or processing.

The Canadian Grain Commission moved quickly to test for the presence of Triffid in samples taken from all recent flaxseed shipments, with three ultimately proving positive. At the same time, the Canadian flaxseed industry began working with the EU's director general for health and consumer affairs to establish an acceptable protocol for the sampling, testing and documentation of all future shipments. Although flaxseed shipments to Europe remained embargoed through the remainder of the first quarter, by the beginning of the second quarter a stringent set of new rules that allowed for the resumption of Canadian exports had been agreed upon.[34]

And while flaxseed exports to Europe resumed in December 2009, total shipments through to the end of the crop year proved to be well below

34 The protocol required grain handlers to retain samples of all the flaxseed delivered from farms for testing in the event that GM traits were later discovered. Composite samples of the flaxseed loaded into railcars were to be tested by CGC-accredited laboratories, which would be able to identify any contaminated shipments prior to their arrival at a port terminal. Finally, the CGC was required to certify that flaxseed loaded into vessels destined for Europe was GM-free (0.01% or less).

normal, with 265,700 tonnes having been exported versus 422,700 tonnes a year earlier. Despite this reduction, Canada was able to make up much of the shortfall with sales into new markets. The most prominent among these was China, which imported a total of 220,100 tonnes of Canadian flaxseed as compared to just 18,100 tonnes in the previous crop year.

Salmonella in Canola Meal

Compounding the emergence of the Triffid problem was the identification by the United States Food and Drug Administration (FDA) of yet another Canadian-originated railway shipment of canola meal with traces of salmonella bacteria. The problem first arose in the fall of 2008, when a shipment of meal from a Canadian canola crusher was found to be contaminated. Under American law, the discovery of such contamination automatically places the crusher on an "import alert list," with all subsequent movements to the US from that shipper being subjected to thorough testing, resulting in delayed border crossings and possible entry refusals.

The impetus for the increased FDA scrutiny stemmed from a number of high-profile incidents in which people had become ill as a result of the bacteria. Although the Canadian canola industry argued that these canola-meal shipments were intended to be used as animal feed, and therefore subject to lower standards than when directed towards human consumption, the FDA remained unmoved. As a result, Canada's canola crushers were forced to scale back production, searching for alternative domestic and foreign canola-meal markets.

In total, seven, or just over half of Canada's crushers, were ultimately placed on the alert list. However, crushing plants subsequently deemed free of salmonella contamination had their restrictions lifted. In August 2010 the FDA proposed the adoption of a new policy, one that gave crushers a measure of encouragement. In its essence, the FDA planned to limit the testing on animal feed to only those strains of the bacteria known to cause disease in animals and poultry.

Blackleg in Canola

Yet another setback befell the industry in October 2009 when China informed the Canadian Food Inspection Agency that a new certification requirement would be needed on all canola imported into that country as of 15 November 2009. This additional certification was to stipulate that the canola being imported was free of black-leg; a soil-borne pathogen found around much of the world, including China.[35] Chinese authorities insisted that the embargoing of all non-certified canola was necessary since the black-leg variant present in Canada (as well as Australia) was more virulent than its own domestic strain. The potential for this to disrupt trade with China, which, as Canada's largest customer, purchased 2.9 million tonnes of canola seed in the 2008-09 crop year, quickly escalated the matter into a paramount concern for the industry.

Officials from the Canadian government as well as the Canola Council of Canada moved to try and find a solution to the problem. Moreover, the high-level discussions that followed failed to find an effective alternative to the pending Chinese ban on the importation of non-certified canola. However, the Canadians did gain an important concession: China would allow non-certified canola to be landed at three ports in non-canola growing regions of the country (where the fear of contamination was considered substantially less) for the remainder of the 2009-10 crop year. The Chinese also indicated that they were prepared to substantially increase their canola-oil imports in 2010, to 350,000 tonnes from about 150,000 tonnes.

These concessions resulted in China accepting 2.3 million tonnes of Canadian canola in the 2009-10 crop year. This proved to be a far less calamitous reduction than had been initially feared. More importantly, the Chinese government announced in June 2010 that it would continue to allow non-certified canola to be landed at these same selected ports in the 2010-11 crop year.

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35 Black-leg is known to cause plant diseases that can significantly reduce yields. The threat posed to Canadian production has been mitigated by the development of black-leg resistant varieties.

By the close of the crop year, the Canadian grain industry had come to accept the realities of these new market-access issues. Moreover, there was the growing recognition that these issues could have far-reaching consequences for the entire GHTS. Beyond its immediate implications, the industry was beginning to acknowledge that the system's capacity could be significantly constrained if greater product segregation was going to be required in both the short and longer-term future. At the same time, it was also becoming attuned to the fact that trade barriers, regardless of their legitimacy, could arise very quickly, and leave marketers with little lead time in developing alternative commercial strategies.

CN Delists Producer Car Loading Sites

In September 2009 CN announced that it was closing 53 of its 218 producer-car loading sites. The carrier noted that the closures were being made as a result of the fact that the sites had produced little or no traffic in several years. On a provincial basis, the 53 to be delisted encompassed nine from Manitoba; 24 from Saskatchewan, and 20 from Alberta. The announcement followed the 60-day notification period set out for such closures in the *Canada Transportation Act*.[36]

This announcement, however, was met with a widespread backlash from a number of affected communities and stakeholder groups. Producer-car loading advocates decried the loss of what they perceived as viable competitive options for moving grain given the significant rationalization of elevators and branch lines that had already taken place. They also criticized CN for having posted its planned closure notices during a period when farmers were preoccupied with the pending harvest, and less likely to take notice or respond. Through all of this, there were numerous calls for the federal government to intervene on the farmer's behalf, and to impose a moratorium on such closures until a broader legislative review into the rights of the producer to load his own grain could be undertaken. The subject was even broached in hearings held by the House of Commons Standing Committee on Agriculture and Agri-Food in October 2009.

CN renewed its argument to the effect that there had been no producer-car shipments from the majority of these sites in the preceding five years, and that little volume had been forwarded from those that did originate traffic. Moreover, the railway pointed out that a readily-available alternative could be found within 25 kilometres of most producer-car loading sites being slated for closure. In any event, the carrier said that it could not economically justify the continued absorption of the track inspection and maintenance costs tied to these sites as a result of their limited use.

In light of the souring public-relations atmosphere, CN consented to partially pull back on its plans. Firstly, it agreed to reissue the notices that it had published concerning the planned closure of 13 of its 53 sites, as these had been widely viewed as inadequate. The railway also committed to delay any attempt at removing the physical infrastructure associated with these sidings pending further consultation with affected parties. This resulted in a two-phased approach to the closure of all 53 sites, with an initial 40 having been closed down in the first quarter, and the remaining 13 being shut down in the third.

Not all producers were satisfied with the concessions that had been made by CN. While CN moved forward with its revised closure schedule, a Saskatchewan farmer, Cam Goff, in a bid to block the railway's plan, lodged a formal complaint against it with the Canadian Transportation Agency in December 2009. In a parallel move, Manitoba's Keystone Agricultural Producers moved to have the Agency mediate a similar complaint over the future of these sites with CN, but the effort ultimately failed and the matter was considered over by those involved.[37]

36 The *Canada Transportation Act* requires that CN and CP maintain a current listing of the sidings they provide for producer-car loading on their corporate websites. Any of these sidings may be closed by the host railway following a 60-day notice of the planned closure in a newspaper with a general circulation in the area where the siding is located.

37 As a means of informally addressing complaints brought against federally-regulated carriers, the Canadian Transportation Agency offers a confidential dispute-resolution service to the parties involved. This consists primarily of

Despite the effective closure of all 53 sites, the Agency had yet to render a decision in the Goff challenge. Ultimately, that came in early August 2010, when the Agency dismissed the complaint, finding that CN's delisting of the producer-car-loading site at Allan, Saskatchewan, had not constituted a breach of its level-of-service obligations to Mr. Goff. Moreover, the Agency found that the level-of-service provisions of the *Canada Transportation Act* did not create an absolute obligation on the part of any railway to maintain and operate all of its existing producer-car-loading sites, let alone any site that might be requested by a producer. Rather, the Act required that the railway need only furnish adequate and suitable accommodation for the traffic being offered. In as much as alternative producer-car-loading sites remained open to Mr. Goff's use, the Agency found that CN had in fact met this requirement.[38]

Railway Service Complaints Diminish

As reported in previous editions of the Monitor's reports, complaints over railway service and car allocation had been on the rise in recent years. Of particular concern had been a perceived decline in the consistency and reliability with which that service had been delivered. Grain shippers frequently cited costly instances where railcars had 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 fire from shippers who argued that they were continually being shorted, often in preference to other shippers.

Since 2007, a number of grain shippers, all frustrated with the service they were receiving from CN, had brought their complaints to the Canadian Transportation Agency for redress. In most instances, the Agency found that the carrier had in fact breached its common carrier obligations, finding – as in the case undertaken by Great Northern Grain Terminals Ltd. – that the breach even had a wider "systemic" dimension. In all such cases, the Agency directed CN to undertake specific remedial actions. In the year that followed, CN appeared to have taken a number of steps towards addressing at least some of these service issues. In fact, shipper complaints became less vociferous in consideration of the improved railway service they were receiving.

Still, in March 2009, Western Grain Trade Ltd. (WGTL) launched a similar complaint with the Agency concerning the service it had been receiving from CN at its facility in Hamlin, Saskatchewan. As a processor and exporter of special crops, WGTL maintained that reliable and consistent rail service was essential to its commercial success. Moreover, the shipper alleged that CN's erratic service had already undermined its business and caused it financial harm. The complainant indicated that it was ultimately seeking an order, consistent with the remedies previously advanced by the Agency, which would direct the carrier to provide service that better reflected the shipper's specific needs.

In February 2010 the Agency rendered its decision, ultimately finding that CN had not breached its level-of-service obligations to WGTL. Although the Agency recognized that CN had been rationing cars between its various customers – including those allotted to WGTL – it found that the allocation was reasonable under the circumstances. Moreover, the Agency also found that the level of service being sought by WGTL was at least in part aimed at overcoming the operational limitations of its own facility, and that this standard effectively exceeded what could reasonably be requested of the carrier itself.[39]

Review of Rail Freight Service

In response to the concerns that had been raised by a wide number of shippers regarding the state of railway service in Canada, the federal government committed itself in early 2008 to a review of railway service.

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employing the Agency as a facilitator or a mediator before a formal complaint is lodged with the Agency.

38 See Canadian Transportation Agency Decision Number 331-R-2010, dated 4 August 2010.

39 See Canadian Transportation Agency Decision Number 42-R-2010, dated 9 February 2010.

This undertaking was but one facet in a broader initiative aimed at enhancing the shipper protection provisions already contained in the *Canada Transportation Act*. The general focus of this review was to examine the performance of the freight logistics system in Canada with an eye towards identifying any problems or issues respecting railway service. This was also to include those issues stemming from the operations and activities of stakeholders other than the railways, including shippers, receivers and other logistics partners.

The review was to be conducted in two distinct phases. The first of these phases centred on gathering and analyzing the pertinent data relating to the railways' performance during a two-year period between 2006 and 2008. The second would see a panel of eminent person's appointed to review the work completed in the first phase, and to further that investigation by consulting with various parties from the broader stakeholder community regarding the problems that had been identified. The panel would then develop its recommendations, ultimately submitting its final report to the Minister of Transport, Infrastructure and Communities.

By the end of the second quarter of the 2009-10 crop year, the work associated with the first phase of the review had essentially been completed. Moreover, the three-member panel had already been appointed and was moving forward with its planned consultations with the stakeholder community.[40] To this end, the panel issued a general call for formal stakeholder submissions relating to the various issues, potential solutions and other factors that they believed should figure into the development of the panel's recommendations.

Representatives from all corners of the grain industry were actively involved in this process, which resulted in submissions from the Western Grain Elevator Association, the Inland Terminal Association of Canada, and numerous commodity and producer groups. For the most part, these submissions not only voiced anew the grain industry's long-standing concerns over the erratic nature of existing railway service, but also argued for stronger regulatory measures as a means of tempering what was still widely regarded as the monopolistic power of the railways. The panel's final report was not expected to be released until sometime towards the end of 2010.

Growth and Consolidation in the Pulse Industry

The production of pulse crops in western Canada was in its infancy 30 years ago. Since 1980 it has seen fantastic growth, especially for dry peas and lentils. Dry peas first surpassed 2.0 million tonnes of production in 1998. Lentil production hit 1.5 million tonnes in 2009 and the current trend would only suggest further expansion for the industry. Canada has become a world leader in the production and export of pulse crops. This has been largely due to its natural production advantage, with suitable soils, long sunny days, and cold winters (for pest control and storage) coupled with the latest in farm management technology and research.

As the production of special crops advanced in the 1980s and 1990s, new processing and marketing opportunities were created. The innovative and entrepreneurial spirit of western Canadian producers led many to expand their business models to capitalize on this growing potential. In the mid-1990s there were an estimated 140 processors in Saskatchewan alone, many of these being an extension of farm operations.

As these operations grew in both scope and sophistication, the industry began to consolidate. Over the course of the past decade this produced a structural shift in the organization of the industry, which is now dominated by a much smaller number of players, some with several facilities under their control. The most important in this collection is Alliance Grain Traders, which has evolved into the largest lentil and pea splitting company in the world. In addition to the 12 plants it operates across western Canada under the name of Saskcan Pulse Trading, the

40 The three-member panel was named on 23 September 2009, and comprised: Walter Paszkowski, a former cabinet minister with the Government of Alberta, who would also serve as the panel's chair; David Edison, a former executive with the Canadian National Railway Company; and William LeGrow, a former executive with West Fraser Mills Ltd.

company has also extended its reach into the United States, Turkey, Australia and China.

Expanding value-added processing in Canada has taken on new importance in domestic agricultural policy. Its potential for the creation of new jobs along with the growth in overall economic activity harbours the promise of significant benefit for rural areas of the country. Although the primary value-added activities for pulse products are found in cleaning, bulk loading and bagging, there is also a growing need for retail packaging, colour sorting and splitting. As the industry moves into its fourth decade, it has positioned itself well to take advantage of these opportunities for future growth.

Section 5: System Efficiency and Performance

Indicator Description	Table	1999-00	2007-08	2008-09	2009-10 Q1	Q2	Q3	Q4	YTD	% VAR
Country Elevator Operations										
Average Elevator Capacity Turnover Ratio	5A-1	4.8	6.0	6.6	1.5	1.5	1.6	1.6	6.2	-5.8%
Average Weekly Elevator Stock Level (000 tonnes)	5A-2	3,699.3	2,705.5	2,686.7	2,830.4	3,038.0	3,177.7	2,300.2	2,832.6	5.4%
Average Days-in-Store (days)	5A-3	41.7	31.1	27.7	31.9	34.3	32.8	23.7	30.5	10.1%
Average Weekly Stock-to-Shipment Ratio – Grain	5A-4	6.2	4.5	3.9	4.5	4.6	4.8	3.4	4.3	10.3%
Railway Operations										
Railway Car Cycle (days) – Empty Movement	5B-1	10.7	7.9	6.6	6.4	6.7	6.2	7.5	6.7	2.1%
Railway Car Cycle (days) – Loaded Movement	5B-1	9.2	8.0	6.8	6.1	7.1	6.8	6.0	6.5	-4.8%
Railway Car Cycle (days) – Total Movement	5B-1	19.9	15.9	13.4	12.5	13.9	13.0	13.5	13.2	-1.5%
Railway Car Cycle (days) – Non-Special Crops	5B-2	19.3	15.7	13.3	12.4	13.6	12.8	13.5	13.1	-1.4%
Railway Car Cycle (days) – Special Crops	5B-3	25.8	18.1	15.6	14.4	17.1	14.9	14.6	15.3	-1.5%
Railway Transit Times (days)	5B-4	7.8	6.3	5.5	5.1	6.0	5.7	5.1	5.5	0.0%
Hopper Car Grain Volumes (000 tonnes) – Non-Incentive	5B-5	12,718.7	5,178.4	5,674.4	2,019.9	1,178.5	1,129.2	1,420.1	5,747.7	1.3%
Hopper Car Grain Volumes (000 tonnes) – Incentive	5B-5	12,945.9	16,937.5	21,118.2	5,232.1	5,158.4	5,445.1	6,194.4	22,030.1	4.3%
Hopper Car Grain Volumes ($ millions) – Incentive Discount Value	5B-6	$31.1	$93.4	$132.0	$34.9	$34.9	$36.6	$41.4	$147.7	11.9%
Traffic Density (tonnes per route mile) – Grain-Dependent Network	5B-7	442.5	427.8	527.3	656.7	555.7	569.2	652.4	608.5	15.4%
Traffic Density (tonnes per route mile) – Non-Grain-Dependent Network	5B-7	292.5	269.8	335.2	341.9	303.3	316.5	368.3	332.5	-0.8%
Traffic Density (tonnes per route mile) – Total Network	5B-7	330.4	303.5	373.8	405.0	353.9	367.2	425.3	387.9	3.8%
Terminal Elevator Operations										
Average Terminal Elevator Capacity Turnover Ratio	5C-1	9.1	8.5	10.0	n/a	n/a	n/a	n/a	10.0	0.0%
Average Weekly Terminal Elevator Stock Level (000 tonnes)	5C-2	1,216.2	1,432.7	1,346.4	1,240.2	1,325.7	1,366.1	1,171.1	1,274.8	-5.3%
Average Days-in-Store – Operating Season (days)	5C-3	18.6	21.0	16.7	18.1	22.3	15.2	13.2	16.2	-3.0%
Port Operations										
Average Vessel Time in Port (days)	5D-1	4.3	5.0	4.6	5.3	7.2	6.7	5.6	6.2	34.8%
Annual Demurrage Costs ($millions)	5D-4	$7.6	$23.3	$11.2	n/a	n/a	n/a	n/a	$11.2	-0.3%
Annual Dispatch Earnings ($millions)	5D-4	$14.5	$29.3	$37.6	n/a	n/a	n/a	n/a	$17.2	-54.4%
Avg. Weekly Stock-to-Vessel Requirements Ratio – VCR – Wheat	5D-5	3.1	3.6	3.2	2.1	2.6	2.5	2.0	2.3	-27.3%
Avg. Weekly Stock-to-Vessel Requirements Ratio – VCR – Canola	5D-5	2.5	3.7	1.5	0.5	2.8	1.6	1.1	1.5	1.5%
Avg. Weekly Stock-to-Vessel Requirements Ratio – TBY – Wheat	5D-5	5.6	5.0	4.5	8.0	4.4	4.2	4.1	5.3	20.0%
Avg. Weekly Stock-to-Vessel Requirements Ratio – TBY – Canola	5D-5	2.8	8.3	5.5	2.3	4.9	5.8	3.4	3.9	-29.1%
Avg. Weekly Stock-to-Shipment Ratio – VCR – CWB Grains	5D-7	3.5	2.9	3.1	2.5	2.4	3.1	3.2	2.8	-9.7%
Avg. Weekly Stock-to-Shipment Ratio – VCR – Non-CWB Grains	5D-7	3.6	3.6	2.5	1.4	2.5	2.0	1.4	1.8	-27.2%
Avg. Weekly Stock-to-Shipment Ratio – TBY – CWB Grains	5D-7	4.6	5.2	4.6	5.1	5.1	5.0	4.3	4.8	4.7%
Avg. Weekly Stock-to-Shipment Ratio – TBY – Non-CWB Grains	5D-7	3.3	5.7	4.2	5.5	6.2	5.1	4.2	5.2	24.0%
Terminal Handling Revenue ($millions)	5D-8	$274.8	$319.8	$369.2	n/a	n/a	n/a	n/a	$389.2	5.4%
CWB Carrying Costs ($millions)	5D-8	$94.7	$115.0	$170.1	n/a	n/a	n/a	n/a	$147.6	-13.2%
System Performance										
Total Time in Supply Chain (days)	5E-1	68.1	58.4	49.9	55.3	62.7	53.8	42.0	52.2	4.4%

