Monitoring the Canadian Grain Handling and Transportation System

Annual Report
2005-2006 Crop Year

1 Summary Report

Government of Canada Gouvernement du Canada

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 2006, and focuses on the various events, issues and trends manifest in the movement of Western Canadian grain during the past year. This is the sixth 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 previous quarterly and annual reports, the report is structured around a number of performance indicators established under the GMP, and grouped under five broad series, namely:

Series 1 – Industry Overview
Series 2 – Commercial Relations
Series 3 – System Efficiency
Series 4 – Service Reliability
Series 5 – Producer Impact

Each series is the subject of an in-depth examination presented in Sections 1 through 5 respectively. The analysis is founded on data collected by the Monitor from the industry's various stakeholders, and uses year-over-year performance comparisons to frame the discussion. To that end, performance in the 2005-06 crop year is largely gauged against that of the 2004-05 crop year.

The GMP is also intended to frame recent performance against the backdrop of a longer time series. Beginning with the 1999-2000 crop year – referred to as the "base" year under the GMP – the Monitor has now assembled relatable quarterly performance data in a time series that spans seven crop years. This data constitutes the backbone of the GMP, and is used widely to identify significant trends and changes in GHTS performance over the course of this interval. Readers interested in a fuller examination of the time series data collected are encouraged to consult the detailed data tables found in Appendix 4 as required.

The accompanying report, as well as the data tables which support it, can both be downloaded from the Monitor's website (www.quorumcorp.net).

QUORUM CORPORATION

Edmonton, Alberta
December 2006

Table of Contents

Executive Summary

The federal government's Grain Monitoring Program (GMP) was initiated in 2001 in order to facilitate a continuous gathering of data, the preparation of detailed measures and an assessment of the performance of Canada's Grain Handling and Transportation System. This report is the sixth under the GMP and covers seven years worth of collected data, starting with the 1999-2000 crop year, and culminating with the 2005-06 crop year.

Under its mandate, Quorum Corporation provides the government with a series of quarterly and annual reports that track and analyze the impact of overall changes in the structure of the grain handling and transportation system, the effectiveness of the Canadian Wheat Board's tendering process, commercial relations, the efficiency and reliability of the system, short-term operational performance and producer impacts.

The Monitor's annual reports are intended to provide a wide-ranging examination and assessment of Canada's Grain Handling and Transportation System (GHTS). These findings are summarized below.

Production and Volumes

With 56 million tonnes of grain, the 2005-06 crop year marked a return to what is considered "normal" production levels. When combined with carry-forward stocks of 10.8 million tonnes the grain supply posted an increase of 11.2% over the previous year, a record under the GMP. This was not, however, entirely good news as the quality of the harvest remained lower than normal for a second consecutive year. While much of Saskatchewan and Alberta initially benefited from favourable growing conditions, excessive moisture levels in Manitoba prevented many farmers there from even planting. The onset of heavy rains late in the season ultimately undermined the quality of what had been a promising crop.

Rail traffic realized strong volumes at 25.3 million tonnes, a gain of 21.5% over the previous year, which reflected an unusually large movement of durum, barley and canola to export position. Terminal throughput for the four western ports increased at a similar rate, rising 25% over the previous year to 23.7 million tonnes. Vancouver remained the dominant port for exporting grain at 14.1 million tonnes.

Infrastructure

Reductions in the country elevator network remain the most significant facet of change in the GHTS under the GMP. By the end of the 2005-06 crop year, the 1,004 elevators in 685 locations that existed in 1999 had been pared down to 374 elevators in 282 locations. The majority of these closures occurred between 1999 and 2002, with the last four crop years seeing only comparatively modest reductions. Despite the absolute decrease in the number of elevators, the construction and expansion of high-throughput facilities has meant that storage capacity has fallen by only 16.4% over the past seven years. In fact, an increase of some 157,000 tonnes in the 2005-06 crop year brought the system total up to 5.9 million tonnes.

Saskatchewan Wheat Pool (SWP) and Agricore United (AU) have made the most significant reductions, in terms of both sheer numbers as well as the scope of their own networks: SWP by 268 or 87.9%; and AU by 300 or 78.1%.

Comparatively, the railway network in western Canada saw only a modest reduction in total route-miles, falling by 3.6% over the term of the GMP, from 19,468 route miles to 18,595 route-miles. And while just 169 route-miles were abandoned in the 2005-06 crop year, there were a number of significant changes in railway ownership:

- In December 2005 the Fife Lake Railway was formed from a 60.2-route-mile section of track that had been designated for abandonment by CP.

- In January 2006 RailAmerica Inc. sold CN its three Alberta-based shortlines: the Central Western Railway; the Lakeland and Waterways Railway; and the Mackenzie Northern Railway. Encompassing a total of 702.8 route-miles, these properties were effectively reacquired by CN for $26 million.

- In March 2006 the Southern Manitoba Railway applied to the province's Motor Transport Board for permission to discontinue operations on the last remaining 78.6 route-miles of its network between Morris and Mariapolis. This transaction had not been concluded by the end of the 2005-06 crop year.

CWB Tendering and Advance Car Awards

The 2005-06 crop year was the sixth for the CWB's Tendering Program and the third year in which the CWB targeted to move a fixed 40% of its overall grain movements to the four ports in western Canada using a combination of tendering and advance car awards. About half of this volume – representing a maximum of 20% of its overall grain movements – was to be tendered.

In the 2005-06 crop year a total of 282 tenders were issued calling for the shipment of approximately 5.3 million tonnes of grain. The CWB's tender calls were met by 995 bids offering to move 7.1 million tonnes of grain, about one third more than the amount sought. A total of 342 contracts were signed for the movement of just over 2.4 million tonnes, only 46% of the amount called. This represented 16.2% of the tonnage shipped by the CWB to western Canadian ports during the 2005-06 crop year, and fell short of its 20% target.

Although these results were influenced by a second consecutive year of reduced grain quality, broader market forces also had a hand in shaping these movements. In particular, reduced barley production in western European and former Soviet Union countries lessened the export competition on feed barley. With the ensuing run up in world prices, the CWB was able to exploit a temporary shortfall in world supplies to export about 1.9 million tonnes of feed barley. Given that much of the demand was tied to Asian markets, the CWB initially used the tendering program to facilitate its movement through the west coast ports. Many of the significant year-over-year variations observed, be it with respect to tendered or non-tendered grain, were attributable to the incremental volume provided by these sales.

The difficulty in securing adequate supplies of higher-quality grain, particularly in the fourth quarter, resulted in a high proportion of tender calls going unfilled in the 2005-06 crop year. A total of 2.9 million tonnes went either partially, or completely, unfilled. This constituted 54.7% of the overall volume called, and marked only a modest reduction from the 58.7% recorded a year earlier.

A total of 2.4 million tonnes of grain moved under the CWB's advance car awards program during the 2005-06 crop year, which represented almost 16% of the CWB's total shipments to western Canadian ports. In conjunction with the volume that moved under its tendering program, less than 32% of the CWB's total shipments moved under these two programs. This fell short of the 40% that the CWB had targeted, and marginally below the 34% it represented in the 2004-05 crop year.

Despite a general increase in the discounts offered by the grain companies in their tender bids, as well as a sharp reduction in the amount of premiums paid on select movements, the transportation savings accruing to the CWB – and ultimately passed back to producers through its pool accounts – declined in the 2005-06 crop year. The net savings generated from these activities, which also includes freight and terminal rebates as well as financial penalties for non-performance, was estimated to have decreased by more than 12%, to $23 million from $26 million a year earlier.

Commercial Relations

There were other commercial developments that impacted the GHTS during the 2005-06 crop year, including:

- Discussions regarding the 13,000 federally-owned hopper cars and their disposition continued into the 2005-06 crop year, with several alternatives offered to the government. One in particular called for ownership to be transferred to a non-profit, farmer-led company called the Farmer Rail Car Coalition (FRCC) for a nominal sum. Many stakeholders expressed scepticism over the FRCC's plan while

others maintained that auctioning the cars to the highest bidder remained the only fair means of dealing with the issue. Even as the FRCC entered into preliminary negotiations with the former Liberal government to take over the fleet, a number of stakeholders urged maintenance of the status quo. After the election held on 23 January 2006 the country's new Conservative government chose not to proceed with the transfer, choosing instead to establish new operating agreements with the two Class 1 Canadian railways.

- The Competition Bureau continued to challenge two transactions involving terminal elevators located on Vancouver's waterfront. The first of these relates to a proposed joint operation of the adjacent terminals of Saskatchewan Wheat Pool and James Richardson International Limited on the north shore of Burrard Inlet. The proposal had been aimed at improving the operational efficiency of both facilities by permitting each to specialize in specific commodities, and to integrate their storage capacities, vessel loading activities and supporting railway infrastructures. While requiring the formal approval of the Competition Bureau, Pacific Gateway Terminal Ltd. was formed and began operation in July 2005 with the Bureau's interim consent. In November 2005 the Bureau filed an application with the Competition Tribunal challenging the joint venture, alleging that the increased concentration in the control of port grain terminals at Vancouver would likely result in a substantial lessening of competition, and in a reduction of the competitive options open to farmers and other companies shipping grain to the port. Although the joint venture has continued to operate, the two companies have agreed to market their services separately until the Tribunal makes a final ruling.

  The second matter relates to the order issued to Agricore United (AU) by the Bureau in 2001 to sell its interest in the former United Grain Growers (UGG) terminal on Vancouver's south shore, which was a prerequisite for its approval of the merger between Agricore Cooperative Ltd. and UGG. A tentative arrangement between AU and Terminal One Vancouver Ltd., (a consortium representing five farmer-owned inland grain terminals operating in Saskatchewan) got stalled in 2005 as the consortium was unable to amass the volume commitments that would be required to make the venture economically viable before the deadline imposed by the Bureau expired. Faced with the forced disposal of the facility, AU filed an application with the Competition Tribunal seeking, among other things, an order rescinding the original agreement between the Bureau and AU for the sale of its former UGG facility. After considerable legal discussion between the parties, the Bureau announced that the elevator had been turned over to a Vancouver-based trustee, Grant Thornton LLP, for disposal under a process that was expected to take four months. With the close of the 2005-06 crop year this asset had yet to be sold.

- In the first half of the 2003-04 crop year, ocean freight rates moved sharply higher, reaching a level nearly five-and-one-half times greater than it had been 18 months prior. Since that time, they have continued to fluctuate, following the trend that most believe is tied to the prevailing, and perceived future demand for vessels to service China's growing trade in raw materials and finished goods. An initial increase in ocean freight rates during the first quarter of the 2005-06 crop year, followed by a decline in the second and a moderate rise in the second half, is entirely consistent with this pattern. While the Baltic Dry Index of ocean freight rates has registered a net increase of about 90% in the last twelve months, it remains substantially below the values recorded in either of the two preceding crop years. Although this suggests that ocean freight rates have indeed been moderating, they clearly remain highly volatile.

- In November 2005 the CWB elected to exercise its option to purchase 1,660 hoppers that had previously been leased. In doing so, the CWB increased its pool of owned equipment from 1,850 to 3,510 cars. Although the purchase does not physically add to the number of hopper cars in the CWB fleet, its plan to revise the operating agreement under which it allowed the railways to use them marked a significant departure from past practices. In general terms, the CWB stated that it intended to eliminate the standing practice of supplying these cars to the railways free of charge so long as they were used to move western Canadian grain, and to lease them directly to the railways. While the leasing of the CWB's cars to the railways will generate additional financial benefits to producers as a result of its flow back to them through the CWB's pool accounts, the railways will be entitled to compensation for these additional costs under the revenue cap. In fact, adjustments to the Volume-Related Composite Price Index for the upcoming 2006-07 crop year reflect this commercial change.

- CN and CP have established a number of co-production initiatives designed to provide cost effective means to boost capacity and productivity. The past crop year saw these cooperative efforts spread to the Greater Vancouver Area where a new routing and switching agreement was established. This arrangement will see destination trains operated by both carriers allowed to bypass yards and avoid traditional railway interchanges. Under its terms, CN was to take primary responsibility for the handling of all trains destined to terminals located on the North Shore of Burrard Inlet and Delta Port, while CP would handle all trains destined to the South Shore.

- Possibly one of the most talked about commercial issues in the grain industry during the 2005-06 crop year was bio-fuels, and the impact they will likely have on the supply and price of certain grains. While much is not yet known, there is no doubt that the production of ethanol and bio-diesel will have an influence over supplies of corn, wheat and canola in Canada. There is equally no question that there will be an impact on the logistics and grain supply chain as well, although its degree has yet to be determined.

System Efficiency and Reliability

The Monitoring program's primary measure for viewing the GHTS is through a supply chain and process management model – examining the speed with which grain moves through the system. For the 2005-06 crop year, the amount of time taken by grain as it moved through the supply chain fell to 56.6 days, the lowest value yet recorded under the GMP.

With a grain supply of 66.8 million tonnes, the 2005-06 crop year's potential grain movement constituted the largest ever made available under the GMP. Moreover, the 23.7 million tonnes of grain that passed through western Canadian ports in the 2005-06 crop year proved to be the second largest volume under the GMP, falling less than 1% short of the record 23.9 million tonnes handled in the 2000-01 crop year. And although the volume of grain moved through the GHTS was greater than it had been a year earlier, the movement was heavily influenced by other factors, particularly a second consecutive year of diminished grain quality.

This influenced the mix of both grains and grades that moved through specific ports. By way of example, the west coast ports handled an unusually large volume of feed barley, a significant portion of which moved under the CWB's tendering program.

Naturally, the increase in volume drove the demand for carrying capacity up, making car supply a continuing concern for many GHTS stakeholders. Much of this concern stems from the fact that the railways' loaded transit times have not changed appreciably over the term of the GMP, while the pressure to move grain more quickly has generally increased as a result of elevator rationalization.

Other significant factors that impacted the efficiency and reliability of the system included:

- Rising trucking costs, which were estimated to have increased by another 8.6% following the previous crop year's 11.3% increase. The mounting cost of fuel proved to be the key factor in these recent increases.

- A 10.7% increase in the average elevator capacity-turnover ratio, which rose to a record 6.2 turns. In addition to the effects of an increase in overall volume, this improved performance was bolstered by a 1.2-million-tonne reduction in elevator storage capacity over the past seven crop years.

- The total average car cycle fell by 7.5% to 17.3 days, led primarily by a significant decrease in the average empty transit time which fell by 12.8% to 8.8 days.
    - For the past two years there had been a disparity in the average cycle times between CN and CP, with CP having the lower of the two. This past crop year saw a significant narrowing of that gap.
    - Prince Rupert car cycles were decidedly the lowest of all the ports at 15.6 days.

- Railway incentive payments, the tool used by railways to induce grain companies to move grain in larger blocks and unit trains increased by almost 33% to an estimated $89.9 million. Driven by increased grain volumes, the average discount increased by 6.5% to $4.81 per tonne.

- After having hurriedly reduced their rates by 4 to 6% late in the 2004-05 crop year in order to safeguard their compliance with the revenue cap, both railways published noticeably higher rates for the 2005-06 crop year. Increases in the range of 7% to 8% were the norm. However, it should be noted that when viewed over the entire span of the GMP, single-car freight rates in the Thunder Bay and Vancouver corridors have increased by about 6.0% and 6.6% respectively, with CN's increases having only marginally exceeded those of CP.

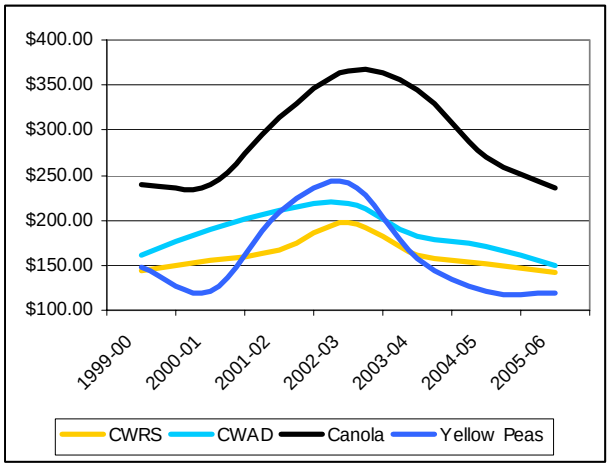
- The Canadian Transportation Agency established the Revenue Cap at $790.8 million and determined that the statutory grain revenues for CN and CP totalled $795.0 million, $4.2 million greater than allowed. CN exceeded its Revenue Cap by $2.7 million and CP by a somewhat lesser $1.5 million. In line with regulatory guidelines, CN and CP were ordered to pay out their excess revenues, along with a 5% penalty, to the Western Grains Research Foundation. Average railway revenue increased by 8.2% to $28.00 per tonne.

- The port terminals of the western GHTS posted a 25% increase in volume over the previous year along with a capacity turnover ratio of 8.7. A total of 780 vessels called for grain at western Canadian ports during the 2005-06 crop year, which represented a 12.2% increase over the 695 that arrived for loading a year earlier. Although this was consistent with the increase in throughput, the comparatively modest gain in vessel calls underscores the expanding role of larger vessels in moving export grain. This has been particularly evident in the movement of grain from Prince Rupert, where 85.5% of the 83 ships that arrived took on loads in excess of 30,000 tonnes.