COUNTRY ELEVATOR OPERATIONS

The net effect of changes in primary elevator throughput and storage capacity is reflected in the system's capacity-turnover ratio. Owing to a 4.2% decrease in throughput, the capacity-turnover ratio fell by 5.8% in the 2009-10 crop year, sliding to 6.2 turns from the previous crop year's 6.6-turn record. [Table 5A-1]

Much of the reduction was attributable to the effects of a sharp decline in grain shipments from Alberta elevators, which dragged the provincial ratio down by 19.4%, to 6.2 turns from 7.7 turns a year earlier. Saskatchewan also posted a decline, albeit only 0.2%, which resulted in its turnover ratio falling to 6.0 from 6.1. Among the larger grain-producing provinces, Manitoba was the only one to report an increase, with its ratio rising to 6.7 turns from 6.6 turns the year previous. British Columbia posted the most significant increase, with its ratio climbing by 24.4%, to 4.6 turns from 3.7 turns.

While the turnover ratio is sensitive to changes in volume, much of the real improvement witnessed since the beginning of the GMP has come from the reduction in storage capacity occasioned by the rationalization of the elevator network itself. Although the primary elevator system's storage capacity has now begun to increase, it has lost over 0.8 million tonnes, or 13.1%, of its base year value. Had storage capacity not been reduced to this degree, the turnover ratio for the 2009-10 crop year would have been 5.0 turns instead of 6.2 turns. This 1.2-turn differential underscores an estimated 24.0% improvement in handling efficiency over the last eleven years.

Elevator Inventories

In assessing the operational efficiency of the primary elevator system, the GMP also considers the amount of grain maintained in inventory. Beyond measuring stock levels, this examination takes into account the amount of time grain spent in inventory, along with its ability to satisfy immediate market needs.

Figure 46: Primary Elevator Capacity Turnover Ratio

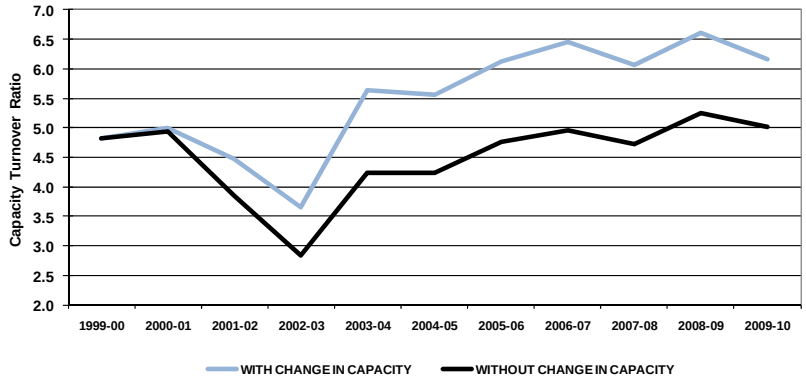
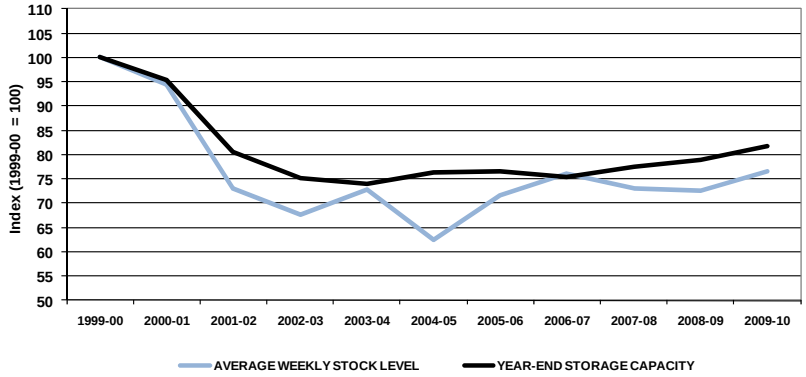


Figure 47: Change in Average Weekly Stock Levels



As a result of the general reduction in storage capacity, grain inventories have also been declining. Despite periodic fluctuations, approximately half of the system's storage capacity is actively employed in maintaining these stocks. From the 3.7-million-tonne average recorded in the first year of the GMP, primary elevator stocks have now shrunk to about three-quarters of this benchmark level. The 2009-10 crop year saw a 5.4% increase in prairie grain inventories, with the average rising to 2.8 million tonnes from 2.7 million tonnes a year earlier. [Table 5A-2]

Just as the average stock level has moved generally lower, so too has the average amount of time spent by grain in inventory. From a benchmark 41.7 days in the GMP's base year, the average number of days-in-store fell to as little as 27.7 days, a record set in the 2008-09 crop year. The 2009-10 crop year, however, saw this average increase by 10.1% to 30.5 days. This result was widely shaped by increases in the underlying averages for most grains. Some of the more noteworthy year-over-year changes in these averages are summarized in the following table. [Table 5A-3]

2009-10 Crop Year – Country Elevator Days-in-Store

Province	Days-in-Store	Change	Grain	Days-in-Store	Change
British Columbia	34.1 days	Down 18.8%	CWB Grains		
Saskatchewan	29.5 days	Up 3.5%	Barley	21.0 days	Down 12.9%
Manitoba	28.0 days	Up 5.3%	Wheat	36.8 days	Up 7.3%
Alberta	34.2 days	Up 33.6%	Durum	43.0 days	Up 12.0%
			Non-CWB Grains		
			Flaxseed	18.9 days	Down 35.3%
			Peas	24.0 days	Up 0.8%
			Oats	25.4 days	Up 14.4%
			Canola	19.5 days	Up 23.4%

Stock-to-Shipment Ratios

The adequacy of country elevator inventories can be gauged by comparing their level at the end of any given shipping week, with the truck and railway shipments actually made in the next seven days. A

Figure 48: Change in Average Weekly Stocks and Average Days in Store

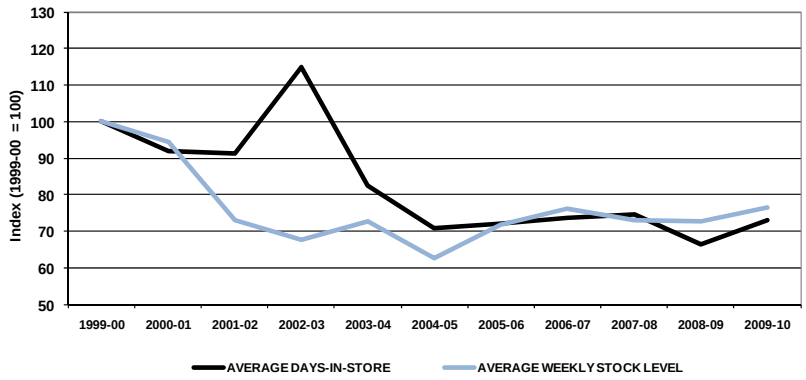
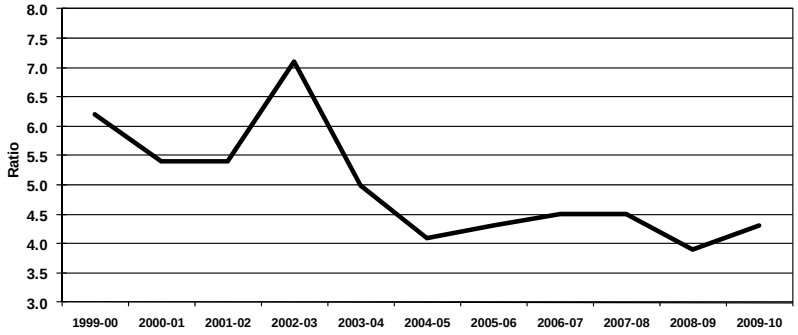


Figure 49: Primary Elevators – Stock-to-Shipment Ratio



review of these weekly stock-to-shipment ratios shows that the quarterly average seldom fell below a value of 5.0 in the first five years of the GMP. As such, the inventory on hand at the close of any given week generally exceeded that required for shipment in the next by a factor of at least five.[41] These ratios are, however, heavily influenced by the amount of time that grain spends in inventory. With the average amount of time spent in inventory having fallen substantially in the last six years, so too had the stock-to-shipment ratio. By the close of the 2008-09 crop year this ratio had declined by a factor of 37.1%, to 3.9 from 6.2. [Table 5A-4]

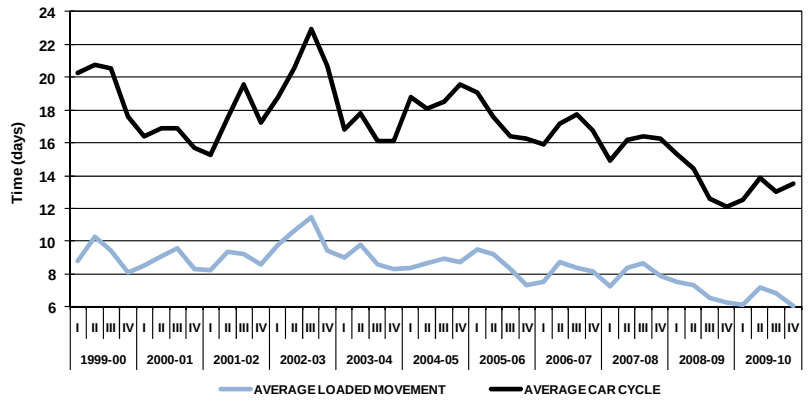
While grain was being drawn into the primary elevator system at a slower rate in the 2009-10 crop year, the quarterly stock-to-shipment ratios climbed from 4.5 in the first quarter to a high of 4.8 in the third quarter of the year. This progressive elevation raised the annualized average by 10.3%, to 4.3 from the record-setting 3.9 of the previous year. Despite the escalation, this value still ranked among the lowest observed under the GMP.

RAILWAY OPERATIONS

In the context of the GHTS, the car cycle measures the average amount of time taken by the railways in delivering a load of grain to a designated port in western Canada, and then returning the empty railcar back to the prairies for reloading. This measure continued to show improvement, with the average car cycle for the 2009-10 crop year declining by 1.5% from that posted a year earlier, to 13.2 days from 13.4 days.

This proved to be the best yet recorded under the GMP, and was largely built on the stronger showings made in the first and second quarters. With a 6.7% reduction, movements in the Thunder Bay corridor posted the largest overall decline, with the average cycle falling to 12.8 days from 13.7 days a year earlier. This was followed by a 0.8% reduction in the Vancouver corridor, which saw its average fall to 14.0 days from 14.1 days. Running counter to these improvements was the average posted in the Prince Rupert corridor, which showed a 1.6% increase, rising to 12.0 days from 11.8 days twelve months before. [Table 5B-1]

Figure 50: Average Railway Car Cycle



These mixed results extended equally to the loaded and empty portions of the car cycle. In the case of the former, the average time under load fell by 4.8%, to 6.5 days from 6.8 days a year earlier. Conversely, a 2.0% increase was observed for the empty portion of the movement, with the average rising to 6.7 days from 6.6 days.

The two main carriers posted markedly different results, with the CN average having fallen by 2.7% against a more modest 0.3% reduction for CP. These differences extended to the loaded and empty portions of each carrier's car cycle as well. In the case of CN, the carrier posted a 6.8% reduction in the loaded portion of its average cycle against a 2.2% increase in its empty portion. Changes in the corresponding CP averages were noticeably less, with a 2.2% reduction on the loaded portion of its movement versus a 1.4% increase on the empty component. Much of CP's

41 In the event that the ratio of these two values amounts to 1.0, it would mean that country elevator stocks exactly equalled shipments made in the following week. A ratio above this value would denote a surplus supply in the face of short-term needs.

weaker performance could be attributed to the effects of an elongation of cycle times in the carrier's third-and fourth quarter averages.

The general improvement in the average car cycle was also reflected in those of non-special and special crops. The average car cycle for non-special crops fell by 1.4% to 13.1 days for the 2009-10 crop year. This value proved to be 14.4% less than the 15.3-day average tied to special crops, which posted a marginally greater reduction of 1.5% for the period. On the whole, these results continue to suggest that there is a structural difference in the service provided by the railways in the movement of special crops. [Tables 5B-2 and 5B-3]

While the railways' continued focus on better asset utilization serves to explain some of this improvement, a more likely scenario appears to have been the benefit derived from grain not having to compete for railway capacity to the same degree as it had in past crop years. This was due to the global financial crisis that began to take hold in the late summer of 2008, and which caused overall railway volumes to plummet. Because of the lingering effects of this widespread decline in traffic, both CN and CP have been able to direct a larger share of their carrying capacity towards the movement of grain. Notwithstanding the operational difficulties that seemed to have impacted CP's performance in the second half, export grain shipments, which remained at comparatively higher-than-normal levels, continued to benefit from this freeing of capacity.

Loaded Transit Time

More important than the railways' average car cycle, is the average loaded transit time. This measure focuses on the amount of time taken in moving grain from a country elevator to a port terminal for unloading. One of the most common concerns voiced by grain shippers relates to the consistency of the service they receive from the railways. Specifically, they find it difficult to develop logistics plans when actual transit times can vary widely from the average.