Producer Impact

The GMP measures the impact of changes in the GHTS on both the producer's logistics costs and net contribution to income. Costs are assembled and presented using the GMP's "export basis" methodology and the net contribution to income through the calculation of the producer's "netback." The GMP uses 1CWRS wheat, 1 CWA durum, 1 Canada canola and large yellow peas to track the changes in these values over time.

The 2005-06 crop year saw a further downward slide in the netback to the producers. In fact, the netback for all four measured commodities fell to their lowest points under the GMP. These declines were driven largely by a reduction in world grain prices. World prices were driven upwards between 1999 and 2003 as a result of shrinking global wheat stocks and the prospect of tighter supplies from drought situations in several regions around the globe. As these situations corrected themselves, prices have fallen to a level reminiscent of the mid 1990s.



Producer Netback of the four Grains ($/ tonne)

Also, the export basis – the GMP's indicator of a producer's logistics cost – has seen a significant rise for wheat and durum over the past two crop years. For the first four years of the GMP, the export basis had moderated at an average of less than 1% increase annually, far below normal and comparative inflationary impacts such as Industrial Products Price Index (1.4%) and the Western Canadian Crop Production Farm Input Price Index (36.5%). This was driven in large part by the reduction of freight costs that came about through the introduction of the railway revenue cap in 2001 along with the financial benefits received in the form of trucking premiums and the CWB's transportation savings, which is passed back to producers through the pool accounts. With the

impact of the revenue cap eroding as a consequence of inflation and the transportation savings falling, producers have seen their overall logistics costs move upwards. In the case of wheat, this increase amounted to more than 7% in the last crop year and to more than 13% since the beginning of the GMP.

The export basis for canola and large yellow peas has fallen over this same period, by 21% in the case of canola and 3% in the case of large yellow peas. It should be noted that while CWB and non-CWB grains have the same basic structural cost components, the individual elements of non-CWB grains are less transparent. And while some of those components have the same rate basis (i.e. freight and elevation), trucking premiums are commodity specific, and others do not apply at all (i.e. tendering or grade deficiency penalties as found in the CWB transportation savings).

While total financial benefits have fallen over the past three years as a consequence of reduced CWB transportation savings, trucking premiums for CWB grains hit new highs in the 2005-06 crop year. An increase of almost 24%, to $4.56 per tonne, for wheat resulted in a virtual doubling of the trucking premium during the GMP, while that of durum rose by more than 50% during the same period, to $4.76 per tonne. In the case of non-CWB grains, which makes less use of premiums, the trend has been clearly downwards. The premium on canola fell from a high of $2.48 per tonne in the 1999-2000 crop year to just $0.43 per tonne this past crop year. In the case of yellow peas, the trucking premium has consistently stayed under $1.00 per tonne.

Notwithstanding an overall reduction in the number of producer loading sites (from 709 in 1999-00 to 483 in 2005-06), producer-car shipments have been on the rise. In the first five years of the GMP, these shipments virtually tripled, increasing from 3,441 carloads to 9,399 carloads by the end of the 2003-04 crop year. And despite the decline in grain quality that prompted a reduction in such shipments during the 2004-05 crop year, producer-car loading have continued to increase, with total shipments in the 2005-06 crop year surging by 40.7% to a record under the GMP of 11,345 carloads. This represents almost 7% of the total western movement of CWB grains.

Considerations

From drought conditions, to labour disruptions and declining grain prices, the western Canadian grain industry has confronted a number of challenges over the course of the last seven crop years. At the same time, the face of the industry has itself changed, sometimes in significant ways:

- The GHTS now comprises less than one third of the elevators that existed in 1999, with many of these being larger, high-throughput facilities. While this may have had negative impacts on the communities where elevators were closed, the system has witnessed an improvement in the efficiency of the remaining network.

- At the same time, there has been an ongoing consolidation of the country elevator network. In addition to the corporate mergers that allowed for the creation of such large entities as Agricore United in 2001, the elevator assets of a variety of other grain companies have also changed hands. By way of example, ConAgra decided to sell most of its Canadian grain handling facilities to the Pioneer Grain Company towards the end of the 2004-05 crop year. The financial difficulties faced by a number of smaller, independent grain companies also led to their later acquisition by larger entities. At the start of the GMP there were 11 independent high-throughput terminals in Saskatchewan. Since then, two of these have been purchased by the larger grain companies: Terminal 22 by Cargill; and Mainline by Parrish and Heimbecker.

- Initiatives have been taken to consolidate operations at port position as well. The Agricore United's "M" Terminal elevator in Thunder Bay has been closed and de-licensed. Saskatchewan Wheat Pool and James Richardson International have jointly established Pacific Gateway Terminal Ltd. to operate their adjacent facilities on Vancouver's north shore, although this transaction continues to await the approval of the federal Competition Bureau.

- Unlicensed producer-car loading facilities have gained a foothold in the movement of western Canadian grain. This is especially true of southwestern Saskatchewan, which has a large concentration of such facilities. Shortlines like the Great Western Railway have benefited significantly

from the traffic these facilities now generate. In equal measure, the sophisticated loading facilities erected by West Central Road and Rail at Eston and Laporte, Saskatchewan, rival those of any conventional grain company.

- In 1999, the shortline railway industry in western Canada had still not reached its peak. That would come a few years later following the creation of several new shortline entities from divested CN and CP branch lines. Since reaching a total of 3,364 route-miles at the end of the 2002-03 crop year, the network controlled by these shortline railways has fallen to just 2,446 route-miles. For the most part, this reduction was precipitated by declining grain volumes, which fell from a height of 2.3 million tonnes in the 2000-01 crop year to 1.7 million tonnes in the 2005-06 crop year. Some lines have been abandoned, others – such as those operated by RailAmerica – have reverted back to their previous owner. The deteriorating financial position of those that remain suggests that further reductions are likely.

- While total grain volumes have returned to what are considered "normal" levels, there has been a shift in the types of grains being grown and moved through the GHTS. Although much of the variation observed stems from the unique conditions attached to individual growing seasons, there appears to be a renewed focus on non-CWB crops, particularly canola. In the 2005-06 crop year canola shipments reached a GMP record of 5.3 million tonnes, and accounted for almost 21% of total railway shipments.

- Finally, the CWB's tendering program has proven financially beneficial to producers at large. Brought forward as part of the federal government's policy initiatives in August 2000, its aim was to give the GHTS a more commercial orientation. Since the beginning of the 2003-04 crop year, a fixed 40% of the CWB's grain movements to the four ports in western Canada have been accomplished through a program that combines tendering with advance car awards, in approximately equal amounts. Although the perspectives of the stakeholder community remain largely polarized over these reforms, they continue to be employed and account for a significant portion of the transportation savings that the CWB passes back to producers through its pool accounts.

The 2005-06 crop year was not without its share of additional controversies. Stakeholder concerns over railway service and car allocation have continued to resonate. Despite the complexity of these issues, shippers of grain as well as other commodities have seemingly found common ground in their pursuit of a solution. Railways maintain that these problems can be addressed through an effective commercial dispute resolution (CDR) mechanism, however, shippers are firm in the view that legislative change is necessary before the CDR approach can be considered.

Whether these issues can be resolved in the near future remains unclear, but they appear to be foremost in the minds of many grain companies as they enter the 2006-07 crop year.

Section 1: industry Overview

The purpose of the Industry Overview series of indicators is to track changes in grain production, the structure of the industry itself and the infrastructure comprising the GHTS. Changes in these areas can have a significant influence on the efficiency, effectiveness and competitiveness of the GHTS as a whole. Moreover, they may also be catalysts that shift traditional traffic patterns, the demand for particular services, and the utilization of assets.

Highlights – 2005-06 Crop Year

Grain Production and Supply

- *Grain production increased by 4.9% over the previous year to 56.0 million tonne.*
  - *Wet weather at harvest produced a second year of lower-quality crops.*
    - *Higher-quality grades remained in tight supply.*
  - *Production in Saskatchewan climbed by 17.1%; 5.9% in Alberta.*
    - *Manitoba production declined by 35.2% due to excessive spring moisture and comparatively poorer growing conditions.*
  - *Production gains limited to a few key commodities.*
    - *Wheat production decreased by 0.8% to 18.9 million tonnes.*
    - *Durum production increased by 19.2% to 5.9 million tonnes.*
    - *Canola production increased by 25.6% to 9.6 million tonnes.*
- *Carry forward stock increased by 62.0% to 10.8 million tonnes.*
  - *Gains noted for all commodities save flaxseed.*
- *Total grain supply increased by 11.2% to 66.8 million tonnes.*
  - *Largest grain supply recorded under the GMP.*

Railway Traffic

- *Railway grain volume increased 21.5% to 25.3 million tonnes.*
  - *Fell marginally below GMP's record of 26.4 million tonnes.*
- *Changes in traffic mix chiefly benefited west coast ports.*
  - *Vancouver volume increased 20.6% to 14.1 million tonnes.*
  - *Thunder Bay volume increased 8.2% to 6.5 million tonnes.*
  - *Prince Rupert volume increased 57.0% to a GMP record of 4.2 million tonnes.*
    - *Share of traffic increased to 16.6% from 12.9% a year earlier.*
  - *Churchill volume increased 10.3% to 0.4 million tonnes.*

Country Elevator Infrastructure

- *Fourth consecutive year of limited changes to elevator network.*
  - *Grain delivery points reduced by 2.5% to 275.*
  - *Number of elevators fell by 2.9% to 374.*
- *Elevator storage capacity increased by 0.4% to 5.9 million tonnes.*
  - *Second consecutive year of modest increases.*
- *Elevators capable of loading in blocks of 25 or more cars fell 2.3% to 250.*
  - *Share of GHTS elevators reached 66.8%.*
  - *Share of GHTS storage capacity rose to 89.2%.*

Railway Infrastructure

- *Western Canadian railway network reduced by 0.9% to 18,595 route-miles.*
  - *CP abandoned 168.7 route-miles of grain-dependent branch lines.*
    - *141.2 route-miles in Alberta and 27.5 route-miles in Saskatchewan.*
- *CN lifted self-imposed moratorium; announces planned abandonment of an additional 328.1 route-miles of Saskatchewan infrastructure.*
- *Fife Lake Railway established in December 2005 following sale of CP's Fife Lake subdivision to local interests.*
- *RailAmerica Inc. sold its Alberta-based shortlines to CN for $26 million.*
  - *Withdrew completely from western Canada by the end of June 2006.*
- *Southern Manitoba Railway applied for discontinuance of remaining network.*

Terminal Elevator Infrastructure

- *Licensed GHTS terminal elevators remained unchanged at 16*
  - *Storage capacity held at 2.6 million tonnes.*
- *Terminal elevator unloads increased by 24.8% to 271,714 railcars.*
  - *CP's share reduced to 50.0% from 51.5% a year earlier.*

Indicator Series 1 – Industry Overview

Table	Indicator Description	Notes	BASE 1999-00	CURRRENT REPORTING PERIOD (1) 2004-05	2005-06	% VAR	
	Production and Supply [Subseries 1A]						
1A-1	Crop Production (000 tonnes)	(2)	55,141.7	53,401.3	56,002.7	4.9%	▲
1A-2	Carry Forward Stock (000 tonnes)	(2)	7,418.2	6,647.5	10,768.0	62.0%	▲
	Grain Supply (000 tonnes)	(2)	62,559.9	60,048.8	66,770.7	11.2%	▲
	Rail Traffic [Subseries 1B]						
1B-1	Railway Grain Volumes (000 tonnes) – Origin Province						
1B-2	Railway Grain Volumes (000 tonnes) – Primary Commodities		26,441.0	20,832.5	25,304.3	21.5%	▲
1B-3	Railway Grain Volumes (000 tonnes) – Detailed Breakdown						
	Country Elevator Infrastructure [Subseries 1C]						
1C-1	Grain Delivery Points (number)		626	282	275	-2.5%	▼
1C-1	Grain Elevator Storage Capacity (000 tonnes)		7,443.9	5,845.6	5,870.8	0.4%	–
1C-1	Grain Elevators (number) – Province						
1C-2	Grain Elevators (number) – Railway Class		917	385	374	-2.9%	▼
1C-3	Grain Elevators (number) – Grain Company						
1C-4	Grain Elevators Capable of Incentive Loading (number) – Province						
1C-5	Grain Elevators Capable of Incentive Loading (number) – Railway Class		317	256	250	-2.3%	▼
1C-6	Grain Elevators Capable of Incentive Loading (number) – Railway Line Class						
1C-7	Grain Elevator Openings (number) – Province						
1C-8	Grain Elevator Openings (number) – Railway Class		43	18	10	-44.4%	▼
1C-9	Grain Elevator Openings (number) – Railway Line Class						
1C-10	Grain Elevator Closures (number) – Province						
1C-11	Grain Elevator Closures (number) – Railway Class		130	37	21	-43.2%	▼
1C-12	Grain Elevator Closures (number) – Railway Line Class						
1C-13	Grain Delivery Points (number) – Accounting for 80% of Deliveries		217	94	n/a	n/a	–
	Railway Infrastructure [Subseries 1D]						
1D-1	Railway Infrastructure (route-miles) – Grain-Dependent Network		4,876.6	4,390.3	4,221.6	-3.8%	▼
1D-1	Railway Infrastructure (route-miles) – Non-Grain-Dependent Network		14,513.5	14,373.4	14,373.4	0.0%	–
1D-1	Railway Infrastructure (route-miles) – Total Network		19,390.1	18,763.7	18,595.0	-0.9%	–
1D-2	Railway Grain Volumes (000 tonnes) – Grain-Dependent Network		8,683.6	5,936.7	7,601.2	28.0%	▲
1D-2	Railway Grain Volumes (000 tonnes) – Non-Grain-Dependent Network		16,976.0	14,323.1	17,119.2	19.5%	▲
1D-2	Railway Grain Volumes (000 tonnes) – Total Network		25,659.6	20,259.8	24,720.4	22.0%	▲
1D-3	Shortline Railway Infrastructure (route-miles)		3,043.0	3,088.2	2,445.6	-20.8%	▼
1D-3	Shortline Railway Grain Volumes (000 tonnes)		2,090.5	1,676.3	1,708.8	1.9%	▲
1D-5	Railway Grain Volumes (000 tonnes) – Class 1 Carriers		23,569.1	18,583.6	23,011.6	23.8%	▲
1D-5	Railway Grain Volumes (000 tonnes) – Class 2 and 3 Carriers		2,090.5	1,676.3	1,708.8	1.9%	▲
1D-6	Grain Elevators (number) – Grain-Dependent Network		371	132	126	-4.5%	▼
1D-6	Grain Elevators (number) – Non-Grain-Dependent Network		513	239	239	-2.1%	▼
1D-6	Grain Elevator Storage Capacity (000 tonnes) – Grain-Dependent Network		2,475.4	1,659.2	1,613.8	-2.7%	▼
1D-6	Grain Elevator Storage Capacity (000 tonnes) – Non-Grain-Dependent Network		4,847.6	4,133.4	4,203.9	1.7%	▲
	Terminal Elevator Infrastructure [Subseries 1E]						
1E-1	Terminal Elevators (number)		15	16	16	0.0%	–
1E-1	Terminal Elevator Storage Capacity (000 tonnes)		2,678.6	2,642.6	2,642.6	0.0%	–
1E-2	Terminal Elevator Unloads (number) – Covered Hopper Cars		278,255	217,666	271,714	24.8%	▲

(1) – In order to provide for more direct comparisons, the values for the 1999-2000 through 2005-06 crop years are "as at" or cumulative to 31 July unless otherwise indicated.

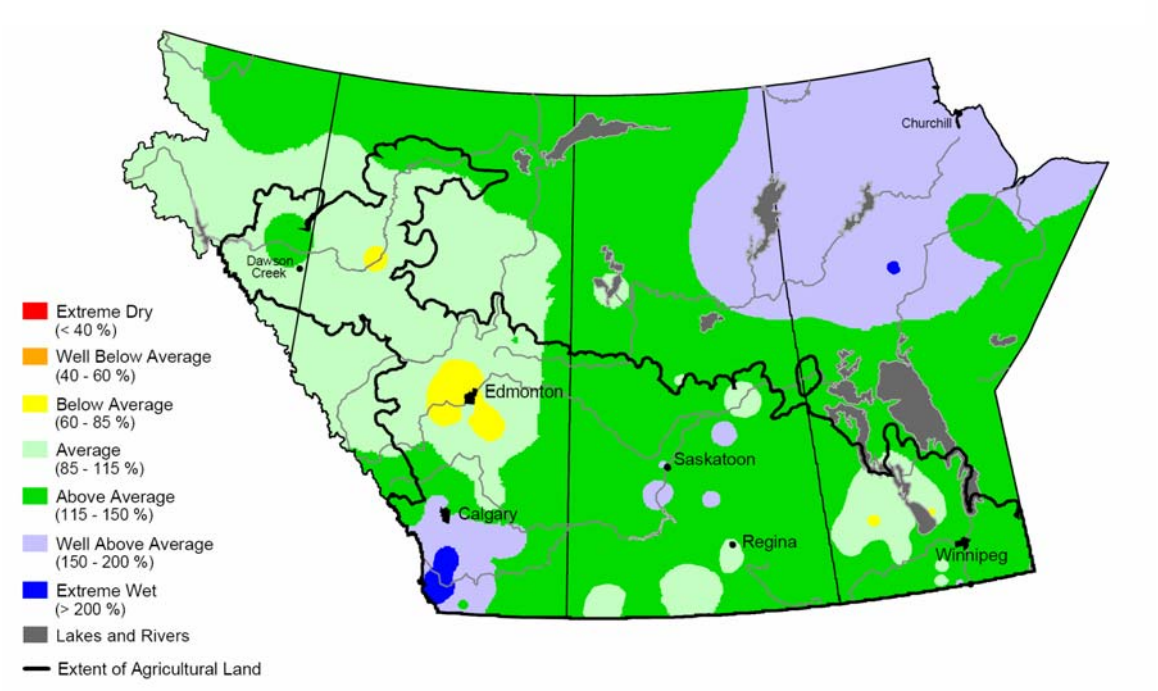
(2) – Values quoted represent the supply available for movement during the crop year.