Figure 51: Average Loaded Transit Time

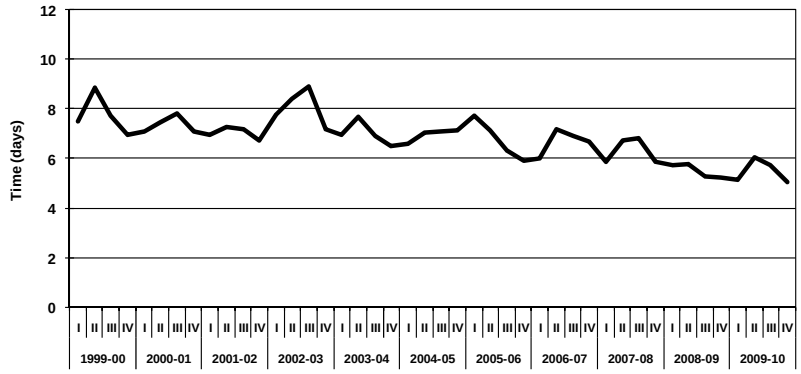
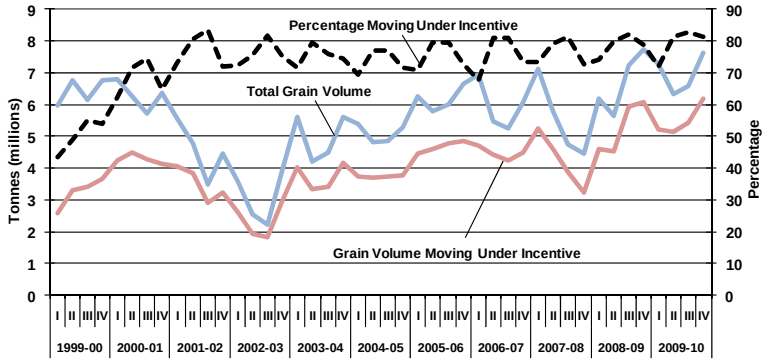


Figure 52: Railway Traffic Moving Under Incentive



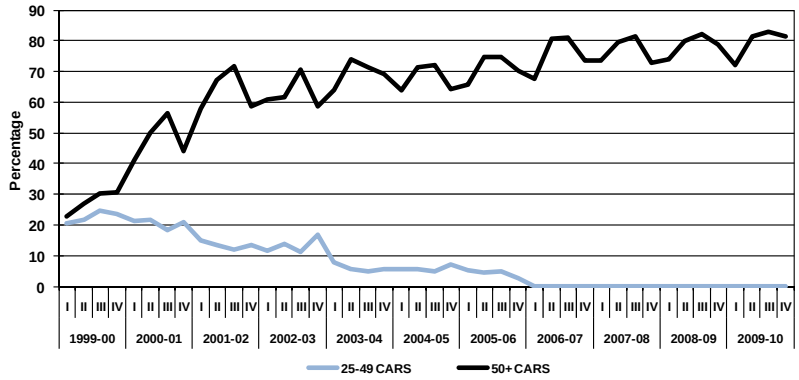
The railways' loaded transit time has shown a 29.8% improvement over the course of the last eleven years, falling to an average of 5.5 days in the 2009-10 crop year against the 7.8-day average of the GMP's base year. Moreover, the variability in the underlying distributions has shown an equally significant reduction, with the coefficient of variation falling to 30.8% from 42.9%.[42] All of this suggests that, while the railways have improved the consistency of their in-transit services, it still shows a high degree of variability. It remains to be seen whether the performance strides made by the railways, particularly in the last four years, can be materially improved upon over the longer term. [Table 5B-4]

Multiple-Car Blocks

During the course of the 2009-10 crop year, 22.0 million tonnes of grain moved in the multiple-car blocks that offered discounted freight rates. This represented an increase of 4.3% over the 21.1 million tonnes handled a year earlier, and only the second instance wherein MCB shipments actually exceeded 20 million tonnes.

From the beginning of the GMP, it has been clear that the largest block sizes were the most popular with grain shippers. This stems simply from the fact that they provide the deepest monetary discounts, allowing the grain companies to realize the greatest financial returns. Moreover, both railways promoted these larger block sizes by systematically increasing the discounts on shipments in blocks of 50 or more cars while reducing those on movements in blocks of 25-49 cars.[43] [Table 5B-5]

Figure 53: Composition of Multiple-Car-Block Movements



As a result, the proportion of railway traffic moving in multiple-car blocks climbed quite rapidly. By the close of the 2009-10 crop year, 79.3% of the regulated grain moving to the four ports in western Canada was earning a discount, against 50.4% in the GMP's base year. Moreover, since the 2006-07 crop year all this traffic had begun to move in blocks of no less than 50 cars. By extension, the proportion of grain moving in smaller, non-discounted car blocks declined steadily, to 20.7% from 49.6%.

The annual value of the discounts earned by grain shippers – estimated as a gross savings in railway freight charges – has more than quadrupled in the last eleven years, climbing to an estimated $147.7 million from $31.1 million. Yet only $21.8 million, or 18.7%, of this $116.6-million

[42] The GMP has revised its loaded transit-time calculations in order to better represent the actual variability in each of the underlying origin-destination pairs, or traffic flows. The coefficient of variation effectively removes the distortions that arise from measuring the transit times tied to individual movements in a diverse population set by focusing on the underlying variability in the data distributions tied to each flow. As a ratio, smaller values depict tighter distributions than larger ones. To this end, a lower ratio can be deemed indicative of better consistency around the average loaded transit time presented.

[43] CN eliminated its $1.00-per-tonne discount on shipments in blocks of 25-49 railcars at the beginning of the 2003-04 crop year. Although CP reduced its discount to $0.50 per tonne at the same time, it ultimately did away with them three years later, at the commencement of the 2006-07 crop year.

increase was derived from the additional volume of grain shipped. The majority, $94.8 million, came from its migration towards movements in larger car blocks and the railways' application of increasingly larger per-tonne discounts. This is best reflected in the average discount earned, which is estimated to have climbed to an average of $6.71 per tonne from $2.40 per tonne. [Table 5B-6]

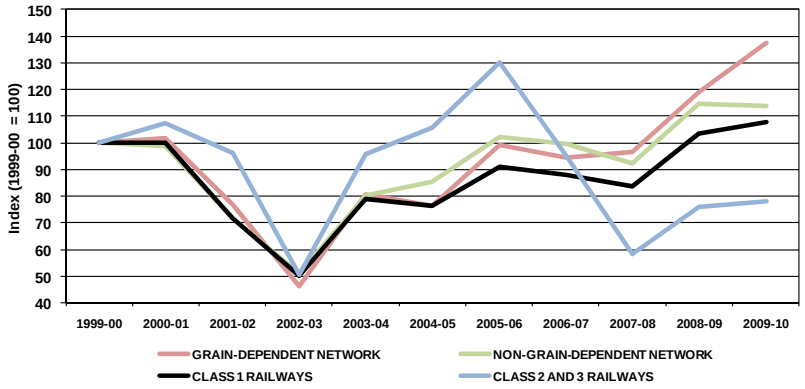
Traffic Density

A broad indicator of railway efficiency is traffic density. With a quarterly average of 387.9 originated tonnes per route-mile, overall density in the 2009-10 crop year was 3.8% greater than the 373.8 tonnes per route-mile observed a year earlier. Moreover, this also marked the setting of a second consecutive record for traffic density under the GMP.[44]

The limited transformation of the railway network over the past decade has largely sensitized this indicator to changes in traffic volume. This was equally reflected in comparisons between the densities of the grain-dependent and non-grain-dependent networks, which presented similar patterns as a result of comparable changes in traffic volume. But a 15.1% increase in the volume originated by the grain-dependent network resulted in its traffic density rising by 15.4% in the 2009-10 crop year, to an average of 608.5 tonnes per route-mile from 527.3 tonnes per route-mile a year earlier. At the same time, a 0.8% decrease in the amount of grain shipped from the non-grain-dependent network yielded a corresponding reduction in its traffic density, which fell to an average of 332.5 tonnes per route-mile from 335.2 tonnes per route-mile a year earlier. As a result, there was a pronounced widening between the relative densities of these two networks. [Table 5B-7]

[44] Traffic density is determined by relating grain volumes for a specific period of time to the number of route-miles comprised within the western Canadian railway network at the end of that same period. Although year-over-year measurements are comparable, they cannot be directly gauged against quarterly measurements. For this reason, an average of the year's quarterly values is used as a substitute.

Figure 54: Change in Railway Traffic Density



An even greater degree of volatility can be seen when comparing the change in density for Class 1 and non-Class-1 carriers, with the latter being far more sensitive to changes in both volume and infrastructure. This susceptibility was evident in the gyrations that arose from the rise and fall of various shortline operations over the course of the last eleven years, including, most recently, the Last Mountain Railway and the Battle River Railway.

Both groups benefited from increased volumes in the 2009-10 crop year. In the case of the Class 1 carriers, traffic density rose by 4.4%, to an average of 436.2 tonnes per route-mile from 417.9 tonnes per route-mile a year earlier. The gain for the non-Class-1 carriers proved to be a marginally lower 2.9%, which raised its average to 84.5 tonnes per route-mile from 82.1 tonnes per route-mile.

TERMINAL ELEVATOR OPERATIONS

Owing to only a modest 0.5% increase in the volume passing through the ports in the 2009-10 crop year, the terminal elevator system's capacity-turnover ratio stood unchanged from the record-setting 10.0 turns reached a year earlier.[45] Even so, there were significant shifts in the turnover ratios of the constituent ports, which reflected their own changes in throughput. The ratio for the port of Churchill showed the most significant increase, climbing by 26.7% to 3.8 turns from 3.0 turns the year before. Vancouver, with a gain of 5.6%, posted the next largest increase, with 15.2 turns versus 14.4 turns a year earlier. A more modest 0.9% gain was noted for Prince Rupert, which saw its ratio rise to 22.4 turns from 22.2 turns. Running counter to these results was Thunder Bay, which saw its ratio fall by 14.8% in consideration of reduced throughput, to 4.6 turns from 5.4 turns. [Table 5C-1]

Terminal Elevator Inventories

Over the course of the GMP, the amount of grain held in inventory at terminal elevators has proven to have a fairly consistent relationship with the system's overall handlings, generally amounting to about 25% of quarterly throughput. Notwithstanding a marginal 0.5% increase in terminal throughput for the 2009-10 crop year, the average weekly stock level fell by 5.3% to slightly under 1.3 million tonnes. This was due to inventory draw-downs at Vancouver, Thunder Bay and Churchill, which fell by 2.4%, 3.6% and 55.1% respectively. Prince Rupert was the only port to post an increase in inventories, with a gain of 12.1%.

As in past years, wheat stocks again constituted the largest single commodity held in inventory, accounting for just under half of the

45 The capacity turnover ratio of the terminal elevator network is a simple average based on each facility's individual handlings. As such, the measures for Vancouver and Thunder Bay, as well as the GHTS at large, can be skewed by outlying values. The magnitude of the year-over-year change cited here is not tied to a change in throughput alone.

Figure 55: Average Terminal Elevator Capacity Turnover

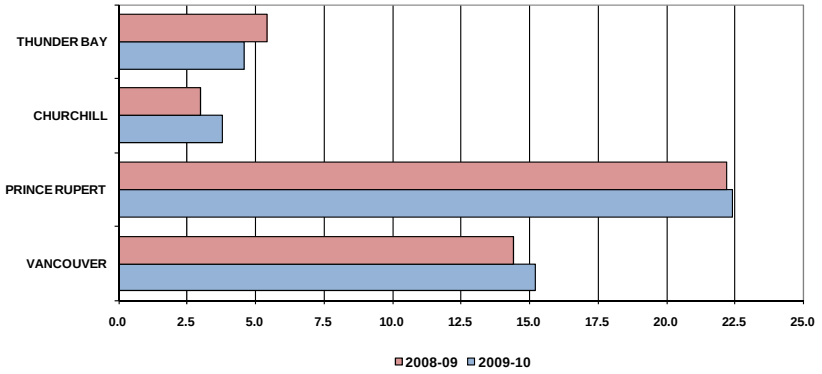
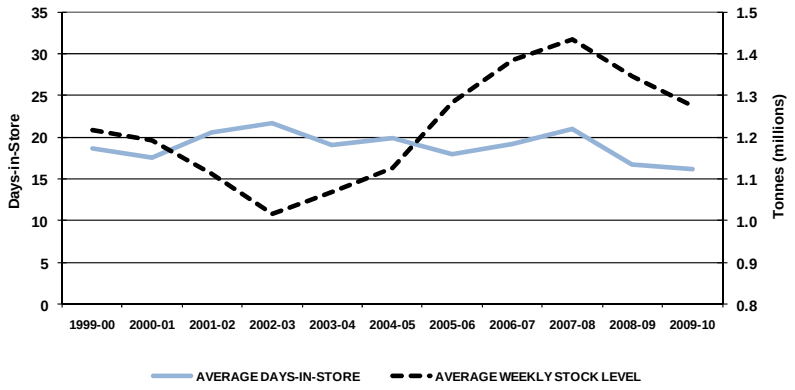


Figure 56: Terminal Elevators – Weekly Stock Level and Days-in-Store



average tonnage. Even so, the size of these stocks declined by 3.7%, to 0.6 million tonnes. With few exceptions, reductions were noted in the size of other stocks as well. Canola inventories, which again ranked as the second largest, decreased by a more substantive 17.3%, falling to an average of 0.2 million tonnes. Durum and barley accounted for a further 0.3 million tonnes, while oats, peas and flaxseed rounded out the remaining 0.2 million tonnes. [Table 5C-2]

Days in Store

In conjunction with the decrease in terminal stocks came a decrease in the amount of time grain spent in inventory, with the overall average number of days-in-store falling by 3.0%, to a record GMP low of 16.2 days from 16.7 days the year before. Much of the impetus for this came from reductions at Vancouver and Churchill, which fell by 6.6% and 35.7% respectively. Running counter to this were Prince Rupert and Thunder Bay, which posted increases of 16.2% and 9.4% respectively. [Table 5C-3]

These results came despite the fact that the average amount of time spent in storage by most grains actually increased. The source that drove the change came from sharp reductions in the storage times associated with barley and canola, which fell by 47.2% and 15.0% respectively. The fourth-quarter decline in the average storage time for wheat helped reduce that period's overall average to a record 13.2 days, the lowest yet recorded under the GMP.

Some of the more pronounced year-over-year changes in the 2009-10 crop year are summarized in the table that follows:

2009-10 Crop Year – Terminal Elevator Days-in-Store

	Days in Store	Change	Remarks
Terminal Ports			
Churchill	14.8 days	Down 35.7%	
Vancouver	11.3 days	Down 6.6%	Lowest average number of days-in-store
Thunder Bay	30.2 days.	Up 9.4%	Highest average number of days-in-store
Prince Rupert	13.6 days	Up 16.2%	
Notable Grains			
Barley	31.9 days	Down 47.2%	
Canola	9.1 days	Down 15.0%	Lowest average number of days-in-store
Wheat	17.4 days	Up 3.0%	
Durum	19.1 days	Up 20.9%	
Flaxseed	21.3 days	Up 23.1%	
Oats	80.2 days	Up 45.8%	Highest average number of days-in-store

Stock-to-Shipment Ratios

Whether sufficient stocks were on hand to meet demand can best be gauged by the average weekly stock-to-shipment ratios. This measure provides an indication of how terminal stock levels related to the volume of grain loaded onto ships during the course of any particular week.[46] For Vancouver, the average ratio on most grains stood comfortably above a value of 2.0. The chief exception to this proved to be canola, with an average ratio of 1.1. In light of the increased throughput for most grains, however, many of the average ratios fell in comparison to those posted a year earlier. Still, there was a noteworthy exception in the ratio associated with flaxseed, which rose by 12.0% in the face of an 829.8% increase in volume, occasioned by new exports to China. [Table 5C-4]

46 As a multiple of the volume of grain ultimately shipped in a given week, the stock-to-shipment ratio provides an objective measurement of whether or not sufficient terminal stocks were on hand to meet short-term demand. Ratio values of one or more denote a sufficient amount of stock on hand. By way of example, a ratio of 2.5 would indicate that two-and-a-half times the volume of grain ultimately shipped in a given week had been held in inventory at the beginning of that same week.

The average ratios posted by Thunder Bay were all well above a value of 2.0. However, because of a 17.0% reduction in throughput, many of the ratios actually increased. Although flaxseed posted a 206.2% increase in its ratio, the most significant gain was posted by wheat, which rose by 26.1%, to 5.6 from 4.4 a year earlier. Owing to an increase in stock, the ratios associated with all grains shipped from Prince Rupert moved sharply higher, by as little as a 13.3% in the case of canola, to as much as 178.6% for durum.[47] Much the reverse was true for Churchill, which owing to a reduction in wheat inventories, posted a 53.7% decline in its ratio for wheat.

On the whole, these measures affirm that sufficient terminal stocks were maintained in the face of prevailing demand, although they also indicate that stock shortages were experienced periodically. While grade-based stock-to-shipment ratios show a greater degree of variability, they too indicate that stock levels were generally sufficient to meet demand throughout much of the crop year. [Table 5C-5]

When examining the frequency with which weekly stock-to-shipment ratios fell below a value of 1.0, the ports of Vancouver and Thunder Bay can both be seen to have had more such instances in the 2009-10 crop year.[48] In the case of Vancouver this happened about 23.6% of the time, up sharply from the 17.1% occurrence rate posted a year earlier. At Thunder Bay such incidences proved rare, with the occurrence rate falling to 3.3% from 3.9% a year earlier.

47 Traditionally, wheat has been the only grain with sufficient consistency in shipments from Prince Rupert to allow for the calculation of a stock-to-shipment ratio in each of the last eleven crop years. An increase in the throughput of other commodities has broadened the use of these ratios.

48 A stock-to-shipment ratio of less than 1.0 does not mean that the port's terminal elevators were unable to meet vessel demand. Rather, it implies that existing grain inventories were insufficient, and that the shortfall would have to be covered using future railway deliveries.