1.1 Production and Supply *[Measurement Subseries 1A]*

Although grain production for the 2005-06 crop year was consistent with what many in the industry would call a "normal" crop, the comparative quality of the harvest remained lower than normal for a second consecutive year. While much of Saskatchewan and Alberta benefited from initially favourable growing conditions, excessive moisture levels in Manitoba prevented many farmers from even planting. However, it was the onset of heavy rains late in the season that ultimately undermined the quality of what had been a promising crop. Furthermore, producers had to contend with the effects of still lower commodity prices in the face of rising input costs.

An upturn in western Canadian grain production, coupled with larger carry-forward stocks, resulted in a significant increase in GHTS activity. This was broadly reflected in substantial year-over-year changes to the indicators employed in the Grain Monitoring Program (GMP).

Figure 1: Percentage of Average Precipitation – 1 April to 31 August 2005



Source: Prairie Farm Rehabilitation Administration

For most areas of western Canada, the amount of precipitation received in the 2005 growing season proved to be above the historical norm.[1] Although there were areas in both Alberta and Saskatchewan that experienced particularly wet conditions, it was actually in eastern Manitoba where too much spring precipitation caused the most problems, and prevented over one million acres from being seeded.

Overall grain production in western Canada climbed to 56.0 million tonnes for the 2005-06 crop year. In addition to representing a 4.9% increase over the 53.4 million tonnes harvested a year earlier, this denoted the largest production volume in western Canada since the GMP was initiated, and exceeded the program's previous record of 55.1 million tonnes by 1.6%.[2] Despite the comparative increase, grain production was

[1] The comparisons made here are based on historical data gathered by the Prairie Farm Rehabilitation Administration for the 30-year period between 1961 and 1990.

[2] The previous record was established in the 1999-2000 crop year, the GMP's base year.

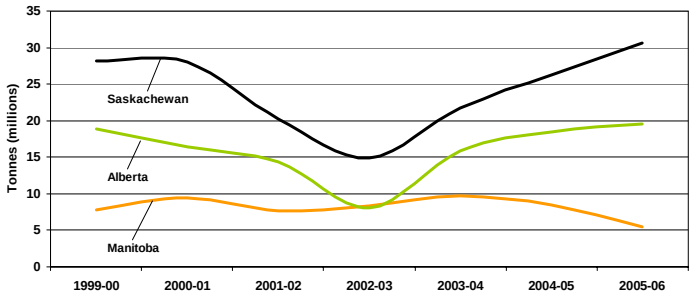
adversely affected for a second consecutive year by excessively wet harvesting weather. As a result, the quality of the grain produced in the 2005-06 crop year was significantly diminished, although not to the same degree as that of the previous crop year. [See Table 1A-1 in Appendix 4.]

Provincial Grain Production

Although comparatively better growing conditions in 2005 resulted in higher grain production, there were notable differences between provinces. Saskatchewan and Alberta each reported a third consecutive increase in annual output. Production in Saskatchewan climbed by 17.1%, increasing to 30.7 million tonnes from 26.2 million tonnes a year earlier. Moreover, this marked a new production high for the province under the GMP, exceeding the 28.1-million-tonne record set in the 1999-2000 crop year by 9.0%. What is more, Saskatchewan's share of western Canadian production increased for a second consecutive year, rising to a record-setting 54.8% from 49.0% the year before.[3]

Alberta followed with a year-over-year production increase of 5.9%, to 19.6 million tonnes from 18.5 million tonnes. This also proved to be a new record for the province, easily exceeding the 18.8-million-tonne threshold set in the GMP's first year by 4.0%. Although British Columbia reported a 9.4% increase in production, its harvest ranked among the lowest recorded under the GMP, amounting to somewhat less than 0.3 million tonnes.[4]

Figure 2: Major Grain Production – Provincial Distribution



Excessive moisture coupled with generally poorer growing conditions in Manitoba actually resulted in a 35.2% decline in production for the 2005-06 crop year. Overall grain production totalled 5.5 million tonnes as compared to 8.5 million tonnes a year earlier. This marked a second consecutive decline in annual production for the province, which fell to the lowest level thus far recorded under the GMP.

Owing to varied provincial growing conditions, year-over-year changes in crop production presented widely mixed results. CWB grains accounted for less than 0.2 million tonnes of the 2.6-million-tonne expansion in overall production. Wheat production, which accounted for one-third of the total harvested tonnage, decreased to 18.9 million tonnes from 19.0 million tonnes a year earlier. This was compounded by a reduction of 0.6 million tonnes in barley, which fell to 11.7 million tonnes. Only a 1.0-million-tonne expansion in the durum harvest, which reached a GMP record of 5.9 million tonnes, managed to counteract these losses.

With a record-setting 9.6 million tonnes of production, canola accounted for slightly less than half of the 19.5 million tonnes of non-CWB grains harvested in the 2005-06 crop year. Moreover, canola's 2.0-million-tonne increase in production accounted for three-quarters of the 2.4-million-tonne expansion. Although reductions in the order of 7% to 15% were noted for dry peas, oats and rye, much of the remaining gain came from a substantive rise in flaxseed and other non-CWB grains, which rose by 109.3% and 22.5% respectively.[5]

[3] Until the 2005-06 crop year, Saskatchewan's share of total grain production had never exceeded the 1999-2000 crop year's record of 51.0%.

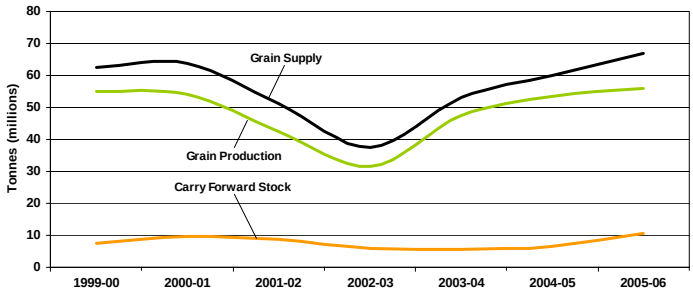
[4] With an annual average of about 0.3 million tonnes, British Columbia is the smallest grain-producing province in western Canada. At 262,700 tonnes, production for the 2005-06 crop year proved 64,900 tonnes less than the province's record high of 327,600 tonnes, which was set in the 2003-04 crop year.

[5] 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.

Carry-Forward Stock and Western Canadian Grain Supply

Although grain production has the most direct impact on the overall supply of grain, the volume held over in inventory from the previous crop year also has a bearing. In fact, these carry-forward stocks typically account for about 14% of the grain supply.[6] These stocks tend to move in conjunction with changes in grain production, albeit with less pronounced variations. They are also heavily weighted in favour of the CWB grains, which typically represent over three-quarters of the total.

Figure 3: Western Canadian Grain Supply



The general deterioration in production witnessed throughout much of the GMP was mirrored in steadily diminishing carry-forward stocks, which fell from 9.8 million tonnes at the end of the 1999-2000 crop year, to a low of 5.5 million tonnes at the close of the 2002-03 crop year.[7] This pattern was reversed when a comparative upturn in the 2003-04 crop year's grain production prompted an increase in year-end stocks. The significant expansion in production for the 2004-05 crop year had a corresponding effect on the stocks carried forward into the 2005-06 crop year, which rose 62.0% to a record 10.8 million tonnes. Reduced grain quality also played a role in this unusually large build-up, with many farmers choosing to stockpile a larger proportion of their lower-quality grain in the hopes of being able to blend it with a better harvest in the fall of 2005. When combined with 56.0 million tonnes of new production, the overall grain supply for the 2005-06 crop year reached a record-setting 66.8 million tonnes under the GMP, and a gain of 11.2% over the previous crop year's 60.0 million tonnes. [See Table 1A-2 in Appendix 4.]

Although increases in carry-forward stocks were generally reported for individual provinces and grains, these varied widely. On a provincial basis, these variations ranged from a reduction of 8.3% in British Columbia, to an increase of 65.1% in Saskatchewan. Saskatchewan and Alberta accounted for almost 90% of the 4.1-million-tonne net increase in carry-forward stocks, with gains of 2.3 million tonnes and 1.3 million tonnes respectively. Additions to CWB grain stocks accounted for slightly more than two-thirds of the overall increase, with the barley carry climbing by 1.3 million tonnes, wheat by 1.1 million tonnes, and durum by 0.4 million tonnes. Among the non-CWB grains, canola stocks accounted for the largest single gain, increasing by more than 0.8 million tonnes. The remaining 0.5-million-tonne gain drew on increases in the carry-forward stocks of oats and peas, and reductions in those of rye and flaxseed.

1.2 Rail Traffic *[Measurement Subseries 1B]*

The amount of regulated grain moved by rail to western Canadian ports increased substantially in the 2005-06 crop year. Total volume climbed by 21.5%, to 25.3 million tonnes from 20.8 million tonnes the year before.[8]

[6] 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 herein are derived from data provided by Statistics Canada and the Canadian Grain Commission.

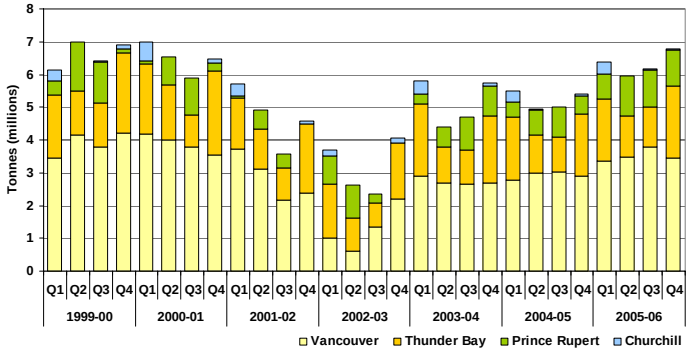
[7] This pattern can best be seen when gauging a 42.8% decline in grain production against a 43.9% reduction in carry-forward stocks during the first four years of the GMP.

[8] The railway grain traffic referred to includes only that portion moving to a designated western Canadian port in accordance with the provisions of the Canada Transportation Act. As such, it does not include grain traffic that may have originated in western Canada but that was destined to other points in North America, be it those of eastern Canada, the United States of America, or Mexico.

This increase, however, was well above the previously noted 11.2% gain in the grain supply. [See Tables 1B-1 through 1B-3 in Appendix 4.]

The scope of the differential between these two rates of increase underscores the fact that the railways carried a greater proportion of the grain supply to western Canadian ports, 37.9% versus 34.7% a year earlier.[9] To an extent, this expansion reflects the impact of an unusually large movement of durum, barley and canola. In fact, rail shipments for these commodities in the 2005-06 crop year reached new records under the GMP.

Figure 4: Railway Grain Volumes



Origins by Province

Railway shipments for the 2005-06 crop year tended to reflect changes in provincial grain supplies. The most substantive gain was attributable to Saskatchewan, where rail shipments increased by 30.1% to 13.4 million tonnes. This was followed by Alberta with a 14.7% increase to 9.3 million tonnes. In both instances, these volumes came close to setting new provincial records under the GMP.[10] Despite a decline in Manitoba's grain production, railway shipments from the province rose by 4.3%, to 2.4 million tonnes from 2.3 million tonnes a year earlier. Rail shipments from origins in British Columbia increased to just over 0.2 million tonnes.[11]

Destination Ports

The port of Vancouver remained the principal destination for the export movement of western Canadian grain in the 2005-06 crop year. Traffic to Vancouver increased by 20.6%, to 14.1 million tonnes from 11.7 million tonnes a year earlier. However, the port's share of the total volume fell marginally to 55.7% from 56.1%.[12] In comparison, Prince Rupert reported a significant increase in both tonnage and share. The port's total volume increased by 57.0% to 4.2 million tonnes, with its overall share climbing to 16.6% from 12.9%.

Like Vancouver, even though the volume of traffic directed to the remaining ports all increased from that handled a year earlier, their relative shares declined. Thunder Bay, which ranked as the second largest destination, saw its railway volume increase by 8.2%, to 6.5 million tonnes from 6.0 million tonnes while its share fell to 25.9% from 29.0%. Although the 0.4 million tonnes of grain shipped to the port of Churchill represented a 10.3% increase in volume, the port's share slipped to 1.8% from 2.0% the year before.[13]

[9] In the 1999-2000 crop year, the railways moved an estimated 42.3% of the grain supply to the four ports in western Canada.

[10] The records for rail shipments from Saskatchewan and Alberta were established in the 1999-2000 crop year, and amounted to 13.9 million tonnes and 9.7 million tonnes respectively.

[11] Under the GMP, statistics relating to the railway movement of grain in western Canada centre on the volume handled by federally regulated carriers. With CN's acquisition of BC Rail in the closing days of the 2003-04 crop year, the volumes that would have moved under provincial jurisdiction previously became subject to federal regulation, and were incorporated into CN's overall traffic statistics. Total traffic volume from British Columbia in the 2005-06 crop year reached 229,700 tonnes, up sharply from the 139,500 tonnes recorded a year earlier.

[12] The British Columbia Terminal Elevator Operators Association locked out employees of the Vancouver Grain Workers Union in August 2002. This action effectively prevented grain from moving through the port of Vancouver for much of the first half of the 2002-03 crop year. Although the dispute was settled in December 2002, the redirection of grain traffic to Prince Rupert effectively distorted traditional shipping patterns on the west coast for some time thereafter. As a result, Vancouver's share of the total railway volume fell to its lowest point in the 2002-03 crop year, 40.6%. Although the port's share has since rebounded, it remains somewhat below the 60.8% share achieved in the 2001-02 crop year.

[13] The port of Churchill's overall share of railway grain volumes reached a maximum 2.7% in the 2002-03 crop year.

Despite the gain made by Prince Rupert in the 2005-06 crop year, the shares accorded to Vancouver, Thunder Bay and Churchill differ only marginally from those observed at the beginning of the GMP. The modest nature of these differentials suggests that their relative roles within the GHTS have remained largely unaltered from those presented seven years earlier.

1.3 Country Elevator Infrastructure *[Measurement Subseries 1C]*

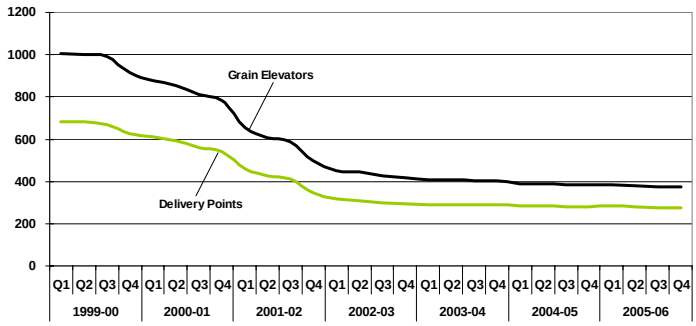
The decline in the number of licensed country elevators in western Canada has been one of the most visible facets of the GHTS's continuing evolution. At the outset of the 1999-2000 crop year, there were 1,004 licensed primary and process elevators on the prairies. By the time the 2005-06 crop year began six years later, that number had fallen by 61.7% to 385.[14] [See Tables 1C-1, and 1C-2 in Appendix 4.]

In fact, during the first three years of the GMP, the rate at which these facilities were declining was rapidly accelerating. A total of 87 facilities were removed from the network in its first year, followed by 136 in the second, and 281 in the third. However, when only 84 elevators were removed from the system in the 2002-03 crop year, this pace began to exhibit signs of relaxing. This deceleration was confirmed by very modest elevator reductions in each of the following two crop years: twelve in the 2003-04 crop year; and 19 in the 2004-05 crop year.

In the 2005-06 crop year, an additional eleven facilities were removed from the system. Representing a reduction of 2.9%, this lowered the number of licensed elevators in western Canada to 374. This brought the total reduction in elevator facilities recorded since the beginning of the GMP to 630, or 62.7%. Notwithstanding this broader reduction, the modest scope of the changes recorded in the last three crop years continues to suggest that the grain companies have effectively concluded their elevator rationalization programs.

The same is true of grain delivery points, which have been declining in conjunction with the reduction in licensed elevators. In the 2005-06 crop year, the number of active delivery points fell by just 2.5%, to 275 from 282. As a result, 59.9% of the 685 delivery points in place at the beginning of the GMP have now been closed. This implies that all of the licensed elevators in some 410 communities were closed in the last seven crop years.

Figure 5: Licensed Grain Elevators and Delivery Points



Since the beginning of the GMP, grain deliveries have been concentrated at a comparatively smaller number of delivery points. In any given crop year, about one-third of the GHTS's active delivery points accounted for 80% of the producers' grain deliveries. In the 2004-05 crop year – the last for which statistics are available – this amounted to 94, or 39.0%, of the GHTS's 241 active grain delivery points. Proportionally, this share was greater than the 33.5% recorded in the GMP's base year, and was driven in large measure by the significant upturn in volume that distributed somewhat more grain to secondary deliveries points. [See Table 1C-13 in Appendix 4.]