Figure 57: Distribution of Weekly Stock-to-Shipment Ratios

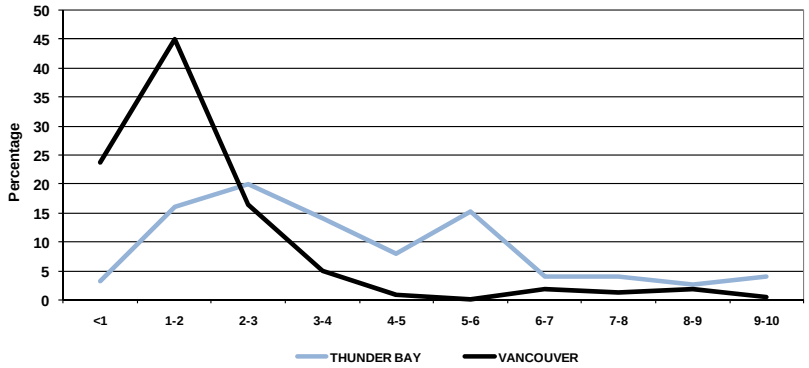
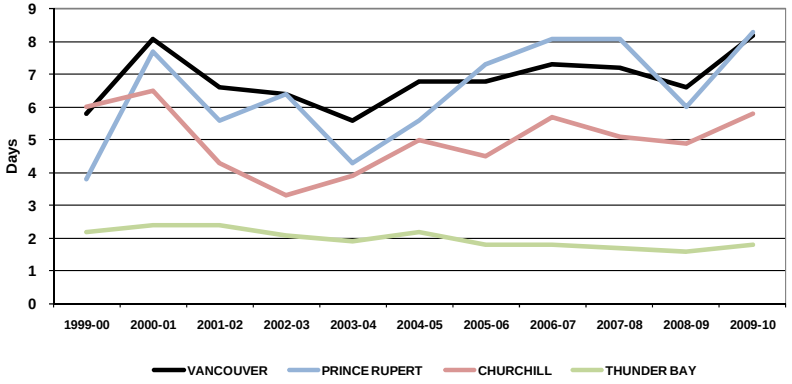


Figure 58: Average Vessel Time in Port



PORT OPERATIONS

A total of 823 vessels called for grain at western Canadian ports during the 2009-10 crop year. This represented a 2.6% increase from the 802 ships that arrived for loading a year earlier. Owing to the fact that this was greater than the 0.5% increase in throughput, it also suggested that larger vessels played a slightly lesser role in moving export grain. This was most evident in the movement of grain from Prince Rupert, where 80 of the 100 ships that arrived took on loads in excess of 30,000 tonnes.[49]

Average Vessel Time in Port

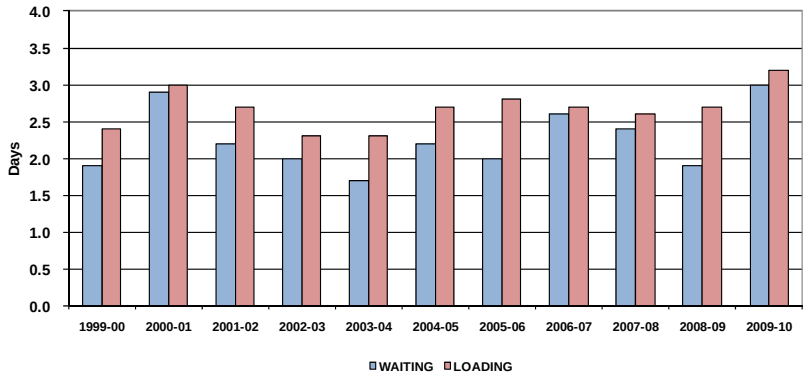
The average amount of time spent by vessels in port increased by 34.8% in the 2009-10 crop year, rising to an average of 6.2 days from 4.6 days a year earlier. This increase was seen in each of the four quarters, and at each of the four ports. This was also equally reflected in increases in the amount of time vessels spent waiting to load, as well as in loading itself. Vessels spent an average of 3.0 days waiting to load, up 57.9% against the previous crop year's 1.9-day average. The time spent loading increased 18.5%, rising to an average of 3.2 days from 2.7 days a year earlier.[50]

The most significant increases were registered by the west-coast ports, with Prince Rupert posting a 38.3% rise, to an annualized average of 8.3 days from 6.0 days a year earlier. The time spent by vessels in Vancouver trailed only marginally, increasing by 24.2%, to an average of 8.2 days from 6.6 days. These were followed in turn by Churchill, which posted an 18.4% increase that raised its average to 5.8 days from 4.9 days

49 Comparatively, only 66.2% of the ships loaded at Prince Rupert in the 2003-04 crop year took on loads in excess of 30,000 tonnes. Since then the proportion has increased substantially, attaining a height of 86.2% in the 2007-08 crop year. The 2009-10 crop year's proportion fell marginally from 84.3% a year earlier.

50 The number of days a vessel spent waiting is determined using the difference between the time the vessel passed the inspection of the Port Warden and Canadian Food Inspection Agency, and the time at which actual loading was commenced.

Figure 59: Average Vessel Waiting and Loading Times



the year before. Although Thunder Bay saw a 12.5% increase in the amount of time spent by vessels in port, its average remained the lowest among the four ports in western Canada, amounting to 1.8 days against the previous crop year's 1.6 day average.[51] [Table 5D-1]

Distribution of Vessel Time in Port

Considering the increased averages noted above, the proportion of ships needing more than five days to clear moved sharply higher, rising to 49.8% from 30.9% a year earlier. This was reflected in sizable increases in the proportions posted by each of the four ports in western Canada, with the most significant increases again being along the west coast. Taking the lead was Prince Rupert, where 69.0% of the ships arriving stayed in port for more than five days, versus 43.8% a year earlier. Vancouver saw this proportion increase to a slightly lesser 64.5% from 51.1%. The story was much the same at Churchill, where the proportion

51 Thunder Bay's lower averages stem chiefly from the greater regularity with which vessels move through the St. Lawrence Seaway, the port's ample storage capacity, and the limited delays incurred by vessels waiting to berth.

of vessels in port for longer than five days climbed to 44.4% from 20.0% the year before. Even Thunder Bay, which traditionally reports the smallest share of vessels staying beyond five days, saw the proportion rise to 17.7% from 1.0%. [Table 5D-2]

Distribution of Berths per Vessel

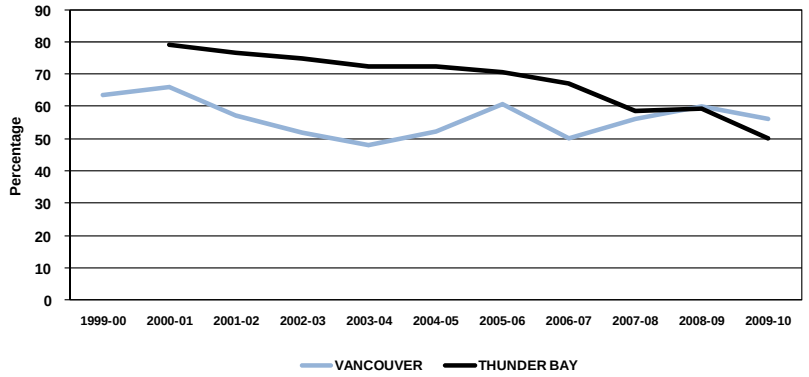
There were comparatively modest changes in the number of vessels needing to berth at more than one terminal during the 2009-10 crop year. At Vancouver, this proportion fell to 56.2% from 59.9% a year earlier. It is worth noting that these recent values are only marginally lower than those observed at the beginning of the GMP. One of the contributing factors in their more recent rise can be traced back to the additional tonnage that has been loaded at the Alliance Grain Terminal since its takeover in 2007, and where its shallower berth often necessitated the "topping-up" of larger vessels at other terminals around the harbour. In comparison, the proportion of vessels needing more than one berthing at Thunder Bay fell to 50.0% from 59.1% a year earlier. This proved to be well below the 79.2% level benchmarked in the first year of the GMP. [Table 5D-3]

Demurrage and Dispatch

Members of the WGEA and the CWB reported total vessel demurrage costs and dispatch earnings to the Monitor.[52] This is intended to provide some indication of the effectiveness with which grain flowed through western Canadian ports. For the 2009-10 crop year, net earnings decreased by 77.3% from what they had been a year earlier, falling to $6.0 million from $26.4 million.

52 Note should be made of the fact that data relating to vessel demurrage and dispatch is both un-audited and aggregated. In addition, they pertain to shipments made during the crop year and, as such, may vary from the figures presented in the financial statements of the organizations that provided the data.

Figure 60: Multiple Berthing Vessels



This result was largely shaped by a 54.4% decrease in dispatch earnings, which fell to $17.2 million from $37.6 million the year before. Much of the reduction could be traced to a 60.2% decrease in the dispatch earned along the Pacific Seaboard, which fell to $11.6 million from $29.1 million. However, this was also complemented by a 34.4% decrease in the dispatch earnings for Churchill, Thunder Bay, and the St. Lawrence Seaway, which fell to $5.6 million from $8.5 million a year earlier.

In comparison, demurrage costs actually declined by a marginal 0.3%, remaining essentially unchanged at $11.2 million. This neutral result was, however, the product of counteracting forces. First there was a 22.4% increase in demurrage costs along the Pacific Seaboard, which rose to $9.4 million from $7.7 million. Secondly there was the offset that arose from a 50.1% reduction in the demurrage costs incurred at Churchill, Thunder Bay, and points along the St. Lawrence Seaway, which declined to $1.7 million from $3.5 million a year earlier. [Table 5D-4]

On the whole, the sharp reduction in dispatch earnings coupled with a marginal reduction in demurrage costs suggests that fewer ships were

capable of clearing port expeditiously. This is corroborated by the substantial increase in the amount of time spent by vessels in port.

Stock-to-Vessel-Requirements Ratio

Average weekly stock-to-vessel requirement ratios are calculated for major grains at Vancouver and Thunder Bay using weekly reports of the tonnage held in inventory at terminal elevators, and the coming weeks' forecast of vessel arrivals. By comparing terminal stocks-in-store to the demand requirements of vessels scheduled to arrive, short-term supply can be gauged against short-term demand.

The average weekly stock-to-vessel-requirement ratios for grains held in inventory at the port of Vancouver moved generally lower in the 2009-10 crop year. The most significant reduction among the ratios for CWB grains was in that for wheat, which fell by 27.3%, to 2.3 from 3.2 a year earlier. This was accompanied by an 11.5% decline in the average ratio for durum, which fell to 2.5 from 2.9. Running counter to these was a 5.9% increase in the ratio for barley, which rose to 4.1 from 3.9 the year before. The results were equally mixed among the non-CWB grains, with the ratio for canola rising by 1.5% to 1.5, while those for peas and flaxseed fell by 1.8% and 55.3% respectively. In most instances, these ratios all stood comfortably above the 1.0 threshold.

Much the same was true of the changes in the ratios posted for Thunder Bay, although most moved higher. The largest increase among the CWB grains was recorded in the ratio for durum, which climbed 52.1%, to 3.7 from 2.4 a year earlier. This was followed by a 20.0% increase in the ratio for wheat, which rose to an average of 5.3, and a 1.9% decline in the ratio for barley, which fell to 7.4. More significant swings were noted among the non-CWB grains, with that posted by peas actually falling to zero.[53] This was followed by canola, with the ratio falling by 29.1% to 3.9. [Table 5D-5]

53 The amount of peas shipped from Thunder Bay in the 2009-10 crop year were insufficient to calculate a meaningful ratio.

Figure 61: Stock-to-Vessel Requirements Ratio

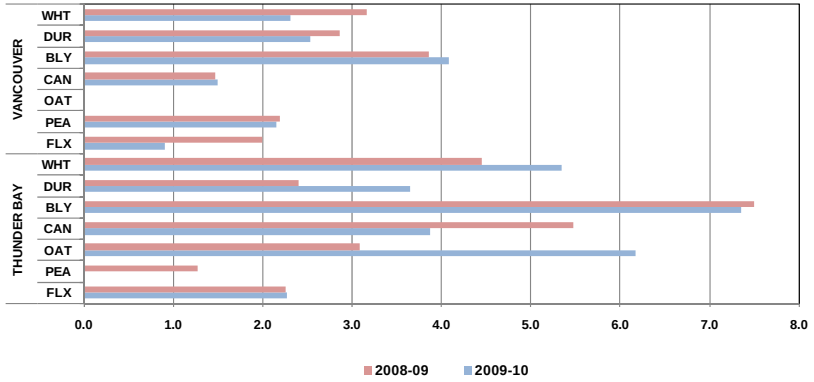
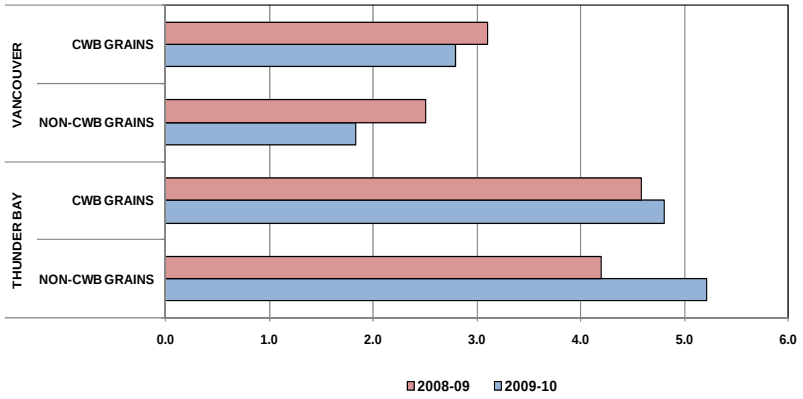


Figure 62: Stock-to-Shipment Ratio



Average weekly stock-to-vessel-requirement ratios by grade were calculated using a similar methodology. The variability in these weekly ratios is even more extreme and largely distorted by blending, as is necessary for the shipment of "Western Canada Wheat." Even so, comparatively few of the grade-specific averages fell below a value of 1.0. [Table 5D-6]

Stock-to-Shipment Ratio

A related measure involves the calculation of average weekly stock-to-shipment ratios for both CWB and non-CWB grains. This measure provides an indication of how terminal stocks-in-store related to the volume of grain actually loaded – as opposed to that expected to be loaded – onto vessels during the course of any particular week, and is interpreted in the same way as stock-to-vessel requirement ratios.

For the purposes of segmentation, average weekly stock-to-shipment ratios for wheat, durum, and barley are deemed to depict those of CWB grains, although it is acknowledged that a small portion of wheat and barley stocks – as well as shipments – at Thunder Bay are in fact non-CWB feed grains. The ratios for canola, oats and flaxseed are deemed to be representative of the non-CWB grains.

The average stock-to-shipment ratio for CWB grains at Vancouver decreased by 9.7% in the 2009-10 crop year, falling to 2.8 from 3.1 a year earlier. Coupled with this was a 27.2% reduction in the ratio for non-CWB grains, which fell to 1.8 from 2.5. At Thunder Bay, both ratios moved in the opposite direction, with the average ratio for CWB grains increasing by 4.7%, to 4.8 from 4.6, while the average for non-CWB grains rose by a more substantive 24.0%, to 5.2 from 4.2. In all instances, these values indicated that ample stocks were generally on hand to meet the prevailing short-term demand. [Table 5D-7]

Terminal Revenues and CWB Carrying Costs

The GMP includes a provision for an annual reporting of terminal elevator revenues and CWB inventory carrying costs at terminal elevators. The WGEA and its members developed a method of reporting total terminal revenues using a number of key financial measures, and provided data for their terminals at Thunder Bay and Vancouver. The CWB provided a breakdown of their terminal costs using an aggregate for Pacific Seaboard terminals, in addition to that of Thunder Bay.[54]

Total reported terminal revenues for the 2009-10 crop year increased by 5.4%, rising to $389.2 million from $369.2 million a year earlier. This result was shaped by two contrary inputs: a 12.6% gain at Vancouver, which saw revenues climb to $320.6 million from $284.8 million; and an 18.7% decrease at Thunder Bay, where terminal revenues fell to $68.6 million from $84.4 million. [Table 5D-8]

The CWB's carrying costs declined by 13.2% in the 2009-10 crop year, falling to $147.6 million from $170.1 million a year earlier. Reductions were reported for the Pacific Seaboard as well as Thunder Bay. In the case of the former, this amounted to an 8.2% reduction, with carrying costs falling to $114.7 million from $124.9 million the year before. There was an even sharper drop in the CWB's carrying costs at Thunder Bay, which declined by 27.1%, to $33.0 million from $45.2 million a year earlier.

SYSTEM PERFORMANCE

The supply chain model provides a useful framework by which to examine the speed with which grain moves through the GHTS. For the 2008-09 crop year, it was observed that this process required an average

54 It should be noted that, owing to the differences in accounting practices, it is difficult to make direct comparisons between total terminal revenues and CWB costs. In addition, the terminal revenue and cost data presented here are un-audited.

of 49.9 days; the lowest value yet observed under the GMP. Much of this was shaped by significant reductions in each of the supply chain's principal time components: while in storage at a country elevator; while in transit as a railway shipment; and while in inventory at a terminal elevator.

The overall amount of time involved in moving grain through the supply chain rose by 4.6% in the 2009-10 crop year, to an average of 52.2 days. This was due primarily to the additional time spent by grain in storage in the country elevator system, which increased by an average of 2.8 days. Partially offsetting this was a 0.5-day reduction in the amount of time spent in terminal inventory.

Despite the overall increase, the amount of time spent by grain in moving through the GHTS in the 2009-10 crop year remains one of the better values recorded since the beginning of the GMP. In addition to the preceding, a few other comments concerning the performance of the GHTS in the 2009-10 crop year are warranted:

- Firstly, although the grain supply declined by 0.5%, falling to 65.7 million tonnes from 66.0 million tonnes, the 28.4 million tonnes of grain moved in the 2009-10 crop year proved to be the largest in the GMP's history. As a result, the pressures brought to bear on the GHTS during this period proved to be the greatest yet experienced.

- Secondly, the effects of the financial crisis at the beginning of the 2008-09 crop year were still reverberating more than a year later. North American railway shipments, while showing signs of increasing, remained substantially below what they had been before the onset of what became the deepest economic recession in several decades. From the vantage point of the GHTS, however, this proved advantageous in as much as it still continued to free capacity that could be directed towards the movement of grain. This was reflected in a 13.2-day average car cycle for the crop year; the lowest average yet achieved under the GMP. Moreover, grain shippers appeared

Figure 63: Days Spent Moving Through the GHTS Supply Chain

FARM OPERATIONS

COUNTRY ELEVATOR STORAGE TIME

RAILWAY LOADED TRANSIT TIME

TERMINAL ELEVATOR STORAGE TIME

MARINE OPERATIONS

				TOTAL	NET CHANGE
1999-00	41.7	7.8	18.6	68.1	
2006-07	30.7	6.7	19.2	56.6	
2007-08	31.1	6.3	21.0	58.4	
2008-09	27.7	5.5	16.7	49.9	
2009-10	30.5	5.5	16.2	52.2	-23.3%

largely satisfied with the service they were receiving from the railways for much of this period.

- Finally, although grain was moving through the GHTS at a slower pace than in the previous crop year, this pace still proved to be faster than in the early years of the GMP. Much of the overall improvement

  has come from an eleven-day reduction in the amount of time spent by grain as inventory in the country elevator network, which has clearly been driven by the rationalization of these same facilities. Complementing this has been the gain made from improvements in the railway's loaded transit time, which at the close of the crop year stood better than two days less than that observed in the GMP's base year. This was supported by a comparable reduction in the amount of time spent by grain in storage at terminal elevators.

Section 6: Producer Impact

Indicator Description	Table	1999-00	2007-08	2008-09	2009-10 Q1	Q2	Q3	Q4	YTD	% VAR
Export Basis										
1CWRS Wheat ($ per tonne)	6A-10A	$54.58	$67.65	$66.74					$65.86	-1.3%
1CWA Durum ($ per tonne)	6A-10B	$67.63	$84.44	$87.57					$79.52	-9.2%
1 Canada Canola ($ per tonne)	6A-10C	$52.51	$53.47	$48.63					$49.73	2.3%
Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	6A-10D	$54.76	$85.51	$101.57					$78.32	-22.9%
Producer Cars										
Producer-Car-Loading Sites (number) – Class 1 Carriers	**6B-1**	415	346	333	291	291	277	268	268	-19.5%
Producer-Car-Loading Sites (number) – Class 2 and 3 Carriers	**6B-1**	122	108	104	101	101	101	110	110	5.8%
Producer-Car-Loading Sites (number) – All Carriers	**6B-1**	537	454	437	392	392	378	378	378	-13.5%
Producer-Car Shipments (number) – Covered Hopper Cars	6B-2	3,441	10,729	13,243	2,123	3,158	3,351	3,566	12,198	-7.9%

CALCULATION OF THE EXPORT BASIS

One of the GMP's principal objectives involves gauging the logistics cost associated with moving prairie grain to market – commonly referred to as the "export basis" – along with the resultant "netback" earned by producers after subtracting these costs from a grain's sale price. By definition, both the export basis and the producer netback are location-specific calculations, and include charges for elevation, elevator cleaning and storage, and transportation (be it road, rail or marine), along with any discounts that may be applicable.

There are over 1,000 origin-destination pairs given the hundreds of prairie grain delivery points and the four principal grain ports for Western Canada. Moreover, given the number of differing grains, grain grades, grain company service charges, and freight rates, the permutations inherent in calculating the export basis and netback of individual producers takes on extraordinary dimensions. Such calculations can easily swell into thousands of separate estimates.

The only practical means by which to manage this undertaking rests in standardizing the estimates around a representative sample of grains, and grain stations. As a result, the GMP consciously limits its estimations to four specific grains: wheat; durum; canola; and peas.[55] Sampling techniques were used to select 43 separate grain stations as a representative sample in the calculation of the export basis and producer netback. These grain stations are grouped into nine geographic areas, comprised of four to six grain stations each, namely: Manitoba East; Manitoba West; Saskatchewan Northeast; Saskatchewan Southeast; Saskatchewan Northwest; Saskatchewan Southwest; Alberta North; Alberta South; and Peace River.

Components of the Calculation

It is important to remember that every individual producer's cost structure differs. As a result, no general calculation can be expected to precisely depict the export basis and netback that is specific to each farmer. The methodology employed here is intended to typify the general case within each of the nine geographic areas identified.[56] Caution, therefore, must be exercised in any comparison between the general values presented, and those arising to individual producers within each of these areas.

Special consideration is given to the distinct merchandising activities tied to CWB and non-CWB commodities, which compels the use of discrete methodologies in calculating the export basis and producer netback for both. The differences between these two methodologies are delineated in the table that follows. The reader is encouraged to become familiar with this material before attempting to draw any specific conclusions from the ensuing discussion.

55 In addition to the grains themselves, the GMP also specified the grades to be used, namely: 1 CWRS Wheat; 1 CWA Durum; 1 Canada Canola; and Canadian Large Yellow Peas (No. 2 or Better).

56 Owing to competitive pressures, many of the stakeholders in the GHTS use some form of financial incentive to draw grain volumes into their facilities (i.e., country elevators) or over their systems (i.e., railways). Many of these incentives are of a highly sensitive commercial nature. In order to safeguard all such information, estimates of the export basis and producer netback are calculated at a higher-than-grain-station level of aggregation.

ELEMENT	CWB GRAINS	NON-CWB COMMODITIES
Grain Price	The price for 1 Canada Western Red Spring Wheat and 1 Canada Western Amber Durum are the Final Realized Prices in-store at Vancouver or St. Lawrence as reported by the CWB in the Statistical Tables accompanying its Annual Report. Since Final Realized Prices are expressed net of CWB operating costs, and the Export Basis includes a separate provision for these costs, CWB Costs (net) are added back to produce Adjusted CWB Final Prices.	The price for 1 Canada Canola is the weighted average Vancouver cash price.[1] The weights used reflect monthly exports as recorded by the Canadian Grain Commission (CGC). The price for Canadian Large Yellow Peas is based on the average weekly dealer closing price, track Vancouver, reported by Stat Publishing for the months of October and November.[2]
Weighted Applicable Freight	The farmer incurs a charge for the movement of his grain as it is delivered to a local elevator. This per-tonne deduction is set by the CWB but based primarily on the single-car rates as published by the railways. This freight deduction embodies the less costly of two options: that to Vancouver; or that to Thunder Bay plus the Freight Adjustment Factor (FAF).[3] The applicable freight rate depicted is a weighted average for the area as a whole based on the proportion of deliveries made to each of the stations included in the area.	
Churchill Freight Advantage Rebate and Churchill Storage Program	The Churchill Freight Advantage Rebate (CFAR) was introduced in the 2000-01 crop year as a mechanism to return the market sustainable freight advantage to farmers in the Churchill catchment area. Following the 2007-08 crop year, the CFAR was replaced with the Churchill Storage Program (CSP). The CSP is designed to pay producers to store grain so as to ensure that it is accessible during the Churchill shipping season (typically August through October). The 2008-09 crop year was a transitional year, with no payments having been made under the CSP. Since the data needed to calculate the CSP on a per-tonne basis is no longer available, it has ceased to be factored into the export basis.	
Trucking Costs	The trucking costs are based on the commercial short-haul trucking rates for an average haul of 40 miles as presented in Table 4A-1.	The trucking costs are based on the commercial short-haul trucking rates for an average haul of 40 miles as presented in Table 4A-1.
Primary Elevation Costs	Primary elevator licensees are required to post primary elevation tariffs with the CGC at the beginning of each crop year, and at any time the rates for elevation, dockage (cleaning), storage, and related services change. The costs depicted for primary elevation are based on the applicable provincial average presented in Table 4C-1 as at August 1 of each crop year.	
Dockage Costs	Primary elevator licensees are required to post primary elevation tariffs with the CGC at the beginning of each crop year, and at any time the rates for elevation, dockage (cleaning), storage, and related services change. The costs depicted for dockage are based on the applicable provincial average presented in Table 4C-1 as at August 1 of each crop year.	
CGC Weighing and Inspection Costs	The costs of CGC weighing and inspection are assessed in various ways by the individual grain companies. Some include a provision for this in their primary elevation tariffs. Others deduct this amount directly from their cash tickets. The per-tonne average deduction from cash tickets used here has been adjusted in order to avoid an overlap with the tonnage already covered under the primary elevation tariffs, and a possible distortion of the export basis.	
CWB Costs	CWB Costs (gross) represent the per-tonne operating costs of each pool account at an in-store export port position, plus the apportioned value of its overall transportation savings.[4]	
Price Differential		For 1 Canada Canola, a price differential – or spread – is calculated between the weighted Vancouver cash price and the weighted average spot price in each of the nine regions. For yellow peas, a price differential is calculated using the average weekly dealer closing price, track Vancouver, and the average weekly grower bid closing price for the months of October and November. These differentials effectively represent the incorporated per-tonne cost of freight, elevation, storage and any other ancillary elements. As such, it encompasses a large portion of the Export Basis.

ELEMENT	CWB GRAINS	NON-CWB COMMODITIES
Canola Growers and Pulse Associations		All elevator deliveries of canola in Saskatchewan are subject to a $0.75 per tonne "check-off" for provincial canola association dues. The applicable "check-off" on deliveries made in Manitoba and Alberta are higher, amounting to $1.00 per tonne in both provinces. Similarly, a levy of 0.5% is deducted for the Manitoba Pulse Growers Association on the delivery of yellow peas, while 1.0% is deducted for the Pulse Growers Associations in Saskatchewan and Alberta.
Trucking Premiums	Grain companies report on the trucking premiums they pay to producers at each of the facilities identified in the sampling methodology.[5] The amounts depicted reflects the average per-tonne value of all premiums paid for the designated grade of wheat or durum within the reporting area.	Grain companies use their basis (the spread between their cash and the nearby futures price) as the mechanism to attract producer deliveries. Narrowing their basis, resulting in higher return to producers, is the signal that a company needs a commodity. Conversely a wide basis signals a lack of demand for the product. Some companies, however, offer premiums over and above their basis in order to attract delivery of some non-Board commodities. These premiums are presented as a producer benefit when factored into the export basis. Owing to the limited use of this mechanism, they assume relatively small values when weighted by the applicable tonnage at a regional level.
CWB Transportation Savings	The CWB Transportation Savings is an apportioned per-tonne amount representing the total financial returns to the pool accounts as a result of grain-company tendering, freight and terminal rebates, and any penalties for non-performance.	
Other Deductions	Other deductions, such as drying charges, GST on services, etc., may also be applied to, and appear as an itemized entry on the cash ticket of, any grain delivery. No attempt is made to capture these deductions within the framework employed here.	Other deductions, such as drying charges, GST on services, etc., may also be applied to, and appear as an itemized entry on the cash ticket of, any grain delivery. No attempt is made to capture these deductions within the framework employed here.

1) – ICE Futures Canada (formerly the Winnipeg Commodity Exchange) collects Vancouver cash prices and spot prices at selected country elevator locations daily.
2) – Data provided by Stat Publishing. Using a "snapshot" period of two months during the fall, when pricing of the new crop is relatively heavy, was deemed to be an appropriate representation of producer prices, thereby avoiding the need to incorporate a weighting factor.
3) – Freight Adjustment Factors (FAF) were introduced in the 1995-96 crop year to account for a change in the eastern pooling basis point, from Thunder Bay to the Lower St. Lawrence, and for the location advantage of accorded shipments from delivery points near Churchill and markets in the United States. FAFs are established prior to the beginning of each crop year to reflect changes in sales opportunities, cropping patterns and Seaway freight rates.
4) – The costs published in the CWB's Annual Report are net of any transportation savings. Since the 2002-03 crop year, the CWB's Annual Reports has published its receipts at "contract prices." In order to provide a consistent time series, the CWB provides the Monitor with an adjusted reporting to reflect receipts and costs at "in-store" Vancouver or St. Lawrence.
5) – Various terms are used by grain companies to describe the premiums they offer to producers in an effort to attract deliveries to their facilities – i.e., trucking premiums, marketing premiums, and location premiums. The most common term, however, remains "trucking premium," and it is utilized generically in the calculation of the Export Basis.

CWB COMMODITIES

All of the data assembled since the beginning of the GMP has consistently shown that the financial returns arising to producers have been heavily influenced by the prevailing price of grain. While the export basis has unquestionably risen over time, it is the prevailing price of the commodity that has had the most sway over these returns.

1CWRS Wheat

Between the 1999-2000 and 2009-10 crop years, the producer's netback for 1CWRS wheat climbed by 26.4%, to an average of $181.05 per tonne from $143.25 per tonne. However, the overall improvement has not been altogether progressive. Rather, the farmer's return has varied widely because of dramatic price swings, extending from a low of $141.17 per tonne in the 2005-06 crop year to a high of $314.29 per tonne in the 2007-08 crop year. [Table 6A-10A

Final Realized Price

Better prices proved to be the chief force underlying improvements in the netback to producers of 1CWRS wheat throughout much of the GMP. From the 1999-2000 crop year's benchmark price of $192.43 per tonne, shrinking global wheat stocks and the prospect of tighter supplies helped push the Final Price for 1CWRS wheat (13.5% protein) to $250.20 in the 2002-03 crop year. And although prices tumbled over the course of the next three years, they began to rally again in the 2006-07 crop year as a result of reduced global production. Production shortfalls in the United States, Europe and Australia helped push prices even higher in the 2007-08 crop year, with the Final Price for 1CWRS wheat reaching a record $372.06 per tonne.

Record global wheat production along with increased international competition resulted in significant downward pressure being placed on wheat prices in the 2008-09 crop year. Moreover, the instability occasioned by the global financial crisis served only to compound these

Figure 64: Producer Netback – 1CWRS Wheat

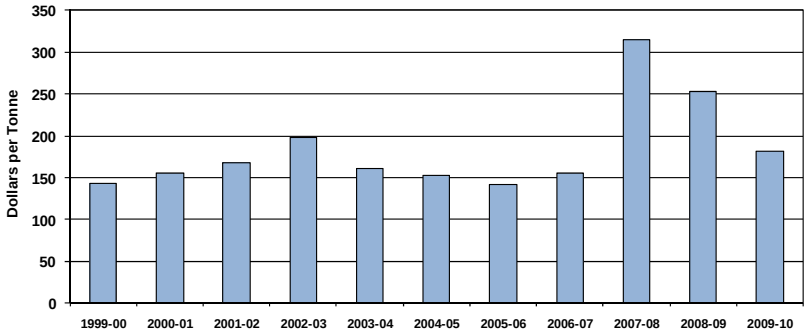
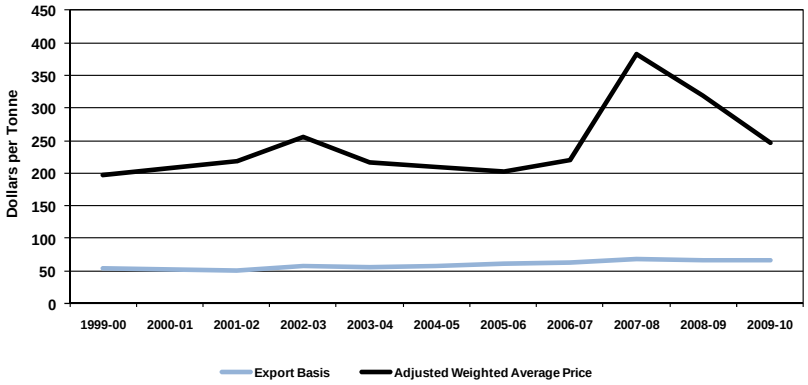


Figure 65: Change in Netback Components – 1 CWRS Wheat



pressures, with the Final Price for 1CWRS wheat being reduced to $311.36 per tonne. The competitive environment proved much the same in the 2009-10 crop year, ultimately undercutting the Final Price of 1 CWRS wheat by another 23.9%. In the span of just two crop years, the Final Price of 1 CWRS wheat had been reduced by a third from its all-time high, to $236.80 per tonne. Despite the setback, the per-tonne price of wheat remained $44.37 higher than its base-year value.