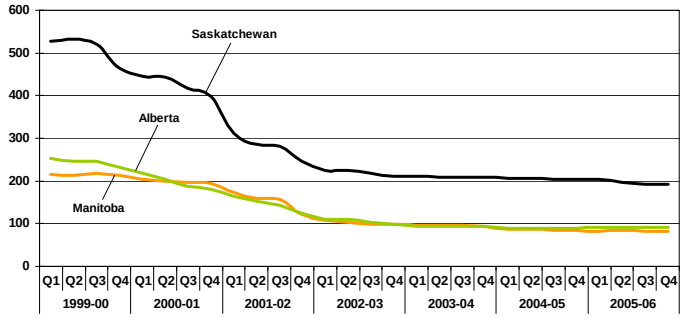
Provincial Distribution

With the close of the 2005-06 crop year, 193 of western Canada's licensed elevators were situated in Saskatchewan. This constituted 51.6% of the system's active total, and proved to be consistent with the proportion held by the province since the beginning of the GMP. This was followed in succession by Alberta

[14] 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 openings and closures are discussed elsewhere in this report, and the statistics relating to them are presented in Tables 1C-7 through 1C-12.

and Manitoba, whose respective 92 and 82 elevators accounted for about another quarter each. The system's remaining seven facilities were divided between British Columbia and Ontario.[15]

Figure 6: Licensed Grain Elevators – Provincial Distribution



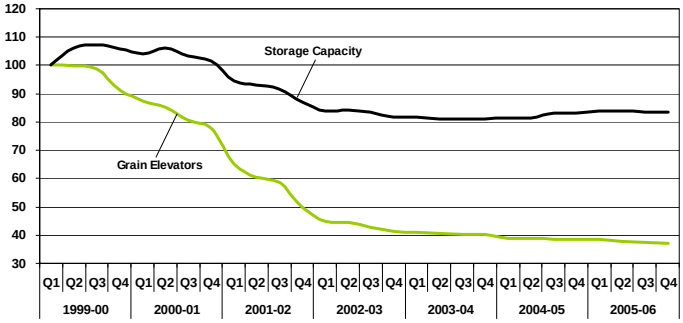
And while the greatest numerical reduction in licensed facilities was also attributable to Saskatchewan, it was the closure of 160 elevators in Alberta that produced the largest relative decline since the beginning of the GMP, 63.5%. However, this proved virtually indistinguishable from the 63.4%, or 334-elevator, reduction registered in Saskatchewan and the 62.0%, or 134-elevator, decline posted in Manitoba. These similarities highlight the fact that elevator rationalization activities have been broad based, and that they have not unduly targeted the facilities of any single province.

Elevator Storage Capacity

Despite a 62.7% decline in the overall number of elevators, the GHTS's storage capacity fell by a comparatively modest 16.4%. As outlined in the Monitor's previous reports, this lower rate of decline simply reflects the fact that while grain companies were methodically closing their less-efficient smaller elevators, they were also expanding and opening 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 a 7.4% increase in storage capacity, which peaked at 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, losing 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 from 7.0 million tonnes.

Figure 7: Relative Change in Grain Elevators and Storage Capacity



This trend was reversed in the 2004-05 and 2005-06 crop years when total storage capacity increased by 157,000 tonnes and 25,200 tonnes respectively. As was the case in the first year of the GMP, this arose because an expansion in high-throughput storage capacity more than offset the reduction that came from the closure of smaller facilities. This served to increase the GHTS's overall storage capacity to a total of 5.9 million tonnes by the end of the period.

Facility Class

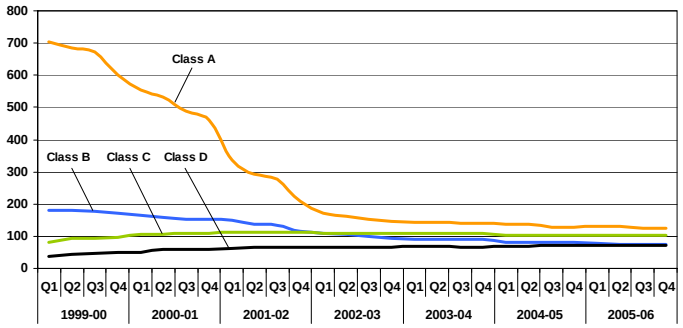
For comparative purposes, the GMP groups elevators into four classes. These classes are based on the loading capability of each facility, which is in turn defined by the number of car spots each possesses. Those with less than 25 car spots are deemed to be Class A facilities; those with 25-49, Class B; those with 50-99,

[15] There were seven licensed elevators located outside the provinces of Manitoba, Saskatchewan, and Alberta as at 31 July 2006. 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.

Class C; and those with 100 or more, Class D.[16] 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 past seven crop years. The most striking aspect of this change has been the 82.4% decline in the number of Class A facilities, which dropped to 124 from 705, and the 58.3% reduction in Class B facilities, which fell to 75 from 180. At the same time, the trade's growing use of high-throughput elevators proved equally pronounced: Class C facilities increased by 27.2%, to 103 from 81; and Class D facilities increased by 89.5%, to 72 from 38.

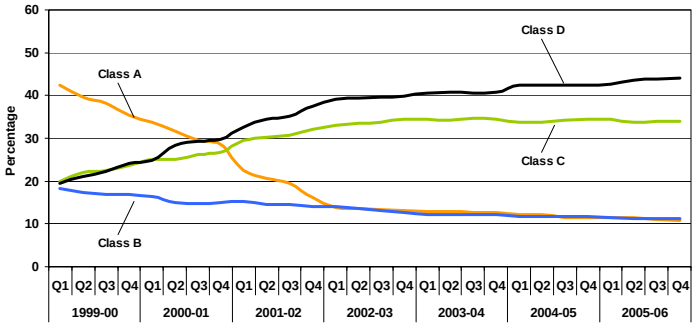
Figure 8: Licensed Grain Elevators – Facility Class



Clearly, these statistics illustrate that the primary target in elevator rationalization has been the conventional wood-crib facility. Of the 793 recorded elevator closures since the beginning of the GMP, 643 related to the shutdown of Class A facilities.[17] 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 railways' system of financial incentives that encouraged 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 discounts under the railways' incentive programs, they were not as generous as those accorded shipments from high-throughput elevators. Moreover, these discounts were later progressively reduced and eliminated.[18] As a result, over the course of the past seven crop years, a total of 119 Class B facilities also closed. Together, Class A and B facilities account for 96.1% of all recorded elevator closures. [See Tables 1C-10 through 1C-12 in Appendix 4.]

Figure 9: Share of Storage Capacity – Facility Class



In contrast to their share of elevator closures, only 57.1% of the 163 elevators opened during this period were Class A and B facilities.[19] This differential calls attention to the fact that high-throughput facilities accounted for a much greater proportion of elevator openings than closures, 42.9% versus 3.9% respectively. In fact, Class

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

[17] 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, reopened by another later.

[18] 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.

[19] Many of the 93 Class A and B elevator openings recorded during this period reflect the acquisition of previously closed facilities, and their subsequent reopening by a different grain company.

C and D elevators were the only ones to have posted net increases since the 1999-2000 crop year. Considered together, these changes underscore the industry's continuing migration towards the use of high-throughput elevators. By the end of the 2005-06 crop year, high-throughput facilities accounted for 46.8% of all elevators, and 77.9% of overall storage capacity. These values differ substantially from the 11.9% and 39.4% shares they respectively held at the beginning of the GMP. [See Tables 1C-7 through 1C-9 in Appendix 4.]

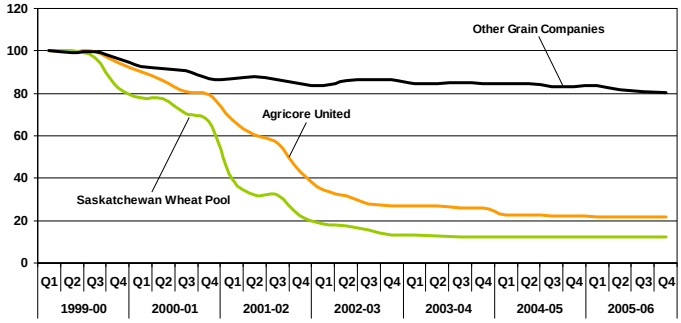
When taking into account all facility classes, the number of elevators entitled to receive incentive discounts can be seen to have fallen by 16.4% over the course of the past seven years, to 250 from 299, while its associated storage capacity has actually increased by 29.3%, to 5.2 million tonnes from 4.1 million tonnes.[20] More importantly, by the end of the 2005-06 crop year, these facilities accounted for 66.8% of the system's elevators, and 89.2% of its storage capacity. As was the case with high-throughput elevators, these stakes are significantly greater than the 29.8% and 57.7% shares respectively held at the beginning of the GMP. [See Tables 1C-4 through 1C-6 in Appendix 4.]

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. In fact, the two largest grain companies at the beginning of the GMP, Agricore United (AU) and Saskatchewan Wheat Pool (SWP), have been the main practitioners of elevator rationalization. When taken together, 90.2% of the net reduction in GHTS elevators was derived from actions taken by these two companies.

Comparatively, SWP has proven to be the more aggressive of the two companies. Through to the end of the 2005-06 crop year, SWP reduced the number of its licensed elevators by 87.9%, to 37 from 305.[21] Over half of this 268-facility reduction occurred in a single crop year, specifically that of 2001-02, when the company culled 135 elevators from its network. With only minor changes over the course of the past three crop years, the evidence strongly suggests that the company has largely concluded its rationalization program.

Figure 10: Licensed Grain Elevators – Grain Company



In comparison, by the end of the 2005-06 crop year AU had reduced its elevator network by a somewhat lesser 78.1%, to 84 from 384. As with SWP, almost half of the company's reductions were made in the 2001-02 crop year, and may well have been fuelled by the rationalization opportunities afforded through the merger of its two predecessor companies.[22] Likewise, the limited decline in AU elevators witnessed over the past two crop years suggests that the company's rationalization program has effectively ended.

[20] The inclusion of Class B facilities, which declined from 180 to 75 during this period, effectively counters the comparatively smaller numerical increases made by the Class C and D elevators to produce a net reduction in the total number of facilities eligible to receive incentive discounts.

[21] The facilities attributed to SWP do not include those operated under the commercial name of AgPro Grain. This latter operation – encompassing some 11 facilities as at 31 July 2006 – is treated as a separate business entity under the GMP. Were they to be included here, the total number of elevators would have fallen from 316 to 48, and the relative decline would have been a marginally lesser 84.8%.

[22] On 1 November 2001, Agricore Cooperative Ltd. formally merged with United Grain Growers Limited to form Agricore United. Although the relative reduction in the company's elevators falls somewhat short of SWP's, the physical count is greater – 300 versus 268 for SWP.

Among the other large grain companies, Cargill and Pioneer Grain posted the next deepest cuts in their elevator networks. However, with reductions of 44.1% and 43.8% respectively, their rationalization efforts were seen to have advanced at roughly half the pace set by SWP and AU. The 16.0% and 15.4% reductions respectively posted by Paterson Grain and Parrish and Heimbecker proved even less pronounced.

Not all of these reductions marked a permanent facility closure. In some instances, elevators closed by the larger grain companies were sold, later to re-emerge as facilities operated by smaller, independent grain companies such as Delmar Commodities, FGDI, Providence Grain Group, and Westlock Terminals.[23] As a result, the number of elevators operated by these smaller grain companies has actually increased by 47.1% in the last seven crop years, to 75 from 51.[24]

When taken together for comparison purposes, it can be seen that the collective number of elevators operated by companies other than SWP and AU has fallen by only 19.7%, to 253 from 315. What is more, in the face of the deeper cuts made by SWP and AU, these companies now account for about two-thirds of the GHTS's total elevators and associated storage capacity.[25] Despite what amounts to a reversal of position, SWP and AU still remain the dominant handlers of grain in western Canada, shipping over half of the annual volume. And while these two companies have built up the efficiency of their current networks, it is equally clear that their smaller rivals have also been adapting to this change in the competitive environment. [See Table 1C-3 in Appendix 4]

1.4 Railway Infrastructure *[Measurement Subseries 1D]*

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.[26] The dramatic changes to the makeup of the GHTS's elevator system contrast sharply with the more modest ones posted by its railway network. During the first six years of the GMP, the net reduction in western Canadian railway infrastructure amounted to just 3.6%, with the network's total mileage reduced to 18,763.7 route-miles overall. The largest share of this reduction, 80.1%, came from the abandonment of 564.4 route-miles of light-density, grain-dependent branch lines.

Even so, the network had been changing in other ways. Throughout this period, CN and CP continued to transfer a number of their branch line operations to a variety of new shortline railways, a practice that began in the mid 1990s as part of a larger industry restructuring. At its height, regional and shortline carriers had operations that extended over almost one-third of western Canada's railway network.

This practice, however, began to wane in the 2003-04 crop year, when CN acquired the operations of BC Rail.[27] Around this same time, the declining financial health of shortlines at large prompted several into either selling or rationalizing their operations.[28] This was followed by the financial failure of the Prairie Alliance for the

[23] 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 specific facilities. Some of the smaller grain companies now operate these elevators.

[24] The reference to smaller grain companies can be misleading since it refers to the scope of a company's activities within western Canada. By way of example, the 75 elevators cited here include six facilities operated by ADM Agri-Industries Ltd., a subsidiary of the larger US-based Archer Daniels Midland.

[25] By the end of the 2005-06 crop year, grain companies other than SWP and AU accounted for 67.6% of the elevators, and 67.0% of the associated storage capacity. This marks a significant increase over the 31.4% and 46.9% shares respectively held at the outset of the GMP. The shares attributable to SWP and AU have fallen correspondingly in this same period to 32.4% of the elevators, and 33.0% of the associated storage capacity.

[26] 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 Central Manitoba Railway or the Great Western Railway.

[27] In July 2004 CN acquired the vast majority of BC Rail's operations. With the exception of a 23.2-route-mile section of track that was used to service Roberts Bank, the transaction expanded CN's network in British Columbia by 1,419.8 route-miles.

[28] Poor financial performance was central to the decisions taken by the owners of both the Great Western Railway and Alberta RailNet to sell them outright.

Future (PAFF) in the second half of the 2004-05 crop year, along with CN's resumption of control over the branch lines that they had previously leased to this shortline. All of this resulted in a significant realignment of the railway infrastructure in western Canada. By the end of the 2004-05 crop year, CN and CP directly managed a total of 15,251.2 route-miles of track, which constituted a net gain of 2.9% over the 14,827.9 route-miles they oversaw at the beginning of the GMP. In comparison, the network operated by western Canada's smaller Class 2 and 3 carriers declined by 24.3%, to 3,512.5 route-miles from 4,640.3 route-miles.

In October 2005, CN decided to lift a self-imposed moratorium on branch line abandonment, and added a total of 328.1 route-miles of Saskatchewan infrastructure as discontinuance candidates to its Three Year Network Plan.[29] When considered alongside the 412.2 route-miles of infrastructure that CP had also added as discontinuance candidates just three months earlier, it would appear that both CN and CP had begun to more rigorously examine their remaining networks. With this in mind, it is worth noting that the 740.3 route-miles collectively added to these plans exceeded the 704.5 route-miles that had actually been abandoned since the beginning of the GMP.

Although the failure of PAFF along with the weakening financial positions of other shortlines did not preclude the possibility of further spin offs, it suggested that the option may not be as desirable as it once was to potential investors. In fact, throughout the course of the 2005-06 crop year, new expressions were given to both of these perspectives. In the first instance, a 60.2-route-mile section of track that had been designated for abandonment by CP was sold to a new shortline operation. Established in December 2005, the Fife Lake Railway provides another example of rural municipalities banding together to prevent the loss of a railway line they consider vitally important to their local economy.[30] As typified by the operations of either the Wheatland Railway or the former PAFF, actual service along the line is to be contracted out to another carrier, in this case the Great Western Railway.[31]

In the second case, RailAmerica Inc. sold the majority of its western Canadian holdings to CN in January 2006. This transaction, valued at $26 million, encompassed 702.8 route-miles of railway infrastructure grouped under three separate operations: the Central Western Railway; the Lakeland and Waterways Railway; and the Mackenzie Northern Railway.[32] Interestingly, CN sold or leased virtually all of these lines in the late 1990s to RaiLink Ltd., which was subsequently acquired by RailAmerica in 1999.[33] In effect, CN's purchase denotes a reacquisition of the very operations it had sold off several years earlier. As with the sale of other shortline operations, RailAmerica indicated that it was dissatisfied with the returns it had been deriving from these properties, and would be using the proceeds from the transaction to reduce its existing debt level and to make new strategic investments.

This retrenchment by RailAmerica was underscored again in March 2006 when the company effectively agreed to donate its share of the right of way used by the E&N Railway (ENR) as a charitable gift to the Island Corridor Foundation (ICF), a non-profit organization representing several First Nations and municipalities on Vancouver Island.[34] Moreover, this action paralleled that taken by CP when it decided to donate its larger interest in the

[29] Federally-regulated carriers are required to identify these abandonment candidates in a Three-Year Network Plan, a legally prescribed listing of all railway lines that the carrier intends to operate, convey or abandon over the course of the ensuing three years. Listing a line as a conveyance or abandonment candidate has typically preceded any effort to establish a shortline operation on it. In this instance, CN added the lines that it had previously leased to PAFF – which comprised sections of its Amiens, Bolney, Robinhood and Turtleford subdivisions – as well as portions of its Lewvan, Northgate and Preeceville subdivisions.

[30] As was the case with the Great Western Railway and the Wheatland Railway before it, the funds needed to establish the Fife Lake Railway were raised primarily through equity contributions from several affected rural municipalities, as well as a loan from the Saskatchewan government.

[31] The Great Western Railway has an equity position in the Fife Lake Railway, which is adjacent to, but physically separated from, its own operations.

[32] Prior to the sale of these three railways to CN, RailAmerica had four shortline operations in western Canada. Afterwards, only its E&N Railway operation on Vancouver Island remained.

[33] Although the infrastructure of the Central Western Railway had been dramatically reduced in recent years, the operation had originally been established on sections of CP's former Coronation, Lacombe and Stettler subdivisions. In taking control of the Central Western Railway, CN also inherited the vestiges of that infrastructure.

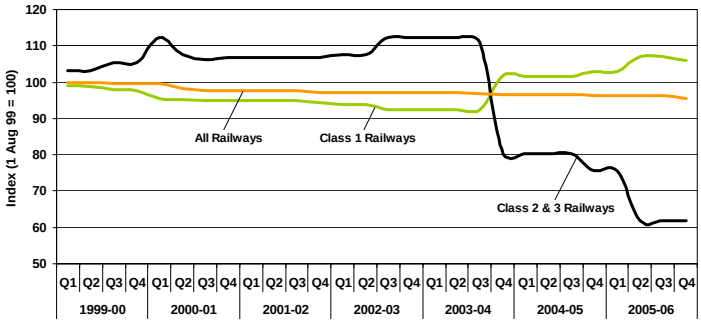
[34] The E&N Railway (ENR) was the sole provider of rail service on British Columbia's Vancouver Island, with operations that extended over 177.6 route-miles from Courtenay and Port Alberni to Victoria. When CP announced that it would cease operating

ENR's right of way, valued at about $236 million, to the ICF one month earlier.[35] Following a transition period that came to an end on 30 June 2006, RailAmerica no longer has a commercial presence in western Canada.[36]

Finally, in March 2006 the Southern Manitoba Railway (SMR) applied to the province's Motor Transport Board for permission to discontinue operations on the last remaining 78.6 route-miles of its network between Morris and Mariapolis. The SMR, which was established in 1999 following the purchase of CN's former Miami and Hartney subdivisions, had already abandoned about 40% of its original network some two years earlier.[37] As was the case then, the SMR cited declining traffic volumes, fostered in large part by competition from larger inland elevators, as the chief factor in its decision to abandon the line. With such a course of action having particularly negative implications for Delmar Commodities, which owns three facilities along the SMR's right-of-way and had spent some $1.3 million to physically relocate a former Manitoba Pool elevator to Somerset just a year earlier, the company appeared to have assumed a lead role in the early effort to save the line. Whether this effort will prove successful has yet to be determined.[38]

These transactions, along with 168.7 route-miles of track that were recorded as having been abandoned during the course of the 2005-06 crop year, resulted in another significant realignment of the GHTS's railway infrastructure. By the end of the period, Class-1 controlled infrastructure had increased by 3.1%, to 15,725.1 route-miles. At the same time, the scope of shortline operations had been reduced by almost one-fifth, falling to 2,869.9 route-miles from 3,512.5 route-miles twelve months earlier. Moreover, the amount of infrastructure controlled by these smaller carriers has fallen by 38.2% since the beginning of the GMP while that of the larger Class 1 carriers has risen by 6.1%. [See Table 1D-1 in Appendix 4.]

Figure 11: Relative Change in Route-Miles – Railway Infrastructure



Although increased producer-car loading has helped compensate for the closure of some local elevators, the continuing erosion in shortline traffic volumes does not augur well for their futures. Moreover, the theoretical framework that suggested that shortline operations could prevent or forestall the closure of the smaller wood-crib elevators, along with many of the grain-dependent branch lines that serve them, now appears to have been

---

the line as a result of steadily eroding traffic volumes in 1998, RailAmerica moved to take it over. Although RailAmerica purchased the 68-route-mile portion of the line running from Port Alberni to Nanaimo when it established the shortline in 1999, CP still retained ownership over the majority of the infrastructure in the Courtney to Victoria corridor, which it then leased to the ENR. In 2004, after having been unable to reverse a further decline in traffic volume, RailAmerica declared that operations on the ENR would be ended. This spurred a fervent effort on the part of many effected communities and First Nations people to preserve the right of way – if not the actual railway operations itself – for the future transportation needs of Islanders. The Island Corridor Foundation was founded with this purpose in mind.

[35] CP's donation encompassed some 651 hectares of land, a number of historic railway stations, and $2.3 million in seed money to help the ICF continue its work. The donation was expected to provide CP with a charitable tax credit of almost $40 million. Although RailAmerica received $1.0 million in cash, along with a promissory note for another $0.3 million, for the sale of its above-rail operations, it also expected to realize a $5-million tax benefit from the donation of its right of way.

[36] Under a new agreement with the Island Corridor Foundation, the Southern Railway of British Columbia – operating through a subsidiary named Southern Railway Vancouver Island Limited – was contracted to provide freight and passenger service on the ICF-owned rail line between Victoria and Courtenay as of 1 July 2006.

[37] The Southern Manitoba Railway abandoned the westernmost 64.0 route-miles of its network, between Elgin and Mariapolis, in March 2004.

[38] The abandonment process for provincially regulated railways in Manitoba largely parallels that of federally regulated railways. The carrier must advertise the fact that the line and any affiliated property is up for sale, and respect specific timelines for the expression of interest from any party intending to make a purchase offer. This process is widely expected to take anywhere from 12 to 18 months to complete.

largely discredited. Despite their best efforts, most shortline railways have simply been unable to reshape the economics that gave rise to the elevator rationalization strategies of the grain companies in the first place. As a result, few of these smaller carriers have actually been able to avoid the need to scale down operations or to abandon parts of their own networks.

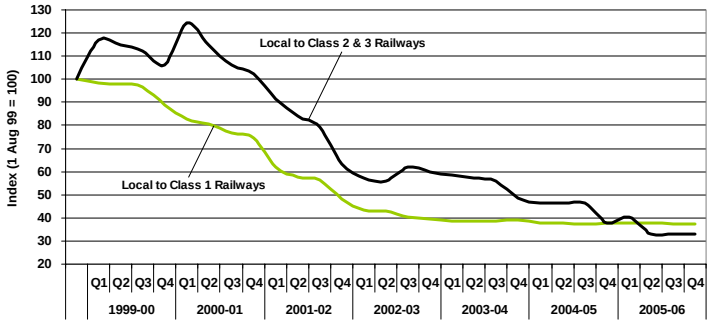
Branch Line Discontinuances

A total of 168.7 route-miles were removed from the western Canadian railway network in the 2005-06 crop year. CP's abandonment of a 130.0-route-mile section of its Willingdon subdivision in northeastern Alberta in May 2006 accounted for the majority of this, but built upon the carrier's first-quarter abandonment of two small sections of its Cardston and Radville subdivisions, which totalled 38.7 route-miles.[39] In total, this constituted a mere 0.9% reduction from the network that existed at the beginning of the crop year. With a remaining network comprised of 18,595.0 route-miles, this enlarged the scope of the reductions made since the beginning of the GMP to 4.5%, or 873.2 route-miles. The modest nature of this change continues to contrast sharply against that of licensed elevators, which as already discussed, fell by 62.7% in the same period.

Local Elevators

As discussed earlier, while the railway network has changed little over the course of the past seven crop years, the elevators it serves have declined significantly. In broad terms, these facilities have decreased by 63.2% in number, to 360 from 979, and by 16.1% in terms of its associated storage capacity, to 5.8 million tonnes from 6.9 million tonnes.[40]

Figure 12: Relative Change in Local Elevators – Railway Class



Ostensibly, the rate of decline in the number of elevators tied to the Class 1 railways appears to differ little from that of elevators affiliated with the smaller non-Class 1 railways. Those local to Class 1 carriers fell by 62.9%, to 333 from 897, while those associated with the non-Class 1 carriers declined by 67.1%, to 27 from 82. There was, however, a significant differential between these two groups in terms of the rate at which the associated storage capacity has declined: 13.3% in the case of elevators local to Class 1 carriers versus 53.2% for those tied to non-Class 1 carriers. This differential underscores the fact that grain companies have been investing far more in facilities served by CN and CP. This is reflected in the industry's decision to situate virtually all of its high-throughput elevators along their primary routes.[41] [See Table 1D-6 in Appendix 4.]

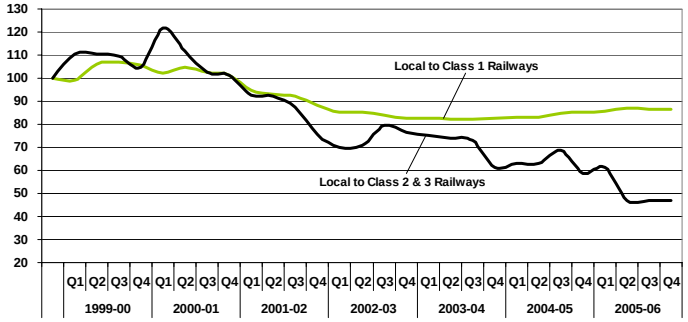
[39] The portion of the Willingdon subdivision mentioned here was actually transferred to the Government of Alberta. However, since this purchase was not aimed at supporting future railway operations, the Grain Monitoring Program deems the infrastructure to have been abandoned. Where appropriate, similar treatment has been given to transfers made to county and municipal governments. In the 2005-06 crop year, these included to sections of CP's Cardston and Radville subdivisions.

[40] The reductions cited here relate only to those facilities directly served by rail. These reductions differ somewhat from those reported in Section 1.3, which related to the net decline in the number and capacity of the entire elevator network, including off-track facilities.

[41] Class 1 carriers serviced 169 of the GHTS's 175 high-throughput elevators (or 96.6%) at the end of the 2005-06 crop year.

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 initial years of the GMP, before later starting to fall. This was due chiefly to the establishment of new shortline operations, including the Southern Manitoba Railway, Red Coat Road and Rail, and the Great Western Railway. When other shortline operations were established in the 2002-03 crop year, similar gains were also made. The occasional transfer of these branch line operations did not, however, detract from the fact that the elevators they served were steadily being closed.

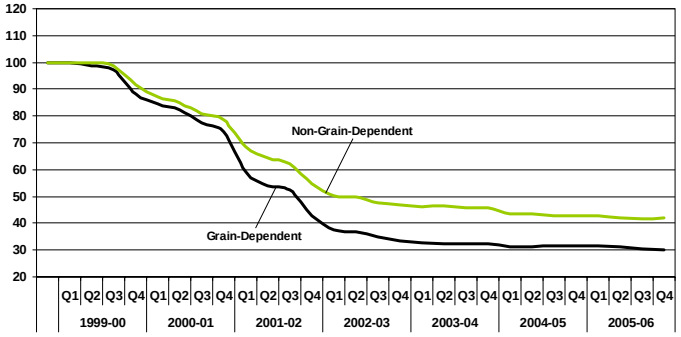
Figure 13: Relative Change in Storage Capacity – Railway Class



Grain-Dependent Network

Differing rates of decline are also evident between facilities local to the grain-dependent, and non-grain-dependent, railway networks.[42] Elevators situated along the grain-dependent network fell by 70.0% over the course of the past six crop years, to 126 from 420. In the case of those situated along the non-grain-dependent network, the decline was a lesser 58.1%, having fallen to 234 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. This trend became particularly evident in the 2001-02 crop year when elevator reductions reached a record 281.

Figure 14: Relative Change in Local Elevators – Railway Line Class



The rate of decline for both networks has, however, substantially abated over the last three years of the GMP. In fact, net declines in the 2005-06 crop year proved to be among the lowest recorded so far, amounting to 4.5% and 2.2% for the grain-dependent and non-grain-dependent networks respectively. These modest declines reflect the general slowdown in elevator closures already discussed.

Traffic Volumes

Overall grain volumes have now begun to reflect the effects of these changes in the elevator and railway networks. In the 2005-06 crop year, the tonnage originated on the remaining non-grain-dependent network increased by 19.5%, to 17.1 million tonnes from 14.3 million tonnes a year earlier. At the same time, traffic originating at points on the remaining grain-dependent network increased by 28.0%, to 7.6 million tonnes from 5.9 million tonnes. Despite the latter's comparatively greater gain in volume, the gap in real originations that had opened between the two networks three years earlier was only slightly narrowed. With the close of the 2005-06 crop year, the tonnage forwarded from points along the non-grain-dependent network had marginally

[42] 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 changing one. 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.

surpassed what it had been in the GMP's base year. In comparison, the volume originated by the grain-dependent network had declined by 12.5%. As a consequence, the non-grain-dependent network's share of the total grain volume has climbed to 69.3% from the GMP's base year value of 66.2%.[43] [See Table 1D-2 in Appendix 4.]

These same structural influences are also apparent in the relative volumes of grain originated by large and small carriers. This became particularly pronounced in the 2005-06 crop year as a result of CN's acquisition of several shortline railways. Whereas the tonnage originated by the major carriers increased by 23.8%, the volume originated by the smaller carriers increased by only 1.9%. Although the addition of several shortline operations in recent years often obscured the real change in individual carrier volume, the overall trend clearly shows the tonnage originated by shortline carriers to be faltering in comparison to that of the Class 1 carriers. This is reflected in the relative declines registered by both groups over the course of the last seven crop years: 18.3% versus 2.4%% respectively. [See Tables 1D-3 and 1D-5 in Appendix 4.]

Figure 15: Relative Change in Grain Volumes – Railway Line Class

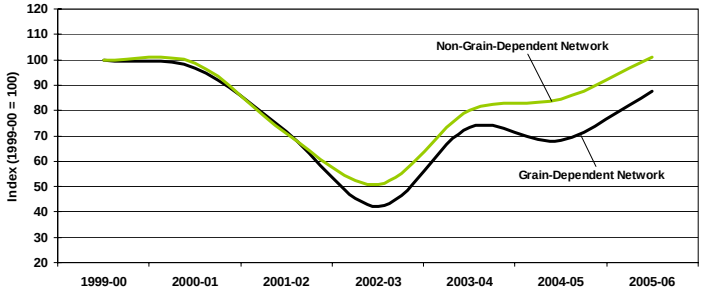
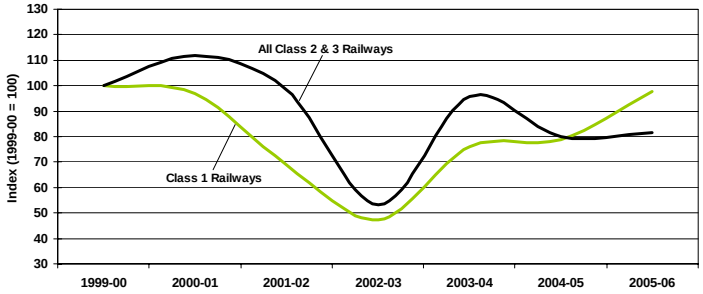


Figure 16: Relative Change in Grain Volumes – Railway Class



Notwithstanding the preceding, the volume of traffic originated by shortline railways has not fallen as sharply as the licensed elevators served by them. In fact, the data indicates that producer-car loading has replaced a significant portion of the grain volume that would otherwise have been lost following the closure of these licensed facilities.[44] This is evidenced by the fact that producer-car loadings accounted for an estimated 43.3% of the overall volume originated by shortline carriers in the 2004-05 crop year.[45] 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.

1.5 Terminal Elevator Infrastructure *[Measurement Subseries 1E]*

Since the beginning of the GMP, the licensed terminal elevator network in western Canada has increased by 14.3%, to 16 from 14, with its associated storage capacity having climbed by just 3.3%, to 2.6 million tonnes. With eight of the elevators and 50.7% of the storage capacity, Thunder Bay held the largest share of these

[43] The proportion of grain shipments originating on the non-grain-dependent network proved extremely stable during the first three years of the GMP: 66.2% in the 1999-2000 crop year; 66.6% in 2000-01; and 65.9% in 2001-02. However, this proportion has moved to a noticeably higher level in recent years, reaching a record 70.7% in the 2004-05 crop year.

[44] A number of producer-car loading sites have been established using elevator assets purchased from grain companies. In most cases, these elevators are used by local producers for trackside storage, and to facilitate the loading of railcars in larger lot sizes than was previously possible.

[45] The proportion given over to producer-car loadings is based on data obtained from the Canadian Grain Commission. Given the scope of recent changes in shortline railway ownership, the limitations of this data preclude the calculation of a reasonable estimate for the 2005-06 crop year. Data from the 2004-05 crop year has been used as a proxy.

assets. Vancouver held second place with six facilities and 36.1% of the system's storage capacity. Prince Rupert and Churchill both followed with one terminal elevator apiece, and storage capacity shares of 7.9% and 5.3% respectively. [See Table 1E-1 in Appendix 4.]