Export Basis

The export basis for 1 CWRS wheat has also increased since the beginning of the GMP, although its rise has proven far less erratic than that of price. The export basis actually declined in the early years of the GMP, reaching a low of $50.88 per tonne in the 2001-02 crop year. But it subsequently began to increase, attaining a height of $67.65 per tonne in the 2007-08 crop year. The 2008-09 crop year saw the export basis cut back to $66.74 per tonne. A further 1.3% reduction in the 2009-10 crop year decreased it to $65.86 per tonne, a value that stands 20.7% above the benchmarked $54.58 per tonne set in the GMP's first year.

It is important to recognize that the export basis has two distinct structural components. The first of these relates to the direct costs incurred by producers in delivering grain to market. These include not only railway freight, but the costs derived from trucking, elevation, dockage, CGC weighing and inspection, as well as the Canadian Wheat Board. The second encompasses all of the financial benefits accruing to producers from the receipt of any offset to these expenses. For the most part, these encompass two items: the trucking premiums farmers receive from the grain companies for delivering their grain; and the transportation savings passed on to them by the CWB through its pool accounts. It must be noted that these offsets have played a central role in containing the growth in the farmer's direct costs.

Figure 66: 2009-10 Direct Costs – 1CWRS Wheat

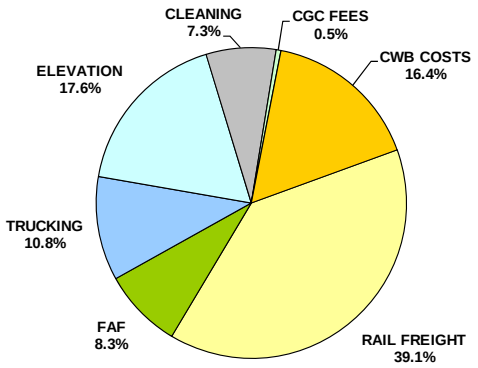
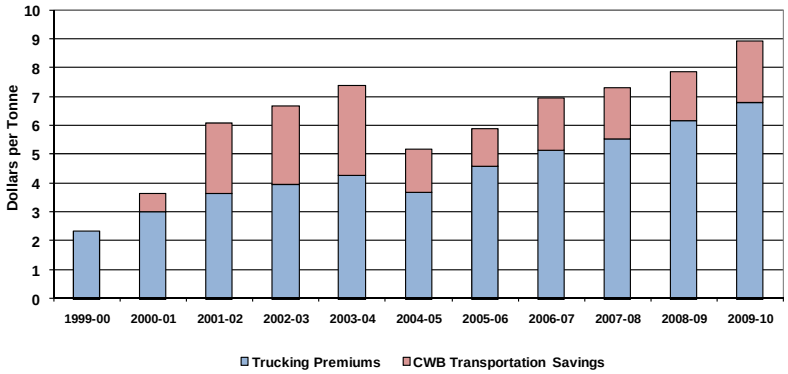


Figure 67: Financial Benefits – 1CWRS Wheat



Direct Costs

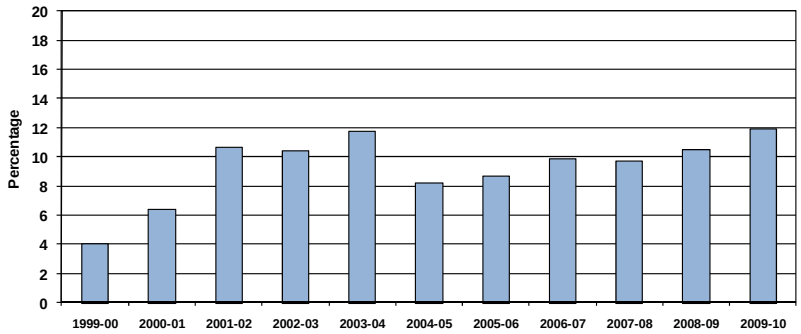
Over the course of the last eleven crop years, the direct-cost component of the export basis has risen 31.4%, to an average of $74.77 per tonne in the 2009-10 crop year from its base-year value of $56.90 per tonne. The largest single element in these costs is the applicable freight, which incorporates not only a charge for the grain's movement by rail, but a CWB Freight Adjustment Factor (FAF) as well.[57] At the outset of the GMP, the weighted applicable freight on the movement of 1CWRS wheat in western Canada averaged $31.87 per tonne, and accounted for 56.0% of the farmer's direct costs. And while these costs have risen by 11.4% over the last eleven years, to an average of $35.49 in the 2009-10 crop year, its share of the farmer's direct costs declined to a markedly lower 47.4%.

This comparative decline reflects the effects of greater increases in the other direct costs associated with producing 1CWRS wheat. While the cost of trucking, elevation and cleaning saw increases that ranged from 35% to 55% over this same eleven-year period, the most substantive gain related to the CWB's gross costs, which more than doubled, rising to an average $12.24 per tonne from $5.40 per tonne. This resulted in their assumption of a larger share of direct costs, 16.4% in the 2009-10 crop year against 9.5% in the 1999-2000 crop year.

Financial Benefits

The direct costs cited above are typically offset by two financial benefits that accrue to producers. These come in the form of any trucking premiums that may have been received directly from grain companies, as well as the transportation savings they indirectly received from the CWB.[58] In the case of trucking premiums, it has been a long-established practice of the grain companies to use these as an instrument with which to draw grain into their facilities. The data suggests that the competition between grain companies has pushed these premiums steadily higher.

Figure 68: Offset Value of Financial Benefits – 1CWRS Wheat



For the most part, the premiums paid by the grain companies for the delivery of 1CWRS wheat in each of the nine sampling areas have more than doubled over the course of the last eleven years, increasing to an average of $6.78 per tonne in the 2009-10 crop year from $2.32 per tonne in the 1999-2000 crop year. On a proportional basis, these premiums have been offsetting an increasingly larger amount of the

57 Prior to the 2008-09 crop year, the Churchill Freight Advantage Rebate (CFAR) was incorporated into the calculation of the applicable freight. When the Churchill Storage Program superseded the CFAR, the data needed to reduce these payments to a per-tonne value was no longer available. As a result, this element is no longer factored into the calculation of the export basis.

58 There are a number of other enticements that a grain company can use in getting farmers to deliver their grain to its elevators - what the grain company refers to as its toolbox. In addition to trucking premiums, grade promotions, discounts on farm supplies, favourable credit terms, or even the absorption of trucking costs are also employed. The GMP does not attempt to evaluate these other benefits.

producers' direct costs: 9.1% in the 2009-10 crop year versus 4.1% in the 1999-2000 crop year.

Complementing this has been the CWB's transportation savings, which initially averaged $0.61 per tonne in the 2000-01 crop year. This helped offset the direct costs tied to 1CWRS wheat by a further 1.1%. Although these savings reached as much as $3.14 per tonne in the 2003-04 crop year, they have since diminished. In the 2009-10 crop year they amounted to $2.13 per tonne, and provided a direct-cost offset of 2.8%.

As a result of these forces, the financial benefit accruing to producers in the 2009-10 crop year averaged $8.91 per tonne, more than three times the $2.32 per tonne recorded in the first year of the GMP. What is more, the offsetting value of these financial benefits increased to 11.9% of total direct costs, against 4.1% eleven years earlier.

1CWA Durum

As was the case for 1CWRS wheat, farmers saw a fairly significant improvement in their netback from the delivery of 1CWA durum throughout much of the GMP. These returns, however, were also heavily influenced by sharp fluctuation in the market price of durum. Between the 1999-2000 and 2007-08 crop years, the producer's netback for 1CWA durum climbed by 185.4%, to an average of $458.04 per tonne from $160.48 per tonne. However, the price of 1CWA durum stumbled badly in the 2008-09 and 2009-10 crop years, precipitating a sharp contraction in the producer's netback, which fell to its second lowest value since the beginning of the GMP, $153.59 per tonne. [Table 6A-10B]

Final Realized Price

Limited supplies of high-grade milling durum largely as a result of reduced North American production was largely responsible for pushing the Final Price of 1 CWA durum (13.5% protein) steadily upwards from its benchmark value of $206.79 per tonne in the 1999-2000 crop year. After reaching a height of $266.88 per tonne in the 2002-03 crop year, however, durum prices began to fall. They continued to weaken over the

Figure 69: Producer Netback – 1CWA Durum

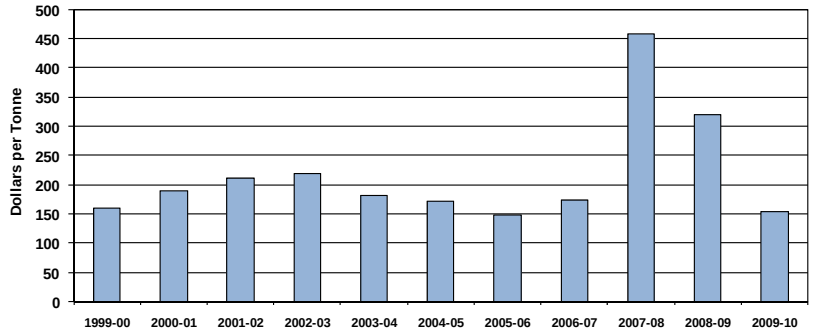
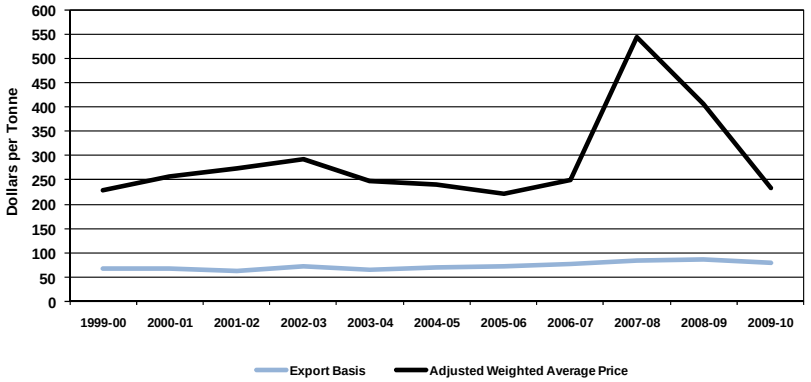


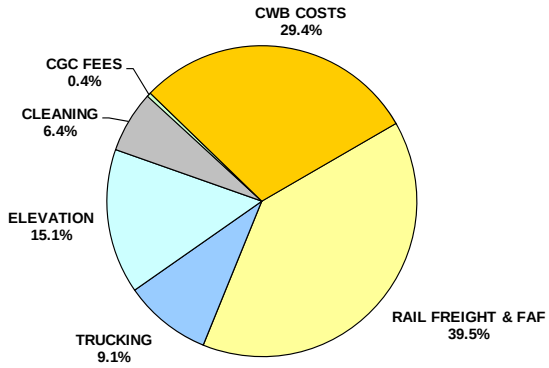
Figure 70: Change in Netback Components – 1CWA Durum



course of the next two years, with the Final Price for 1CWA durum ultimately falling to $199.35 per tonne in the 2005-06 crop year. A tightening of supplies caused prices to rally a year later but it was the ensuing global shortage that propelled the Final Price for 1CWA durum considerably higher in the 2007-08 crop year, to a GMP record of $512.81 per tonne.

A large, good-quality European harvest, complemented by increased North American production, brought downward pressure on prices in the 2008-09 crop year. Compounding this was the instability occasioned by the global financial crisis. Much the same forces were still at work a year later, which resulted in an even further weakening in price. By the close of the 2009-10 crop year, the Final Price of 1 CWA durum had plummeted to $209.16 per tonne, a drop of 59.2% from its prerecession high. Moreover, this proved little different from the benchmark price of $206.79 per tonne recorded eleven years earlier.

Figure 71: Direct Costs – 1CWA Durum



Export Basis

As outlined previously with respect to 1CWRS wheat, the export basis for 1CWA durum has also risen over the course of the GMP. Despite periodic swings, the overall gain amounted to a 17.6% rise, raising the export basis for the 2009-10 crop year to $79.52 per tonne as compared to the $67.63-per-tonne value recorded in the GMP's base year.

As with 1CWRS wheat, the export basis of 1CWA durum has the same two structural components: the direct costs incurred in delivering grain to market; and the financial benefits accruing from the receipt of any offset to these expenses. The gains derived from these latter elements have been instrumental in containing the growth in direct costs.

Direct Costs

The direct costs tied to 1CWA durum have risen with greater fluctuations than that of 1CWRS wheat. By the close of the 2009-10 crop year, these costs stood at an average of $88.57 per tonne. And although the FAF component was not as great as that of 1CWRS wheat, rail freight also constituted the single largest element in the makeup of these costs.[59] For the 2009-10 crop year, the weighted average freight for the movement of 1CWA durum totalled $34.99 per tonne, a gain of 16.4% over the $30.07 per tonne it had been eleven years earlier. Still, its share of direct costs fell marginally, to 39.5% from the 42.5% it had constituted in the first year of the GMP. Gross CWB costs also increased over the past eleven years, rising to $26.08 per tonne from $21.32 per tonne, with their share of direct costs also decreasing marginally, to 29.4% from 30.1%.

59 For 1CWA durum, the FAF constitutes a very small portion of the overall applicable freight – 1.4% in the 1999-2000 crop year. Moreover, the average FAF for 1CWA durum has been steadily decreasing. Although not large in absolute terms, the average FAF dropped from $0.41 per tonne in the 1999-2000 crop year, to a credit of $0.03 in the 2008-09 crop year. When treated as a credit, the FAF actually reduces the freight paid by producers.

As with the preceding two elements, there was little meaningful change in the composition of durum's other direct costs, although trucking, elevation and cleaning posted increases that ranged from about 35% to 55%. Still, this resulted in their assumption of a comparatively larger share of the direct costs, 31.1% versus 27.4% in the 1999-2000 crop year.

Financial Benefits

As with wheat, the trucking premiums paid by grain companies for 1CWA durum deliveries have moved steadily higher over the course of the past eleven years, to an average of $6.92 per tonne from $3.14 per tonne. In the 2009-10 crop year this served to offset 7.8% of the direct costs incurred by farmers in exporting their grain, more than the 4.4% that it shielded in the first year of the GMP. The CWB's transportation savings are also applicable in the movement of 1CWA durum, and are in fact identical to those already presented for 1CWRS wheat. At $2.13 per tonne, this provided an offset value of 2.4% to the farmer's direct costs. When examined on a combined basis, these producer benefits have almost tripled in the last eleven years, climbing to $9.05 per tonne from $3.14 per tonne in the GMP's base year. By extension, they also offset a larger proportion of the farmer's direct costs, 10.2% against 4.4% in the 1999-2000 crop year.

Figure 72: Financial Benefits – 1CWA Durum

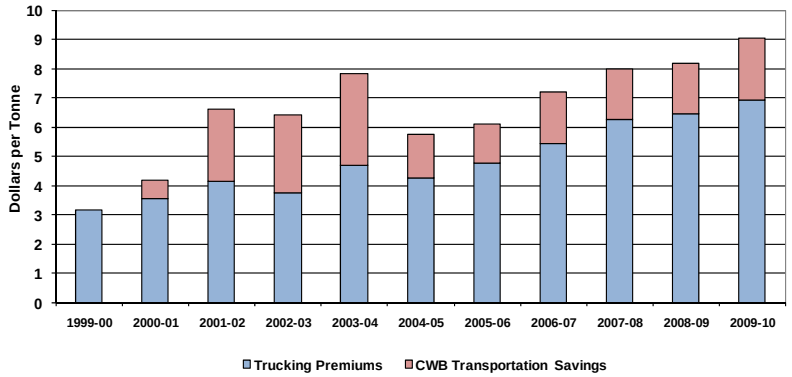
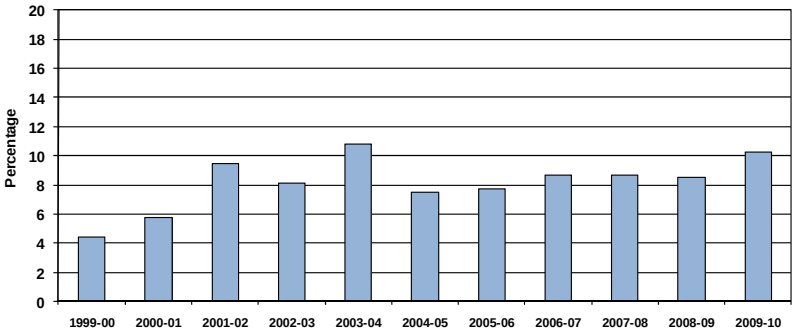


Figure 73: Offset Value of Financial Benefits – 1CWA Durum



NON-CWB COMMODITIES

As with the CWB commodities discussed previously, all of the data assembled since the beginning of the GMP has consistently shown that the financial returns arising to producers of non-CWB commodities have been heavily influenced by the prevailing price of grain. While the export basis has unquestionably risen over time, it is the prevailing price of the commodity that has also had the most sway over these returns.