Despite these overall gains, the changes to the system have not been truly physical. Rather, as the product of having licensed three pre-existing facilities and de-licensed one other, it has largely been illusionary.[46] No physical alterations to the network were made during the 2005-06 crop year.

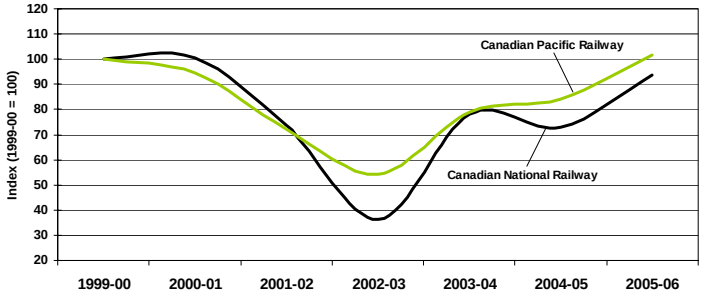
Terminal Elevator Unloads

The number of covered hopper cars unloaded at terminal elevators during the 2005-06 crop year increased by 24.8%, to 271,714 carloads from 217,666 carloads the year before.[47] Of the two major carriers operating in western Canada, CN posted the greatest overall increase in the number of carloads originated. The company's handlings rose 28.9%, to 135,937 carloads from 105,477 carloads the year before.

Much of CN's gain came as a result of the sharply higher volumes it moved to the west coast ports of Vancouver and Prince Rupert, which totalled 109,751 carloads as compared to 80,041 carloads a year earlier. Although Vancouver's handlings climbed by 24.4%, it was Prince Rupert's 58.9% increase – which resulted in a GMP record of 46,872 cars having been unloaded there – that truly spurred the overall gain.[48] Although the gain posted by Prince Rupert was largely driven by a significant upturn in total grain shipments, there were indications that recent rate reductions in the corridor also played a role in these results. CN's comparatively larger share of the barley movement proved to be an equally important determinant.[49] CN also posted a sharp increase in the volume of grain it originated for Churchill, which rose by 42.4% to 3,920 carloads.[50] The carrier posted a modest decline of 1.8% on its handlings into Thunder Bay, which fell to 22,266 carloads.

By way of comparison, CP's handlings increased by 21.0%, climbing to 135,777 carloads from 112,189 carloads a year earlier. The carrier's handlings into Vancouver posted the most impressive gain, increasing by 31.6% to 82,612 carloads. Although the carrier's shipments into Thunder Bay remained second only to Vancouver, the 51,574 cars unloaded there were 11.3% above what had been handled the year before. For movements into Prince Rupert and Churchill, the carrier posted year-over-year reductions of 51.4% and 45.7% respectively.

Figure 17: Relative Change in Terminal Unloads – CN and CP Origins



These results show CN and CP to have each garnered a 50.0% share of the overall grain movement in the 2005-06 crop year. With respect to movements into Vancouver, the GHTS's principal export gateway, CP accounted for 56.8% of all grain shipments, up marginally from 55.4% a year earlier. CP was also the dominant carrier in the Thunder Bay

[46] The last physical addition to the GHTS terminal elevator network occurred in 1985 with the opening of Prince Rupert Grain Ltd.

[47] The statistics cited here are drawn from the records of the Canadian Grain Commission. Although consistent with the volumes cited as having been handled by the railways, these counts vary as a result of differing data collection and tabulation processes.

[48] As a CN-served destination, movements to Prince Rupert from CP-served origins have been comparatively limited, amounting to just 576 cars for the entire 2005-06 crop year. With the exception of the 2002-03 crop year, where a labour disruption in Vancouver resulted in a substantial amount of western Canadian grain being directed to Prince Rupert, CP's handlings into Prince Rupert have seldom reached 1,000 cars per year.

[49] Comparatively, CN originated almost twice as much barley as did CP in the 2005-06 crop year. This extends somewhat naturally from the more northerly latitudes in which barley is grown, and in which CN operates.

[50] The Hudson Bay Railway directly serves the Port of Churchill. Traffic destined to Churchill is received in interchange from CN at The Pas, Manitoba.

corridor, where it originated 69.8% of the 73,840 cars unloaded. This too denoted a modest gain over the 67.1% share earned the year before. [See Table 1E-2 in Appendix 3.]

Although the record is somewhat mixed, CP has often outpaced CN's quarterly and annual handlings since the 2002-03 crop year. To a degree, this can be explained by a distribution in crop production that has tended to benefit CP rather than CN in recent years. The better availability of higher-quality grains in CP's service area was a central factor in its having secured the larger share of the 2004-05 crop year's total movement. Even so, the greater mobility given to grain through extended trucking options has helped to blur the traditional definition of these boundaries. As a result, factors such as the carrier's pricing and service levels have also become key determinants of market share.

1.6 Summary Observations

Overall grain production in western Canada climbed to 56.0 million tonnes for the 2005-06 crop year. In addition to representing a 4.9% increase over the 53.4 million tonnes harvested a year earlier, this denoted the largest production volume in western Canada since the GMP was initiated. Despite the comparative increase, grain production was adversely affected for a second consecutive year by excessively wet harvesting weather. As a result, the quality of the grain produced was significantly diminished.

Production in Saskatchewan climbed by 17.1%, increasing to 30.7 million tonnes from 26.2 million tonnes a year earlier, marking a new high for the province under the GMP. Alberta followed with a year-over-year production increase of 5.9%, to 19.6 million tonnes from 18.5 million tonnes. This also proved to be a new record for the province. Excessive moisture coupled with generally poorer growing conditions in Manitoba actually resulted in a 35.2% decline in production, which totalled 5.5 million tonnes as compared to 8.5 million tonnes a year earlier. This marked a second consecutive decline in annual production for the province, which fell to the lowest level thus far recorded under the GMP.

When combined with a record 10.8 million tonnes.of carry-forward stocks, the overall grain supply reached a record-setting 66.8 million tonnes under the GMP, and a gain of 11.2% over the previous crop year's 60.0 million tonnes. As a result, the amount of grain moved by rail to western Canadian ports increased substantially, with the total volume climbing by 21.5%, to 25.3 million tonnes from 20.8 million tonnes the year before.

The port of Vancouver remained the principal destination in this export movement, increasing by 20.6% to 14.1 million tonnes. However, the port's share of the total volume fell marginally to 55.7%. Prince Rupert reported a significant increase in share as a result of a 57.0% rise in volume, which climbed to 4.2 million tonnes. Thunder Bay, which ranked as the second largest destination, saw its volume increase by 8.2% to 6.5 million tonnes. Churchill reported a 10.3% increase in tonnage, which totalled 0.4 million tonnes.

The decline in the number of licensed country elevators in western Canada has been 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. An additional eleven facilities were removed from the system in the 2005-06 crop year, lowered the number of licensed elevators in western Canada to 374. This brought the total reduction in elevator facilities recorded since the beginning of the GMP to 630, or 62.7%.

Despite this decline, the GHTS's storage capacity fell by a comparatively modest 16.4%. This lower rate of decline simply reflects the fact that while grain companies were methodically closing their less-efficient smaller elevators, they were also expanding and opening larger ones at the same time. By the end of the 2005-06 crop year, high-throughput facilities accounted for 46.8% of all elevators, and 77.9% of overall storage capacity. These values are well above the 11.9% and 39.4% shares respectively held at the beginning of the GMP.

On a combined basis, 90.2% of the overall reduction in GHTS elevators was derived from the rationalization efforts of Agricore United (AU) and Saskatchewan Wheat Pool (SWP), which reduced their networks by 78.1% and 87.9% respectively. In comparison, the number of elevators operated by other grain companies has fallen by only 19.7%. In the face of the steeper cuts made by AU and SWP, these companies now account for about two-thirds of the GHTS's total elevators and storage capacity, although SWP and AU still remain the dominant grain handlers.

The dramatic changes to the makeup of the GHTS's elevator system contrast sharply with the more modest ones posted by its railway network. Under the GMP, the net reduction in western Canadian railway infrastructure amounted to just 4.5%, with the network's total mileage reduced to 18,595.0 route-miles overall. The largest share of this reduction, 84.0%, came from the abandonment of 733.1 route-miles of light-density, grain-dependent branch lines.

With CN's decision to lift a self-imposed moratorium on branch line abandonment, the carrier added a total of 328.1 route-miles of Saskatchewan infrastructure as discontinuance candidates to its Three Year Network Plan. With another 412.2 route-miles of infrastructure having also been designated for discontinuance by CP just three months earlier, it would appear that both CN and CP have begun to re-examine the viability of their remaining networks.

Although the weakening financial positions of other shortlines did not preclude the possibility of further spin offs, it suggested that the option may not be as desirable as it once was to potential investors. In fact, throughout the course of the 2005-06 crop year, new expressions were given to both of these perspectives. In the first instance, a 60.2-route-mile section of track that had been designated for abandonment by CP was sold to a new shortline operation, the Fife Lake Railway. In the second case, RailAmerica Inc. sold the majority of its western Canadian holdings to CN in January 2006. This transaction, valued at $26 million, encompassed 702.8 route-miles of railway infrastructure grouped under three separate operations: the Central Western Railway; the Lakeland and Waterways Railway; and the Mackenzie Northern Railway. RailAmerica finally exited the western Canadian market entirely when it agreed to donate its interest in the E&N Railway to a local non-profit organization. Finally, the Southern Manitoba Railway applied to the province's Motor Transport Board for permission to discontinue operations on the last remaining 78.6 route-miles of its network between Morris and Mariapolis.

These transactions, along with 168.7 route-miles of track that were recorded as having been abandoned during the course of the 2005-06 crop year, resulted in another significant realignment of the GHTS's railway infrastructure. By the end of the period, Class-1 controlled infrastructure had increased by 3.1%, to 15,725.1 route-miles, while the scope of shortline operations had been reduced by almost one-fifth, falling to 2,869.9 route-miles. Moreover, the amount of infrastructure controlled by these smaller carriers has fallen by 38.2% since the beginning of the GMP while that of the larger Class 1 carriers has risen by 6.1%.

Overall grain volumes have now begun to reflect the effects of these changes in the elevator and railway networks. With the close of the 2005-06 crop year, the tonnage forwarded from points along the non-grain-dependent network had marginally surpassed what it had been in the GMP's base year. In comparison, the volume originated by the grain-dependent network had declined by 12.5%. Similarly, the overall trend clearly shows the tonnage originated by shortline carriers to be faltering in comparison to that of the Class 1 carriers. This is reflected in the relative declines registered by both groups over the course of the last seven crop years: 18.3% versus 2.4%% respectively.

At the close of the 2005-06 crop year, the licensed terminal elevator network in western Canada encompassed 16 facilities, with an aggregate 2.6 million tonnes of storage capacity. Although no physical changes were recorded for the period, respective increases of 14.3% and 3.3% were recorded over the course of the GMP.

The number of covered hopper cars unloaded at terminal elevators during the 2005-06 crop year increased by 24.8%, to 271,714 carloads from 217,666 carloads the year before. These results show CN and CP to have each garnered a 50.0% share of the overall grain movement for the period.

Section 2: Commercial Relations

One of the objectives of the government's regulatory reforms was to provide the GHTS with a more commercial orientation. To this end, a cornerstone element of these reforms was the introduction, and gradual expansion of tendering for Canadian Wheat Board (CWB) grain shipments to western Canadian ports. For the 2005-06 crop year, the CWB has committed itself to moving 40% of its grain shipments using a combination of tendering and advance car awards.

Yet the government also expects that industry stakeholders will forge new commercial processes that will ultimately lead to improved accountability. The purpose of this monitoring element is twofold: to track and assess the impact of the CWB's tendering practices as well as the accompanying changes in the commercial relations existing between the various stakeholders within the grain industry.

Highlights – 2005-06 Crop Year

Tendering

- *CWB's tendering commitment held to a maximum of 20% for third consecutive year.*
- *282 tender calls were issued by the CWB during 2005-06.*
  - *Called for the movement of 5.3 million tonnes to export positions.*
    - *Reduction of 14.4% from the 6.2 million tonnes sought a year earlier.*
- *955 bids received; offered an aggregate 7.1 million tonnes.*
  - *Significant rebound in bidding activity.*
    - *Tendering refocused on available, rather than high-quality, grains.*
- *342 contracts concluded for the movement of 2.4 million tonnes.*
  - *Marginal gain of 2.5% from the 2004-05 crop year.*
  - *CWB concentrates tendered grain movements to the west coast.*
    - *Vancouver's share fell to 54.6% from 70.3% while Prince Rupert's share climbed to 26.9% from 8.1%.*
    - *Thunder Bay and Churchill shares dropped to 18.5% and 0.0% respectively.*
  - *Seven contracts for the movement of 155,600 tonnes of malting barley.*
  - *Represented 16.2% of CWB volume moved to ports in western Canada.*
    - *Marginally below established 20% maximum commitment.*
- *Tenders for 54.7% of the tonnage called either partially, or not at all, filled.*
  - *Modest reduction from previous year's 58.7%.*
- *Proportion moving in multiple car blocks increased marginally to 88.6%.*
  - *Proportion in blocks of 50 or more cars decreased to 59.7% from 63.3%.*
    - *3.9-percentage-point increase in 25-49 car blocks.*
- *CWB estimated 2005-06 savings from grain company tendering, freight and terminal rebates, and financial penalties for non-performance, at $22.9 million.*
  - *Decreased by 12.3% from 2004-05's $26.1 million savings.*

Advance Car Awards

- *2.4 million tonnes of grain moved under the CWB's advance car awards program.*
  - *Represented 15.6% of CWB volume moved to ports in western Canada.*
    - *Fell short of the 20% targeted by the CWB.*
- *31.8% of all CWB movements in western Canada moved under its tendered and advance-car-awards programs.*
  - *Fell short of the 40% committed to by the CWB.*
- *Grain moved under the CWB's advance car awards program largely moved in tandem with that of tendered grain.*
  - *Consisted primarily of wheat and durum.*
  - *80.3% sourced from high-throughput elevators.*
- *Reduced usage of larger multiple-car blocks.*
  - *Stems from railcar allocation process and the larger use of shipments in blocks of less than 50 railcars by the non-major grain companies.*

Other

- *Government of Canada cancelled planned sale of federal hopper car fleet to the Farmer Rail Car Coalition; opted to retain ownership.*
  - *Proposed amendments to Canada Transportation Act to reduce maintenance provisions in existing revenue cap.*
- *Competition Bureau moved to prevent two proposed industry transactions.*
  - *Proposed joint operation of SWP and JRI terminals in Vancouver.*
  - *Tentative sale of AU's former UGG terminal elevator in Vancouver.*
    - *Asset given over to trustee for disposal.*
- *Ocean freight rates almost doubled in 2005-06 crop year.*
  - *Continued to exhibit significant seasonal variability.*
- *Pulse growers eyed possible trade action over US exports to Canada.*
- *Joint Task Force released final report on Vancouver truckers strike.*
  - *Recommended long-term strategy to prevent future disruptions.*
- *CN and CP expanded cooperative efforts in the greater Vancouver area.*
  - *Destination trains to grain terminals in Vancouver to be given better handling.*
- *Growing demand for bio-fuels prompts construction of new facilities.*

Indicator Series 2 – Commercial Relations

Table	Indicator Description	Notes	BASE 1999-00	CURRRENT REPORTING PERIOD (1) 2004-05	2005-06	% VAR	
	Tendering Program [Subseries 2A]						
2A-1	Tenders Called (000 tonnes) – Grain		n/a	6,218.5	5,325.7	-14.4%	▼
2A-2	Tenders Called (000 tonnes) – Grade						
2A-3	Tender Bids (000 tonnes) – Grain		n/a	5,722.9	7,131.0	24.6%	▲
2A-4	Tender Bids (000 tonnes) – Grade						
2A-5	Total CWB Movements (000 tonnes)	(2)	n/a	13,281.2	15,132.6	13.9%	▲
2A-5	Tendered Movements (%) – Proportion of Total CWB Movements	(2)	n/a	18.0%	16.2%	-10.0%	▼
2A-5	Tendered Movements (000 tonnes) – Grain	(2)	n/a	2,387.7	2,447.5	2.5%	▲
2A-6	Tendered Movements (000 tonnes) – Grade	(2)					
2A-7	Unfilled Tender Volumes (000 tonnes)		n/a	3,651.2	2,913.9	-20.2%	▼
2A-8	Tendered Movements (000 tonnes) – Not Awarded to Lowest Bidder		n/a	65.9	130.5	98.0%	▲
2A-9	Tendered Movements (000 tonnes) – FOB		n/a	43.2	155.6	260.4%	▲
2A-9	Tendered Movements (000 tonnes) – In-Store		n/a	2,344.5	2,291.9	-2.2%	▼
2A-10	Distribution of Tendered Movements – Port	(3)					
2A-11	Distribution of Tendered Movements – Railway	(3)					
2A-12	Distribution of Tendered Movements – Multiple-Car Blocks	(3)					
2A-13	Distribution of Tendered Movements – Penalties	(3)					
2A-14	Distribution of Tendered Movements – Province / Elevator Class	(3)					
2A-15	Distribution of Tendered Movements – Month	(3)					
2A-16	Distribution of Tender Delivery Points (number) – Contracted Cars	(3)					
2A-17	Average Tendered Multiple-Car Block Size (carloads) – Port		n/a	55.5	54.4	-2.0%	▼
2A-18	Railway Car Cycle (days) – Tendered Grain		n/a	16.9	15.7	-7.1%	▼
2A-18	Railway Car Cycle (days) – Non-Tendered Grain		n/a	17.5	16.8	-4.0%	▼
2A-19	Maximum Accepted Tender Bid ($ per tonne) – Wheat		n/a	-$21.86	-$18.58	-15.0%	▼
2A-19	Maximum Accepted Tender Bid ($ per tonne) – Durum		n/a	-$19.03	-$18.05	-5.1%	▼
2A-20	Market Share (%) – CWB Grains – Major Grain Companies		n/a	77.2%	76.1%	-1.4%	▼
2A-20	Market Share (%) – CWB Grains – Non-Major Grain Companies		n/a	22.8%	23.9%	4.8%	▲
	Advance Car Awards Program [Subseries 2B]						
2B-1	Advance Award Movements (%) – Proportion of Total CWB Movements		n/a	15.8%	15.6%	-1.3%	▼
2B-1	Advance Award Movements (000 tonnes) – Grain		n/a	2,100.7	2,365.1	12.6%	▲
2B-2	Distribution of Advance Award Movements – Port	(4)					
2B-3	Distribution of Advance Award Movements – Railway	(4)					
2B-4	Distribution of Advance Award Movements – Province / Elevator Class	(4)					
2B-5	Distribution of Advance Award Movements – Month	(4)					
2B-6	Railway Car Cycle (days) – Advance Award Grain		n/a	17.3	15.6	-9.8%	▼
2B-7	Distribution of Advance Award Movements – Multiple-Car Blocks	(4)					
2B-8	Average Advance Award Multiple-Car Block Size (carloads) – Port		n/a	47.3	46.0	-2.7%	▼

(1) – In order to provide for more direct comparisons, the values for the 1999-2000 through 2005-06 crop years are "as at" or cumulative to 31 July unless otherwise indicated.