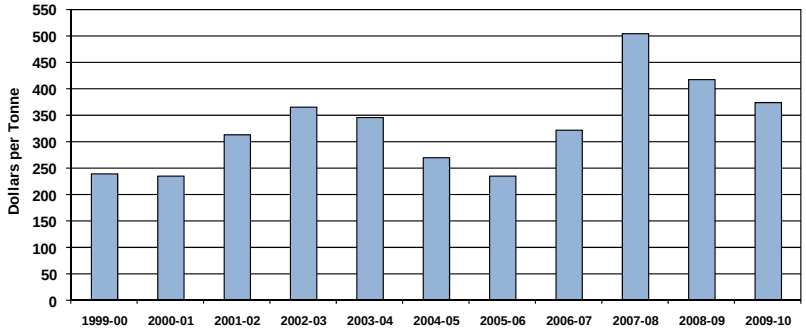
1 Canada Canola

The visible netback to producers from the delivery of 1 Canada canola has fluctuated rather significantly over the course of the last eleven years. Once again, much of this was due to dramatic swings in market prices. These forces propelled the farmer's return from a base-year value of $239.10 per tonne to a high of $503.29 per tonne in the 2007-08 crop year. But the decline in canola prices over the past two years has done much to undercut these returns. By the close of the 2009-10 crop year, the farmer's netback had fallen to $374.46 per tonne. However, this still represented an improvement of $135.36 per tonne, or 56.6%, over the return presented in the first year of the GMP.

Vancouver Cash Price

As with other grains, higher market prices have proven to be instrumental in improving the netback to producers of 1 Canada canola. These too have fluctuated significantly since the beginning of the GMP. From its base-year benchmark of $291.61 per tonne, the Vancouver Cash Price moved steadily higher in the first four years of the GMP, reaching $414.36 per tonne before gradually settling back to $276.38 per tonne in the 2005-06 crop year. This was followed by a sharp upturn just a year later when the growing need for feedstock in US and European biodiesel production began to lift prices higher. The 2007-08 crop year saw declining oilseed stocks coupled with rising consumption propel canola prices to even further heights, with the average Vancouver cash price reaching a GMP record of $556.76 per tonne.

Figure 74: Producer Netback – 1 Canada Canola



Record Canadian production along with greater outputs from Australia, Russia and Ukraine led to expectations of a global oversupply in the 2008-09 crop year. This, along with increased palm oil production from countries like Indonesia, served only to undermine global prices. The instability occasioned by the global financial crisis did little to help matters. Much the same was true for the 2009-10 crop year, which added to the downward pressure that had already been exerted. As a result, the Vancouver cash price was cut by 23.8% in just two years, falling to an average of $424.19 per tonne. Notwithstanding this reduction, the average price remained well above the $291.61 per tonne benchmarked in the first year of the GMP.

Export Basis

Over the course of the last eleven years, the export basis for 1 Canada canola has decreased by 5.3%, falling to an average of $49.73 in the 2009-10 crop year from $52.51 per tonne in the GMP's base year. However, this net decline tends to obscure some of the fluctuations that have occurred during this same period. This can readily be observed when

considering that, despite the longer-term decline, the export basis actually increased by 2.3% in the 2009-10 crop year.

The export basis for non-CWB commodities have the same basic structural components as do CWB grains: the direct costs incurred in delivering grain to market; and any financial benefits that serve to offset them. However, over 80% of the direct costs cannot be examined directly. Instead, a price differential – or spread – between the Vancouver cash price and the producers' realized price at the elevator or processing plant is calculated. This differential effectively includes the cost of freight, handling, cleaning, storage, weighing and inspection, as well as an opportunity cost or risk premium.

Direct Costs

In contrast to the patterns observed for wheat and durum, the direct costs tied to 1 Canada canola have largely declined since the 1999-2000 crop year. Total direct costs in the 2009-10 crop year stood 7.9% below that recorded in the first year of the GMP, having fallen to an average of $50.63 per tonne from $54.99 per tonne. Even when painted against this broader decline, it must be noted that total direct costs have generally been rising since reaching a low of $41.31 per tonne in the 2004-05 crop year.

Much of the impetus for this has come from changes in the price differential. Since any narrowing of the price differential effectively signals that the product is in demand, and that buyers are willing to surrender a greater proportion of the Vancouver price to the producer in order to acquire sufficient supplies, the broader reduction underscores the strengthening demand for Canadian canola. Over the course of the last eleven years this differential has narrowed, to an average of $41.62 per tonne from $48.55 per tonne. Moreover, its share of direct costs has also declined, to 82.2% from 88.3%.

The second largest component in canola's direct costs is that of trucking the commodity from the farm gate to an elevator or processor. As with

Figure 75: Change in Netback Components – 1 Canada Canola

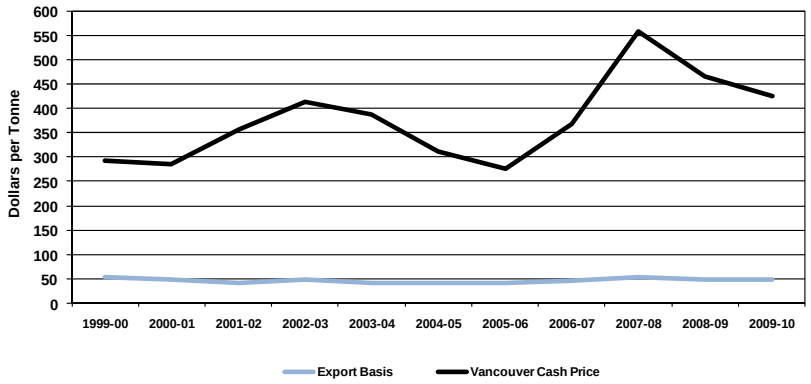
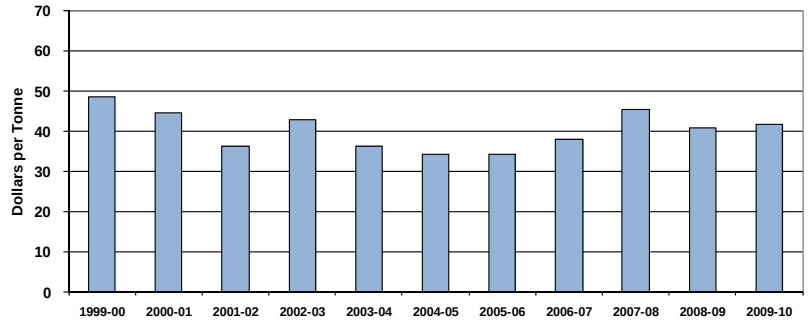


Figure 76: Price Differential – 1 Canada Canola



CWB grains, these costs are estimated to have climbed by 36.2% in the last eleven years, increasing to an average of $8.09 per tonne from $5.94 per tonne at the beginning of the GMP. Owing to the narrowing of the price differential over the past several years, trucking costs in the 2009-10 crop year accounted for a greater proportion of the direct costs, 16.0% versus 10.8% in the 1999-2000 crop year. The remaining direct costs, which accounted for just 1.8% of the overall total, were derived from a provincial check-off that is applied as a means of funding the Canola Growers Association.

Financial Benefits

Unlike CWB grains, trucking premiums are not as aggressively used to entice delivery of non-CWB commodities. In fact, over the course of the last eleven years, the average trucking premium paid on canola has fallen to $0.90 per tonne from $2.48 per tonne. Moreover, the value of these premiums as an offset to the direct costs also declined, falling to 1.8% from 4.5%. It is worth noting that these premiums have largely fallen in conjunction with the narrowing of the price differential. This is consistent with the trade's preference to use the spread between the spot price and the futures price as the primary signalling mechanism to attract deliveries. Although market conditions led to temporarily higher premiums in the 2008-09 crop year, its role remains a very limited one.

Large Yellow Peas

The visible netback arising to producers of large yellow peas has proven to be the most volatile of the four commodities monitored since the beginning of the GMP. As with other commodities, this volatility was occasioned by the rise and fall of market prices. A further decline in the price of large yellow peas was chiefly responsible for a sharp pullback in the producer's netback for the 2009-10 crop year, which fell to $183.40 per tonne from $222.94 a year earlier.

Figure 77: Financial Benefits – 1 Canada Canola

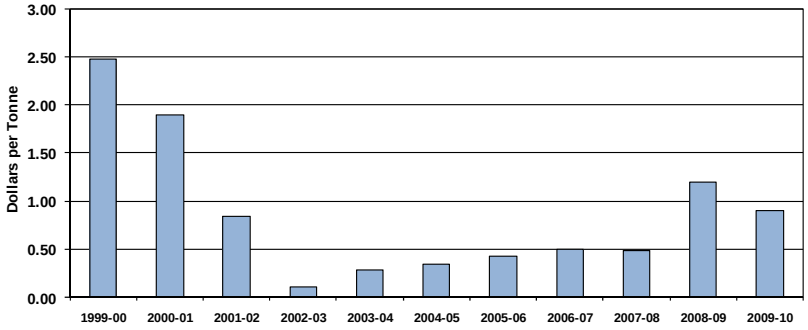
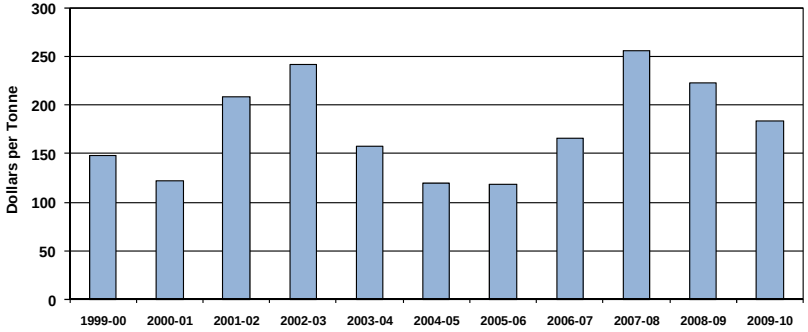


Figure 78: Producer Netback – Large Yellow Peas



Dealer's Closing Price

Although the supply of Canadian large yellow peas exercises significant sway in the marketplace, its price is sensitive to wider international influences. Reflecting the effects of a reduction in international supply, the dealer's closing price rose to $325.14 per tonne from $202.54 per tonne in the first four years of the GMP. Beginning in the 2003-04 crop year, however, increasing supplies brought significant downward pressure on price, which ultimately declined to $171.69 per tonne by the close of the 2005-06 crop year. Strong international demand in the face of a further decline in production resulted in prices rebounding sharply over the next two years, with the dealer's closing price reaching a GMP record of $341.82 per tonne in the 2007-08 crop year.

Against the broader backdrop of the global financial crisis, the market price of large yellow peas began to decline in the 2008-09 crop year. Weaker demand in India, traditionally a price-sensitive market, was a key factor in the application of even further downward pressure on price in the 2009-10 crop year, with the dealer's closing price falling by 19.3% to an average of $261.72 per tonne. Even considering this reduction, the average price still remained substantially above the $202.54 per tonne benchmarked in the GMP's base year.

Export Basis

In the first four years of the GMP the export basis for large yellow peas rose steadily, to a height of $83.19 per tonne in the 2002-03 crop year from its benchmark value of $54.76 per tonne. But it then began to fall, ultimately reaching a low of $52.94 per tonne in the 2005-06 crop year. This undulating pattern began to repeat itself in the 2006-07 crop year, when the export basis rose to $62.17 per tonne. Moreover, the upward momentum continued through the 2008-09 crop year, ultimately reaching a new GMP record of $101.57 per tonne. Its subsequent reduction to $78.32 per tonne in the 2009-10 crop year marked the first contraction in the export basis of large yellow peas in five years.

Figure 79: Change in Netback Components – Large Yellow Peas

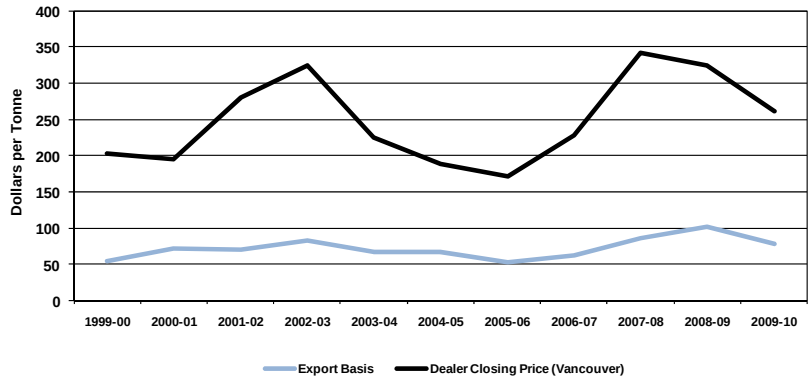
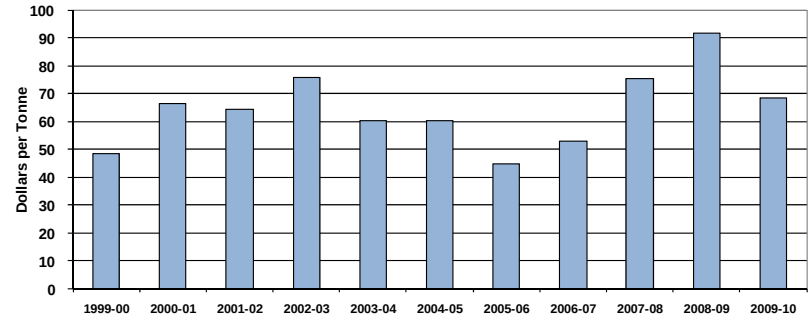


Figure 80: Price Differential – Large Yellow Peas



Owing to the relative size of the direct cost component in the export basis, the changes in each are virtually indistinguishable. As with canola, over 80% of the direct costs tied to large yellow peas cannot be examined directly. Instead, a price differential between the dealer's closing price and the grower's bid closing price is calculated as an approximation for the cost of freight as well as other handling, cleaning, and storage activities.

Direct Costs

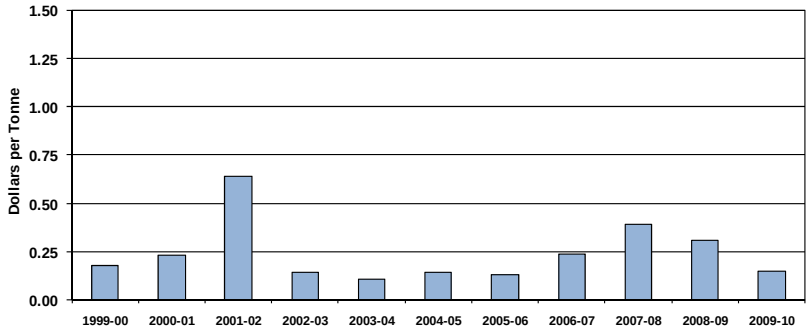
Over the last eleven years the price differential has risen by 41.9%, to $68.45 per tonne in the 2009-10 crop year from $48.23 per tonne in the base year. But this escalation was characterized by significant fluctuations owing to prevailing market conditions, taking values that ranged from a low of $44.56 per tonne in the 2005-06 crop year to a high of $91.46 per tonne in the 2008-09 crop year. These same forces produced a sharp pullback in the 2009-10 crop year, with the price differential contracting by 25.2%, to $68.45 per tonne. Even so, the differential still encompassed 87.2% of the direct costs, a proportion only marginally less than the 87.8% it assumed in the base year.

The second largest component in the direct costs of large yellow peas is trucking. As elsewhere, these costs are estimated using an average haul distance of 40 miles, and are deemed to have amounted to $8.09 per tonne in the 2009-10 crop year. On a comparative basis, this element accounted for 10.3% of total direct costs versus 10.8% at the outset of the GMP. The remaining 2.5% was derived from a levy assessed by the provincial Pulse Growers Association at the time of delivery.

Financial Benefits

Trucking premiums are even less commonly used to encourage the delivery of large yellow peas than they are for canola. From the outset of the GMP these premiums amounted to an average of just $0.18 per tonne, and provided an offset value of just 0.3% to total direct costs. Although premium payments spiked periodically, reaching as much as $0.64 per tonne in the 2001-02 crop year, its use has again declined. In the 2009-10 crop year, these premiums averaged a mere $0.15 per tonne, and provided an offset to direct costs of only 0.2%.

Figure 81: Financial Benefits – Large Yellow Peas



CASH TICKET ANALYSIS

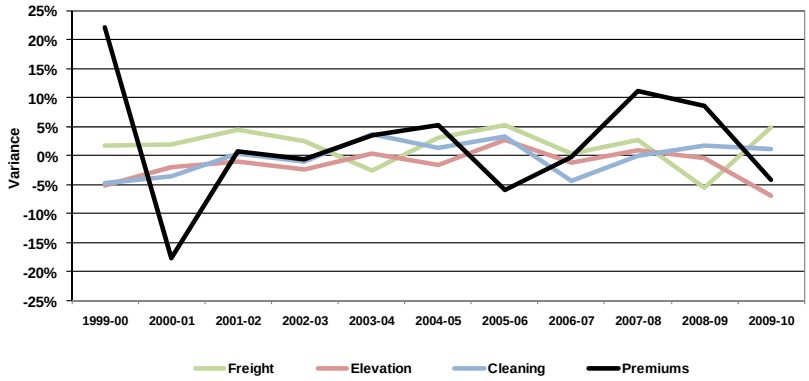
In order to validate the preceding analysis, a number of grain companies provided the Monitor with a sample of the cash tickets issued by the elevators at each of the 43 stations defined in the sampling methodology. It was intended that these tickets would represent a minimum of three percent of the receipts issued with respect to the grains under examination.[60] In some instances, the grain companies provided larger samples.