(2) – Includes tendered malting barley volumes.

(3) – Indicators 2A-10 through 2A-16 examine tendered movements along a series of different dimensions. This examination is intended to provide greater insight into the movements themselves, and cannot be depicted within the summary framework presented here. The reader is encouraged to consult the detailed data table found in Appendix 4 as required.

(4) – With the exception of indicator 2B-6, indicators 2B-2 through 2B-7 examine advance car award movements along a series of different dimensions. This examination is intended to provide greater insight into the movements themselves, and cannot be depicted within the summary framework presented here. The reader is encouraged to consult the detailed data table found in Appendix 4 as required.

2.1 Tendering Program *[Measurement Subseries 2A]*

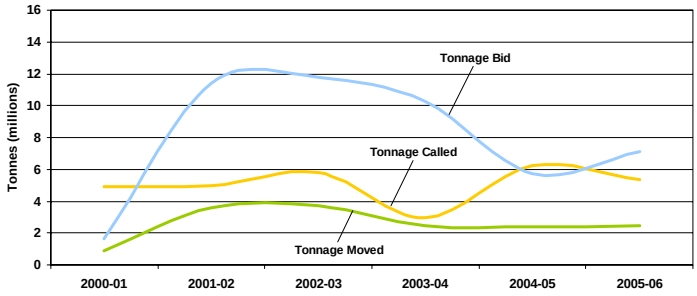
The 2005-06 crop year denoted the sixth for the Canadian Wheat Board's (CWB) tendering program. More significantly, it was the third year in which the CWB targeted to move a fixed 40% of its overall grain movements to the four ports in western Canada using a combination of tendering and advance car awards.[51] Under the terms of this arrangement, about half of this volume – representing a maximum of 20% of its overall grain movements – was to be tendered.

As discussed previously, although the quality of the grain produced for movement in the 2005-06 crop year was generally better than that of the previous crop year, it still fell substantially below normal. In having to adapt to the realities of an unexpected reduction in the supply of higher-quality grain a year earlier, the CWB found itself in a better position to deal with the industry on the tendered movement of a second lower-quality crop. As a result, the behavioural patterns of the industry at large were largely restored to what they had been two years earlier.

Tender Calls

During the 2005-06 crop year, the CWB issued a total of 282 tenders calling for the shipment of approximately 5.3 million tonnes of grain, 14.4% less than the 6.2 million tonnes sought a year earlier. To a large extent, the smaller scope of these calls reflected the CWB's reduced emphasis on drawing in higher-quality grain. As a result, the tender calls also broadened to encompass more lower-graded grains.

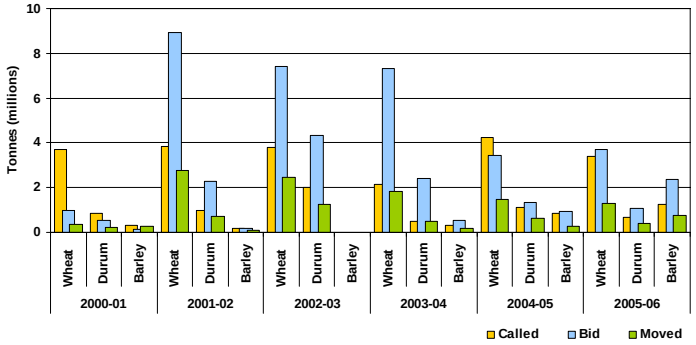
Figure 18: Total Tonnage Called, Bid and Moved Through Tendering



These overarching forces brought about some change to the makeup of the tender calls. As in past years, the vast majority of the grain put out to tender, 63.6%, called for the movement of wheat. For the 2005-06 crop year this entailed a potential movement of 3.4 million tonnes, a value substantially less than the previous crop year's record-setting 4.3 million tonnes. More strikingly, barley displaced durum as the second largest commodity for which tenders were issued. Barley calls amounted to 1.3 million tonnes, which constituted 23.8% of the overall total as compared to 13.5% the year before. Durum calls, which fell to a 12.6% share from an 18.1% share a year earlier, accounted for the remaining 0.7 million tonnes.

There was also a noticeable shift in the comparative amounts these tenders sought to direct to the four ports in western Canada. A record 84.6% of the volume called was intended for export through the west coast ports of Vancouver and Prince Rupert. Although this was consistent with the previous crop year's 81.8% share, it remained considerable above the 64.9% average presented in the first four years of the CWB's tendering program. However, there was a significant shift in the allocation between the two ports. Prince Rupert's share climbed to 26.3% from 10.9% a year earlier, while Vancouver's declined to

Figure 19: Tonnage Called, Bid and Moved Through Tendering – Grain



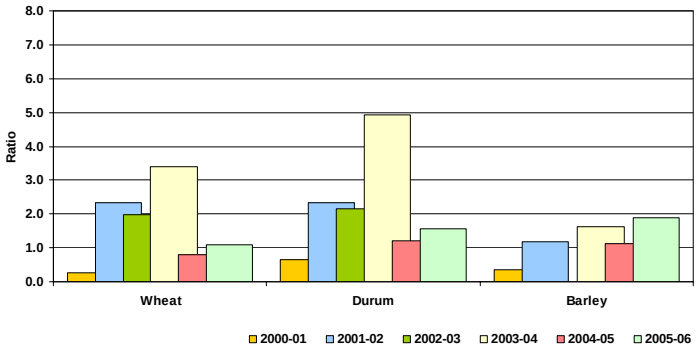
[51] The CWB's tendering program was significantly modified for the 2003-04 crop year following consultations with its 26 agents. The 2002-03 crop year was the last in which the CWB had been committed to tender a *minimum* of 50% of its overall volume.

58.3% from 70.9%. The shares accorded to the ports of Thunder Bay and Churchill also declined: to 15.4% from 16.9% in the case of Thunder Bay; and to 0.0% from 1.3% in the case of Churchill.[52] [See Tables 2A-1 and 2A-2 in Appendix 4]

Tender Bids

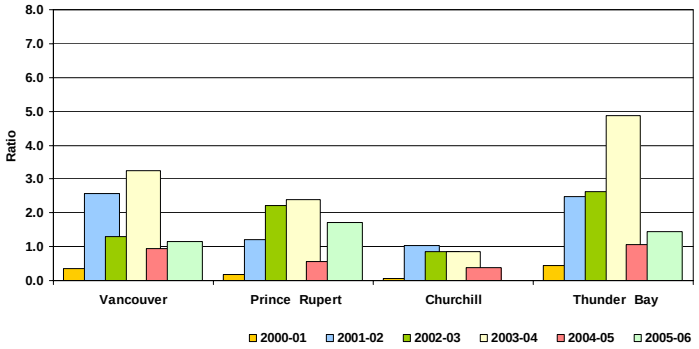
The CWB's tender calls were met by 955 bids offering to move 7.1 million tonnes of grain, about one-third more than the amount sought. The majority of these bids, 51.8%, responded to calls for the movement of wheat. Another 33.4% responded to those issued for barley, while the remaining 14.8% answered those for durum. Although the bidding associated with all grains was higher than in the 2004-05 crop year, there was a noticeable preference given to barley. When examined with respect to the port specified in the tender call, 49.9% of the bids were given over to Vancouver movements, 33.5% to Prince Rupert, and 16.6% to Thunder Bay. In this regard, although the bidding again proved reflective of the tonnage called, it also showed a clear preference for Prince Rupert. [See Tables 2A-3 and 2A-4 in Appendix 4.]

Figure 20: Ratio of Tonnage Bid to Tonnage Called – Grain



In general terms, bidding proved somewhat stronger than in the previous crop year. The comparative increase in the intensity of the bidding can best be gauged through an examination of the tonnage-bid-to-tonnage-called ratio, where higher values denote a much stronger response to a tender call than lower ones. With the exception of tender calls for Churchill, these ratios all moved higher in the 2005-06 crop year. Even so, they remained more subdued than in the 2003-04 crop year, when bidding under the CWB's tendering program proved most intense. Although the bids put forward with respect to wheat and Vancouver, garnered comparatively weaker responses than did others, the overall pattern presented for the 2005-06 crop year proved largely non-discriminatory.

Figure 21: Ratio of Tonnage Bid to Tonnage Called – Port



Contracts Awarded

A total of 342 contracts were subsequently signed for the movement of just over 2.4 million tonnes of grain, only 46.0% of the amount called. This represented 16.2% of the tonnage shipped by the CWB to western Canadian ports during the 2005-06 crop year, and fell somewhat short of its 20% target.[53] [See Tables 2A-5 and 2A-6 in Appendix 4.]

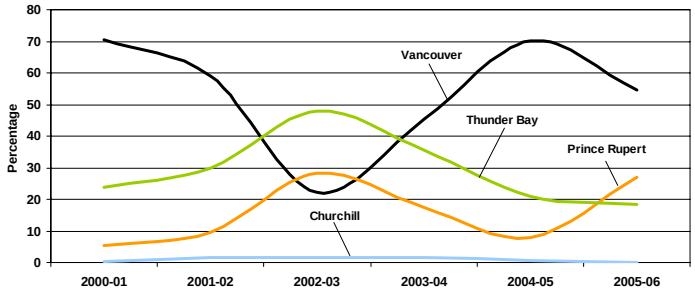
Of the 2.4 million tonnes moved, 54.6% was shipped to Vancouver, 26.9% to Prince Rupert, and 18.5% to Thunder Bay. Owing to the increased volume directed to Prince Rupert these rankings differ significantly from

[52] No tender calls were issued by the CWB for movements to Churchill in the 2005-06 crop year.

[53] Since the tendering of malting barley predates adoption of the Memorandum of Understanding that gave rise to the CWB's current tendering program, malting barley volumes are normally considered independent of the grain volumes tendered under it, but nevertheless are included in the calculation of the total tendered grain volumes moved by the CWB.

those observed in the 2004-05 crop year. In addition to showing a diminished role for Vancouver and Churchill in the movement of tendered grain, these results mark the first instance were Thunder Bay failed to constitute at least the second largest export gateway for tendered grain shipments in the program's six-year history.[54]

Figure 22: Tendered Grain – Destination Port

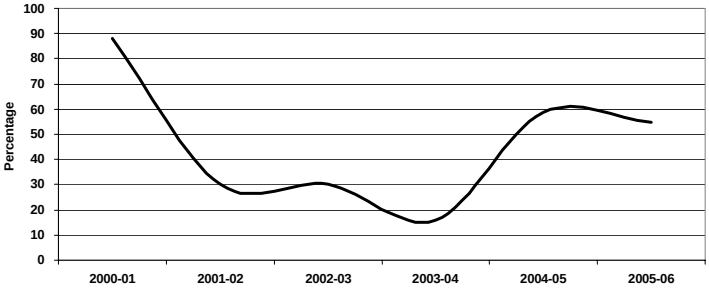


Although these results were influenced by a second consecutive year of reduced grain quality, broader market forces also had a hand in shaping these movements. In particular, reduced barley production in western European and former Soviet Union countries lessened the export competition on feed barley. With the ensuing run up in world prices, the CWB was able to exploit a temporary shortfall in world supplies to export about 1.9 million tonnes of feed barley. Given that much of the demand was tied to Asian markets, the CWB initially used the tendering program to facilitate its movement through the west coast ports. Many of the significant year-over-year variations observed, be it with respect to tendered or non-tendered grain, were attributable to the incremental volume provided by these sales.

Tendered Volumes Not Filled

In large part, the better response rates discussed above reflected the improved ability of the grain companies to secure the volumes set out in the tender calls. However, the difficulty in securing adequate supplies of higher-quality grain, particularly in the fourth quarter, resulted in a high proportion of tender calls going unfilled in the 2005-06 crop year. A total of 2.9 million tonnes went either partially, or completely, unfilled. This constituted 54.7% of the overall volume called, and marked only a modest reduction from the 58.7% recorded a year earlier. Furthermore, it proved to be the third highest value observed since the CWB's tendering program was introduced in the 2000-01 crop year.[55]

Figure 23: Proportion of Total Tonnage Called Not Moved



The specific failings contributing to this outcome provide some insight. No award was made in the case of 1.1 million tonnes (39.1%) since no bids were submitted. Another 0.9 million tonnes (29.4%) went unfilled because an insufficient quantity was bid. For a further 0.6 million tonnes (20.1%), the bid price was unacceptable. The bidders' failure to comply with the specifications set out in the tender also resulted in 0.2 million tonnes (5.5%) having received no award. [See Table 2A-7 in Appendix 4.]

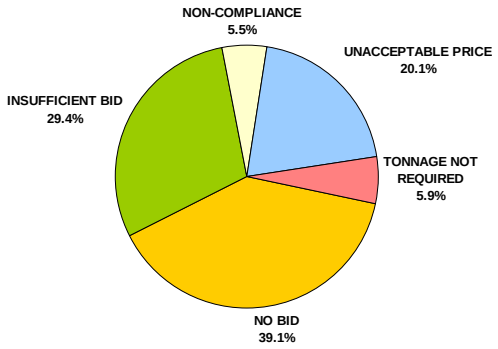
In addition to these conventional failings, special mention must be made of the 0.2 million tonnes in unfilled volume that stemmed from the tendering of feed barley. As opposed to the CWB's normal practice of issuing a tender call only when it has a specific sales contract to fill, the tender calls issued for feed barley were largely speculative, with the CWB anticipating that it could ultimately sell the grain gathered beforehand. However, this

[54] With the exception of the 2002-03 crop year, where Thunder Bay became the GHTS's largest handler of tendered grain as a result of a labour dispute that impeded the movement of grain through Vancouver, tendered grain shipments through the port of Thunder Bay have always ranked second to those of Vancouver.

[55] Owing to the initial lack of industry participation, 88.2% of the tenders called in the first year of CWB's tender program went unfilled. To date, this remains the highest value yet recorded.

was not always the case. In the first quarter, bids were sought and received for 171,600 tonnes of feed barley that ultimately was not needed. When this volume is excluded, the unfilled proportion falls to 51.5%.

Figure 24: Composition of Tendered Volumes Not Filled



Of the 282 tender calls issued, 20 resulted in contracts being awarded to companies that did not put forward the lowest-priced bid. This involved an aggregate volume of 130,504 tonnes, almost double that awarded the year before, and the largest amount recorded in the program's six-year history. In these cases, the lowest-priced bid often failed to secure an award because it included conditions that could not be accommodated.[56] [See Table 2A-8 in Appendix 4.]

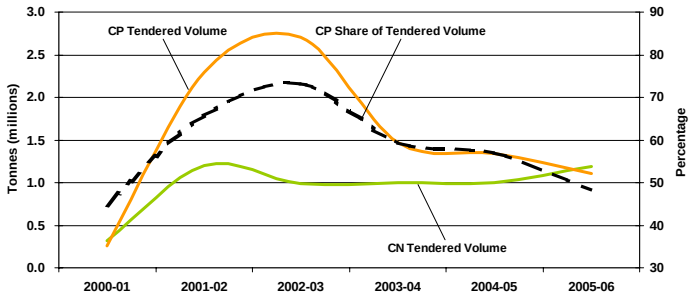
Malting Barley

During the 2005-06 crop year, eight tender calls were issued by the CWB for the movement of malting barley. In response, a total of 23 bids were received. This resulted in the awarding of seven contracts for the subsequent shipment of 155,600 tonnes to Vancouver, the largest amount recorded since 280,800 tonnes were forwarded in the 2000-01 crop year. As has been the case historically, 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. Tendered malting barley shipments in the 2005-06 crop year represented 11.7% of the overall tonnage moved under tender to the port of Vancouver, and just 6.4% of that directed to the four ports in western Canada. [See Table 2A-9 in Appendix 4.]