The deductions on the cash tickets were then gauged against the averages developed for the export basis. The variances pertaining to wheat in the 2009-10 crop year ranged from a high of 7.0% on elevation, to a low of 1.1% on cleaning. The variances for freight and trucking premiums fell easily within this range, amounting to 4.9% and 4.1% respectively.

With the exception of elevation, all of the observed variations showed a modest narrowing in comparison to the variances posted a year earlier. As regards the former, much of the gain appears to have been tied to problems in data quality, and the need to reject a larger geographically based portion of the cash tickets collected.

The focus of this analysis, however, has always been on gauging the accuracy of the total premiums paid by the grain companies. In this regard, although there has been a significant narrowing in the variability witnessed in the first years of the GMP, the variability in the premium data has remained generally greater than that of other cash ticket items.[61]

Figure 82: Cash Ticket Variances



And while data quality remains a factor in the calculation of these variances, the analysis provides reasonable corroboration for the premiums reported by the grain companies. In light of this, the Monitor is satisfied that the methodology used to determine both the export basis and the producer's netback provides a fair portrait of the financial returns arising to western Canadian producers.

60 The sample of cash tickets used is based on three percent of the number of tickets actually issued, and does not necessarily correspond to three percent of volume delivered. The average freight charges presented in the data tables are, however, weighted by volume.

61 The variances pertaining to the trucking premiums paid during the first two crop years must be viewed in the context of the challenge involved in obtaining the necessary information to conduct the analysis. Owing to the fact that the information systems used by the grain companies were not designed to extract the data required for this analysis, there were significant data integrity problems to be overcome. The variances reported for the 1999-2000 and 2000-01 crop years largely reflect these initial difficulties.

PRODUCER CARS

Producer-car loading has increased substantially since the beginning of the GMP. This has come about as a result of many factors, not the least of which has been the formation of producer-car loading groups. These range from small groups loading cars with mobile augers on a designated siding, to more sophisticated organizations with significant investments in fixed trackside storage and carloading facilities. Some have gone so far as to purchase the branch lines being abandoned by CN or CP, establishing shortline railways that then became an integral element in their broader grain-handling operations. Although the majority of these producer groups are situated in Saskatchewan, a number can also be found in Manitoba and Alberta.

With the close of the 2009-10 crop year, two more producer-owned shortlines had been created: the Last Mountain Railway in Saskatchewan; and the Battle River Railway in Alberta.

Loading Sites

The number of producer-car loading sites situated throughout western Canada has been reduced by almost a half since the beginning of the GMP. With the close of the 2009-10 crop year, only 378 out of 709 remained. Much of the overall decline can be traced back to the closures made by the larger Class 1 carriers, which reduced the number of sites serviced by 58.4%, to 268 from 644. Conversely, the number of sites operated by the smaller Class 2 and 3 carriers increased to 110 from 65. [Table 6B-1]

Regionally, Manitoba and Alberta posted the largest attrition rates, with the number of producer loading sites declining by 66.0% and 60.3% respectively. The rate of decline in Saskatchewan was substantially less, with the number of sites having fallen by only 26.1% during the same interval. Hidden by these statistics is the fact that while the overall number of producer loading sites had declined sharply, the reduction rate had also abated substantially in recent years. However, the closure

Figure 83: Producer-Car Loading Sites

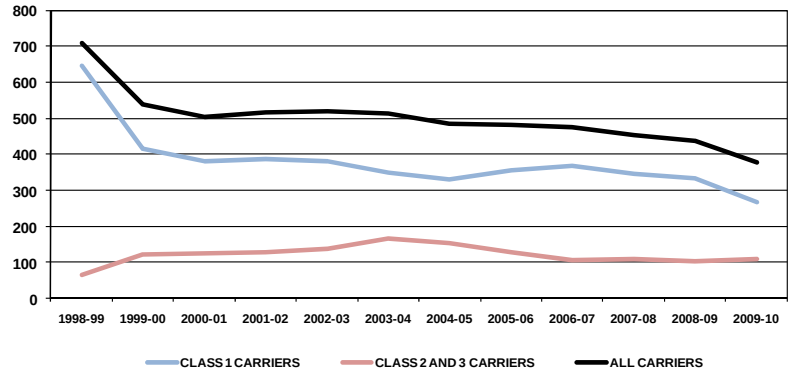
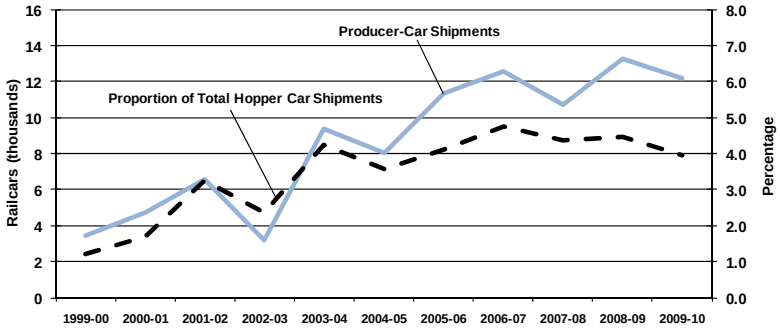


Figure 84: Producer-Car Shipments



of 53-facilities by CN, along with another six operated by other carriers, spurred a 13.5% reduction in the 2009-10 crop year. These closures denoted the largest single-year reduction yet recorded since the first year of the GMP when 172 sites were closed.

Producer Car Shipments

Despite the last eleven year's reduction in producer-car-loading sites, producer-car shipments have risen significantly. In the first decade of the GMP, these shipments almost quadrupled, increasing to 13,243 carloads in the 2008-09 crop year from 3,441 carloads in the base year. This growth in volume has not been altogether continual, but sluggish. This was reflected in the fact that producer-car shipments slid by 7.9% in the 2009-10 crop year, falling to 12,198 carloads from the GMP record set just a year earlier.

As producer-car volumes have increased, so too has its share of all covered hopper car movements. From an estimated 1.2% in the 1999-2000 crop year, producer-car shipments climbed to a GMP record of 4.7% in the 2006-07 crop year. When gauged against total CWB grain shipments, the share reached an even greater 7.4%. Although these proportions have fallen back, taking corresponding shares of 4.0% and 6.6% in the 2009-10 crop year, the forces underscoring the growth in producer-car loading make it likely that further inroads will continue to be made. [Table 6B-2]

Appendix 1: Program Background

The Government of Canada selected Quorum Corporation to serve as the Monitor of Canada's Grain Handling and Transportation System (GHTS) in June 2001. Under this mandate, Quorum Corporation provides the government with a series of regular reports relating to the system's overall performance, as well as the effects of the various policy reforms enacted by the government since 2000.

In a larger sense, these reforms were expected to alter the commercial relations that have traditionally existed between the primary participants in the GHTS: producers; the Canadian Wheat Board; grain companies; railway companies; and port terminal operators. Using a broad series of indicators, the government's Grain Monitoring Program (GMP) was designed to measure the performance of the GHTS as this evolution unfolded. Moreover, these indicators are intended to reveal whether grain is moving through the supply chain with greater efficiency and reliability.

To this end, the GMP provides for a number of specific performance indicators grouped under six broad series, namely:

- Series 1 – Production and Supply: Measurements relating to grain production in western Canada. In addition to the major cereal grains, this also includes oilseeds and special crops.

- Series 2 – Traffic and Movement: Measurements focusing on the amount of grain moved by the western Canadian GHTS. This includes shipments from country elevators; by rail to the four western ports; and by vessel from terminal elevators at the ports.

- Series 3 – Infrastructure: Measurements illustrating the makeup of the GHTS. These statistics include both the number and capacity of the country as well as terminal elevator systems, and the composition of the western Canadian railway network.

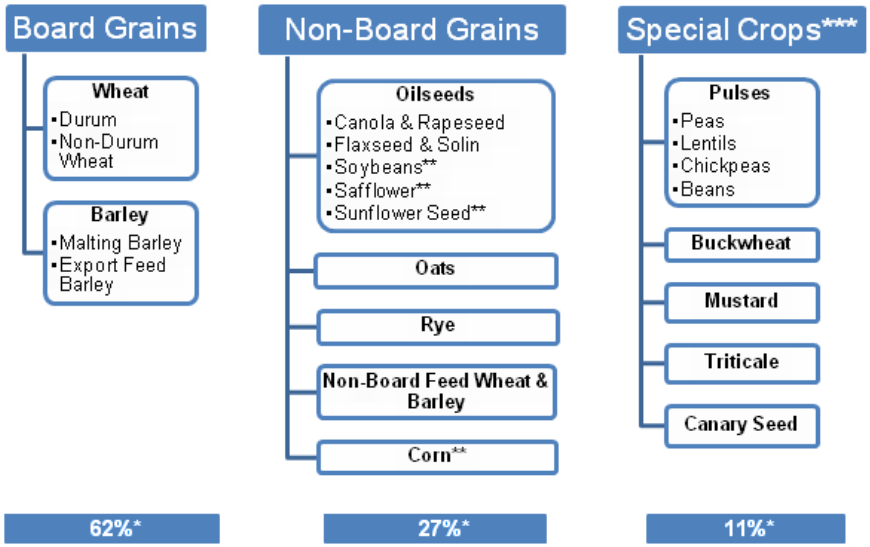
- Series 4 – Commercial Relations: Measurements relating to the rates applicable on various grain-handling and transportation services, as well as the activities of the Canadian Wheat Board in the adoption of more commercially oriented policies and practices.

- Series 5 – System Efficiency and Performance: Measurements aimed at gauging the operational efficiency with which grain moves through the logistics chain.

- Series 6 – Producer Impact: Measurements designed to capture the value to producers from changes in the GHTS, and which are focused largely on the calculation of the "producers' netback."

Appendix 2: Commodities Guide

The following provides a high-level overview of the various commodities discussed in this report. The delineations made here are drawn from the Canadian Grain Commission's Official Grain Grading Guide Glossary.



* Percent of railway shipments to the four western ports in the past five years.

** Also may be considered special crops.

*** Not all special crops as defined by the CGC are included under the umbrella of the Canadian Special Crops Association.

Board Grains: Board grains are western grains marketed under the control of the Canadian Wheat Board (CWB). These include western wheat and barley destined for the export market, as well as domestic sales of wheat and barley for human consumption. Domestic feed wheat and domestic feed barley may be sold either on the open market or delivered to the CWB.

Non-Board Grains: Non-Board grain is grain marketed through the open market system. Such grain includes domestic feed wheat and barley, rye, oilseeds and specialty crops.

Oilseeds: Oilseeds include flaxseed and solin, canola and rapeseed, soybeans, safflower and sunflower seed.

Canola: The term "canola" was trademarked in 1978 by the Western Canadian Oilseed Crushers' Association to differentiate the new superior low-erucic acid and low-glucosinolate varieties and their products from older rapeseed varieties.

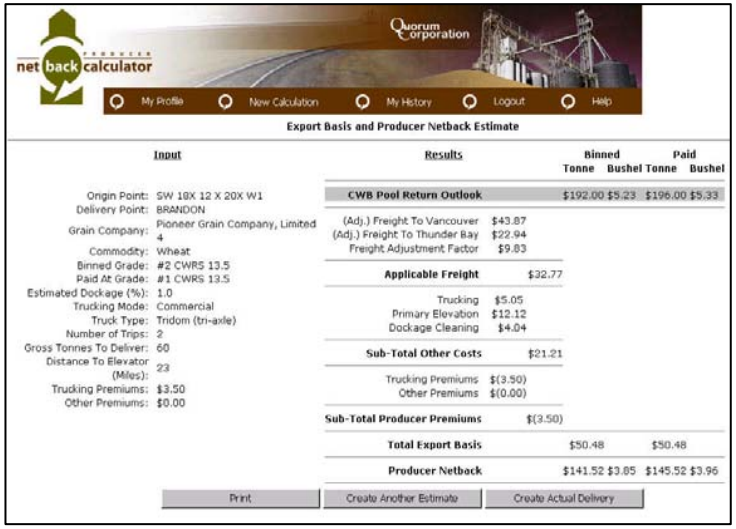
Special Crops: Special crops are considered to be beans, buckwheat, chick peas, corn, fababeans, lentils, mustard, peas, safflower, soybeans, sunflower, and triticale.

Pulses: Pulses are crops grown for their edible seeds, such as peas, lentils, chick peas or beans.

Screenings: Screenings is dockage material that has been removed by cleaning from a parcel of grain.

Appendix 3: Producer Netback Calculator

Many stakeholders have expressed concern over the increased trucking distances in moving grain from the farm gate to the elevator as a result of the rationalization of GHTS infrastructure. While all evidence suggests that truck hauls are increasing because of the reduced number of delivery points, the exact – or even approximate – amount of this increase remains unknown. The GMP assumes an average haul of 40 miles when estimating the producers' netback. Following stakeholder consultations, an internet-based approach was developed. The Producer Netback Calculator (PNC) was designed to provide a cost-effective and non-intrusive means of gathering better data on the producer's actual trucking distances.



The output screen for Quorum Corporation's Netback Calculator.

To entice producers into providing this data, the PNC would provide farmers with data on the costs associated with moving grain from farm-specific locations to export position (the export basis). These costs are the same ones reflected as deductions on cash tickets. The PNC was designed to assist farmers in determining the delivery options that would provide them with the best returns for their wheat, durum and feed barley.

To gain access to the PNC, producers are provided with their own personal log-in identification and password, which is secured through 128-bit encryption technology. This ensures that all information is communicated with the strictest confidentiality. Producers can also be assured that Quorum Corporation will not publish or share any of the information it collects.

Calculation of a producer's estimated export basis and netback is based on the entry of movement-specific information (i.e., delivery point, grain company, grain, grade, etc.). After entering this basic information, the producer can then run a calculation that will return a tabular accounting of the export basis and producer netback based on the CWB's Pool Return Outlook. The producer also has the option of "recalculating" these estimates by returning to a previous screen, and changing any of the parameters used in the calculation (i.e., destination station, grain company, etc.).

Every estimate will be recorded and accessible to the producer through a "history" listing. It is through this screen that producers are given the ability to create comparative reports that can present these estimates – or those they wish to see – in summary or detail. These reports can also be printed or presented as a computer spreadsheet. This is also the section of the system where the

producer identifies estimates that subsequently resulted in actual grain movements. As a result, it is hoped that Quorum Corporation will be able to gather meaningful logistics data from these transactions, and more specifically the actual length of haul involved in delivering grain to an elevator. If successful, this information will be incorporated into the calculation of the producer's netback.

Appendix 4: Acknowledgements

The scope of this review is far-reaching and could not have been completed without the assistance of the various stakeholders that submitted views on the detailed monitoring design and provided the data in support of the GMP. Quorum Corporation would like to thank the following organizations, and more particularly the individuals within them, for the cooperation they have extended in our efforts to implement the Grain Monitoring Program. We have come to appreciate not only their cooperation as suppliers of data under the program, but to value their assistance in helping to improve the quality of the program as a whole. We look forward to their continued input and cooperation throughout the duration of the Monitoring Program.

Agricultural Producers Association of Saskatchewan
Agriculture and Agri-Food Canada
Alberta Agriculture, Food and Rural Development
Alberta Infrastructure and Transportation
Alliance Grain Terminal Ltd.
Alliance Pulse Processors Inc.
Canadian Canola Growers Association
Canadian Grain Commission
Canadian Maritime Chamber of Commerce
Canadian National Railway
Canadian Pacific Railway
Canadian Ports Clearance Association
Canadian Ship Owners Association
Canadian Special Crops Association
Canadian Transportation Agency
Canadian Wheat Board
Cando Contracting Ltd.
Cargill Limited
CMI Terminal
Fife Lake Railway Ltd.
Gardiner Dam Terminal
Government of British Columbia
Grain Growers of Canada
Great Sandhills Terminal
Great Western Railway Ltd.
ICE Futures Canada, Inc.
Inland Terminal Association of Canada
Keystone Agricultural Producers
Kinder Morgan Canada
Lethbridge Inland Terminal Ltd.
Louis Dreyfus Canada Ltd.
Manitoba Agriculture, Food and Rural Initiatives
Manitoba Infrastructure and Transportation
Mission Terminal Inc.
Mobile Grain Ltd.
National Farmers Union
North East Terminal Ltd.
North West Terminal Ltd.
OmniTRAX Canada, Inc.
Parrish & Heimbecker Ltd.
Paterson Grain
Port of Churchill
Port of Prince Rupert
Port of Thunder Bay
Port of Vancouver
Prairie West Terminal
Prince Rupert Grain Ltd.
Red Coat Road and Rail Ltd.
Richardson Pioneer Ltd.
Saskatchewan Agriculture and Food
Saskatchewan Highways and Transportation
Saskatchewan Association of Rural Municipalities
South West Terminal
Statistics Canada
Transport Canada
Viterra Inc.
West Central Road and Rail Ltd.
Western Barley Growers Association
Western Canadian Wheat Growers Association
Western Grain By-Products Storage Ltd.
Western Grain Elevator Association
Weyburn Inland Terminal Ltd.
Wild Rose Agricultural Producers