Originating Carrier

Over half, 51.7%, of the volume moved under tender during the 2005-06 crop year originated at points local to CN. This was noticeably greater than the 42.9% share the carrier secured a year earlier. In fact, this marked the first instance since the 2000-01 crop year where CP has not carried the majority of the CWB's tendered grain.[57] [See Table 2A-11 in Appendix 4.]

Figure 25: Tendered Movements – Originating Carrier



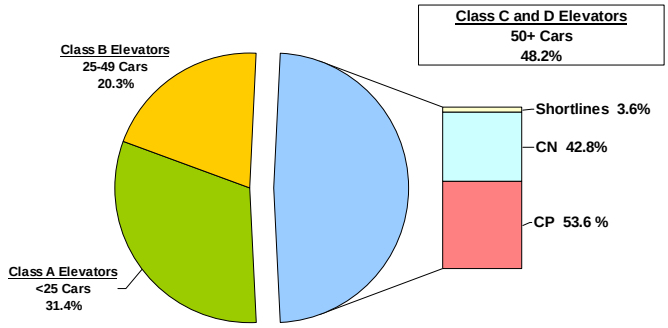
To an extent, the gain in CN's market share should not be taken as an indication of an overall decline in CP's competitiveness. Rather, the data suggests that CN's larger share simply reflected the better availability of grain – particularly barley – within the carrier's own service area. These same forces were equally reflected in CN having garnered an increased share of the overall grain movement as well.

[56] Mention should be of the fact that if these bids were made in accordance with the bidder's agreement with the CWB, they were not automatically rejected. The CWB, the Western Grain Elevator Association, and the Inland Terminal Association of Canada entered into a tri-party agreement that laid out the criteria to be used by the CWB in awarding tenders: the lowest price (greatest savings to farmers); the consolidation of stocks at three terminals or less; and where the full amount of the tender award can not be determined by the first two criteria, the past performance of each grain company with respect to the execution of tender movements is to be used in determining the successful bid.

[57] It was only in the first year of the CWB's Tendering program that CP took a lesser share of the movement than did CN, 44.6% versus 55.4% respectively.

The number of high-throughput facilities served by the carriers themselves underscores the bias in this distribution. Although CN marginally increased the number of high-throughput elevators it serviced to 71 from 69 a year earlier, these constituted just 42.8% of the 166 Class C and D facilities situated across western Canada. With 89 such facilities local to its lines, CP continued to provide service to over half of the high-throughput elevators, 53.6%. Shortline railways provided service to the network's six remaining large facilities. Clearly, with a broader base of high-throughput customers, CP can reasonably be expected to win a greater proportion of the volume shipped from these facilities, be it tendered or non-tendered grain.

Figure 26: Primary High-Throughput Elevators – Serving Carrier

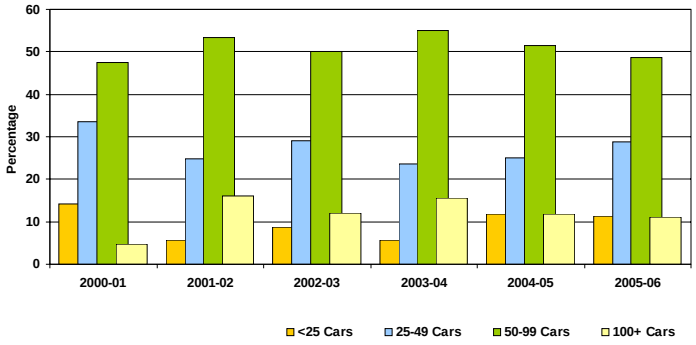


Multiple-Car Blocks

As mentioned above, tendered grain moved largely under the incentive discount programs of both major railways. In fact, since the beginning of the CWB's tendering program, the proportion moving in blocks of 25 or more railcars never amounted to less than 85.9%. While the proportion of tendered grain that moved in this way during the 2005-06 crop year proved slightly higher at 88.6%, it was the third lowest value observed in the past six crop years.

Although largely unchanged from the preceding crop year's 88.2% share, there were some modest losses among the shipments made in the larger car blocks. There was a 2.9-percentage-point decline in tendered shipments using blocks of 50-99 cars, which fell to 48.6% from 51.5%, as well as a 0.7-percentage-point drop in those using blocks of 100 or more cars, which decreased to 11.1% from 11.8%. Much of the losses cited here migrated to shipments made in blocks of 25-49 cars, which increased to 28.9% of the total from 25.0% a year earlier. Movements in blocks of less than 25 cars fell by 0.4 percentage points, to 11.4% from 11.8% a year earlier. [See Table 2A-12 in Appendix 4.]

Figure 27: Tendered Movements – Multiple Car Blocks



Notwithstanding the comparatively small variations that have been observed from year to year, these measurements underscore the fact that successful bidders generally attempt to ship tendered grain in the largest car blocks possible in order to realize the financial benefits available from doing so. Given the greater latitude in planning for these shipments, the proportion of the tendered grain movement earning these discounts has far outpaced that of non-tendered grain. With an estimated 75.6% of all movements having qualified for the same discounts offered by the railway in the 2005-06 crop year, tendered grain shipments held a 13.0-percentage-point advantage.[58]

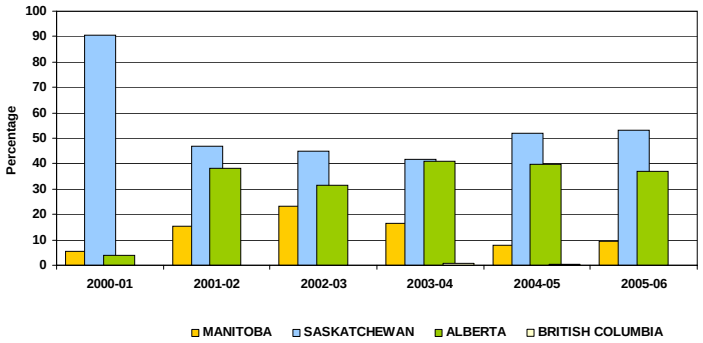
[58] The 75.6% cited here as the overall proportion of shipments moving in blocks of 25 or more railcars at a time is an estimate drawn from data presented in Table 3C-5.

Tendered Origins

As was the case in each of the four previous crop years, the largest amount of grain shipped under the CWB's tendering program was drawn from Saskatchewan. Totalling slightly more than 1.2 million tonnes, these shipments accounted for just over half, 53.2%, of all tendered grain movements. However, this marked a modest increase from the previous crop year's 52.2% share, and only the second instance where the province's share actually exceeded the 46.8% it had represented in the 2001-02 crop year.[59] This 6.4-percentage-point gain has translated into modest losses for the other three producing provinces over the past six years.

With 0.2 million tonnes of tendered grain originating in Manitoba, the province's share increased to 9.5% from 7.7% a year earlier. A modest decline was recorded by Alberta, where an 8.9% decrease in originated volume, which totalled 0.9 million tonnes, reduced the province's share to 37.2%% from 39.9%. The most substantive decline in the 2005-06 crop year was attributable to shipments from British Columbia, which fell by 83.7%, to 967 tonnes from 5,931 tonnes a year earlier. However, this represented less than 0.1% of the overall total.

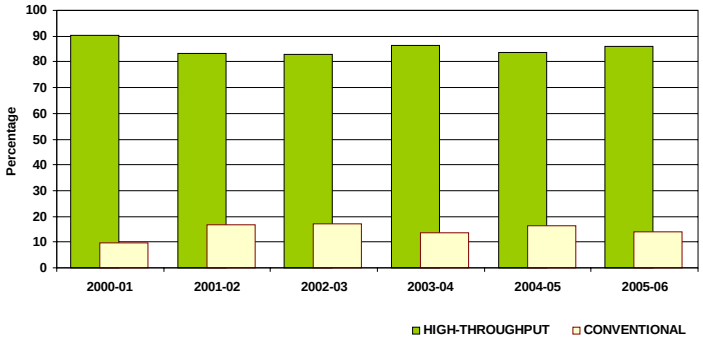
Figure 28: Tendered Grain – Provincial Origin



As mentioned previously, high-throughput elevators have proven to be the principal facilities employed in moving tendered grain. In fact, in the initial year of the tendering program, these facilities originated 90.3% of the volume. Even in the face of two consecutive years of drought, this proportion changed comparatively little, declining to a low of only 83.0% in the 2002-03 crop year. The result was little different for the 2005-06 crop year, when the proportion increased to a marginally higher 86.0%.

This represented a modest gain over the 83.8% reported as having originated at high-throughput elevators a year earlier. This overall strengthening reflected broader provincial gains. For Manitoba, where the limited supply of higher-quality grains had proven problematic for tendered shipments in the 2004-05 crop year, its originations at these elevators climbed substantially, to 85.2% from 75.2% a year earlier. In the case of Saskatchewan, the proportion originating at high-throughput facilities increased only slightly, to 85.9% from 85.5%. Alberta posted the largest share originating at these facilities, 86.3% as compared to 83.8% the year before. As in previous years, tendered grain shipments from British Columbia came exclusively from conventional elevators. [See Table 2A-14 in Appendix 4.]

Figure 29: Tendered Grain – Elevator Class



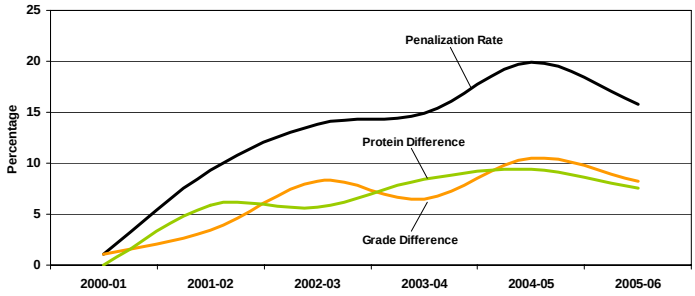
[59] The 83.5% share garnered by Saskatchewan in the 2000-01 crop year is not deemed comparative since the results were heavily skewed in favour of the province during the first year of the CWB's tendering program.

Applied Penalties

For the 2005-06 crop year, a total of 4,383 carloads were assessed with financial penalties following their arrival at the four designated ports in western Canada.[60] This marked a 19.0% decrease from the 5,412 carloads penalized a year earlier. In addition, the penalization rate also declined, to 15.8% from 19.9%.

This marked the first substantive decrease in the penalization rate since the tendering program was instituted in the 2000-01 crop year. At that time, only 1.1% of the cars unloaded were penalized for having failed to meet the grade or protein level specified in the tender.[61] Even when benchmarked against the 9.3% of shipments that were penalized in the 2001-02 crop year, the 2005-06 crop year's penalization rate can be seen to have risen substantially. Nevertheless, it must be remembered that this rate is not inconsistent with the mis-shipment rate of 18% tied to grain movements at large.[62]

Figure 30: Tendered Grain – Penalized Shipments

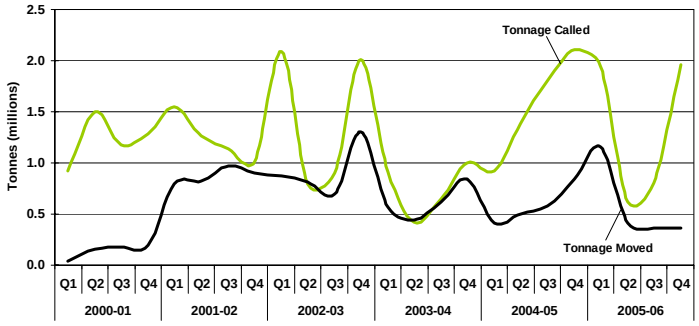


Shipments that failed to comply with the tender's specified grade marginally exceeded those that failed to meet the required protein content, 8.3% versus 7.5% respectively. As with the penalization rate, both values posted modest reductions from the highs that were recorded in the 2004-05 crop year. Notwithstanding this redirection, these failure rates have increased fairly steadily over the past several years. Moreover, they have done so largely in tandem, with no one element having proved to be the single most dominant problem. The pattern exhibited thus far clearly shows that both failings present themselves in roughly equal proportion, although the ranking frequently alternates. [See Table 2A-13 in Appendix 4.]

Distribution

For the 2005-06 crop year, the CWB issued tenders at an average rate of 443,800 tonnes per month. However, the actual amounts varied from a low of 184,100 tonnes in January 2006, to a high of 1,132,700 tonnes in August 2005. The quarterly distribution of these values shows an equally significant amount of variability, with relative lows in the second and third quarters sandwiched between sharply higher first and fourth quarter values. Interestingly, this almost evenly divided the total tonnage called between the first and second halves of the crop year.

Figure 31: Quarterly Distribution of Tendered Grain



The monthly volume of grain actually shipped under the tendering program showed a similar, albeit dampened, distribution pattern. Averaging 191,000 tonnes per month, these shipments varied from a low of 41,200 tonnes to a high of 527,300 tonnes.

[60] Shipments falling below the specified grade or protein level are assessed a penalty of $200 per railcar. Those exceeding the specifications are penalized an amount equal to the price differential commanded by the received grade or protein, and that of the initial payment for the contracted grain.

[61] The penalization rate of 1.1% cited for the 2000-01 crop year is not deemed comparable to that of later crop years given the limited volume of grain actually moved under the CWB's tendering program.

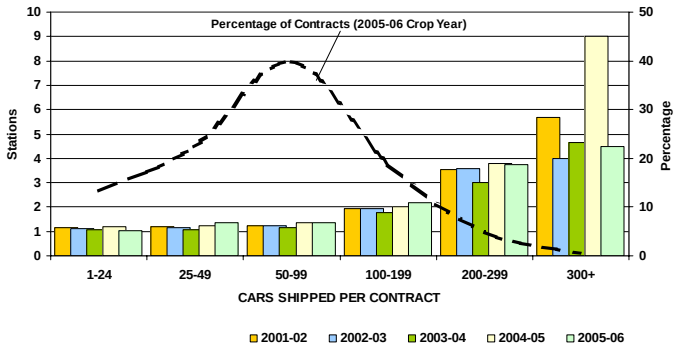
[62] The 18% mis-shipment rate cited here is an estimate provided by the CWB.

Although the quarterly distribution shows an initial correlation with the tonnage called, the relationship proved far weaker than that witnessed a year earlier. The forces underscoring this appear to be twofold: a structural lag that sees much of the tendered volume actually moved some four to six weeks after the call was issued by the CWB; and the volume that went unfilled. Much of the diminished strength in the correlation appears related to the latter, which saw the proportion of tender calls that went unfilled increase from 28.7% in the first quarter to 79.1% in the fourth. [See Table 2A-15 in Appendix 4.]

Delivery Points per Tender Contract

Tendered grain shipments can originate at one or more delivery points. Of the 342 contracts signed for the movement of tendered grain in the 2005-06 crop year, 63.7% involved grain drawn from a single delivery point. This was somewhat lower than the 67.6% observed a year earlier. The average number of delivery points observed for shipments made in blocks of less than 25 cars, 25-49 cars, and 50-99 cars, showed only minor variation, averaging somewhat less than 1.3 stations per contract in all three instances. Moreover, the average for these groupings has remained relatively stable since the 2001-02 crop year. [See Table 2A-16 in Appendix 4.]

Figure 32: Tendered Grain – Delivery Points per Contract



Contracts calling for the shipment of 100 or more cars typically drew grain from a greater number of delivery points. This relates simply to the larger amount of grain involved, and the fact that it often had to be drawn from a larger geographic area. In the case of shipments comprised of 100 to 199 cars, grain was drawn from an average of 2.2 delivery points; 3.8 stations for shipments of between 200 and 299 cars; and 4.5 stations for shipments involving 300 or more cars. With the exception of this last grouping, where the average fell to half of the 9.0 it had been a year earlier, these averages have changed comparatively little from those first observed in the 2001-02 crop year.[63]

Of all contracts signed in the 2005-06 crop year, 75.8% involved movements of less than 100 carloads of grain. Although this was somewhat less than the 80.4% observed a year earlier, the result was consistent. Still, the greater part of this, 40.0%, moved in lots of 50-99 cars. This was little changed from the 42.2% recorded a year earlier, and only marginally higher than the 38.4% garnered in the 2001-02 crop year. On the whole, these observations reinforce earlier ones to the effect that grain companies have generally attempted to ship tendered grain in larger car blocks whenever possible.

Multiple-Car Block Size

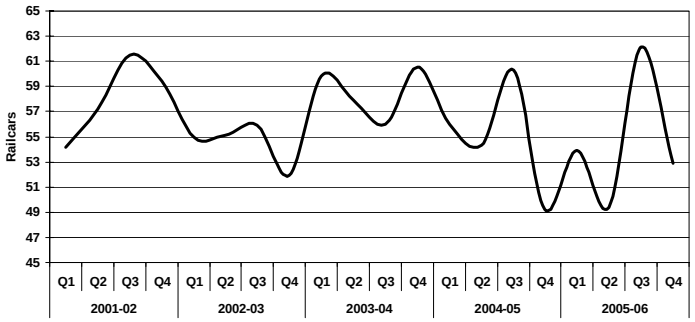
As mentioned previously, 88.6% of the tendered grain shipped in the 2005-06 crop year moved under the incentive discount programs offered by CN and CP. On average, these shipments amounted to only 54.4 cars, a value just above the 50-car threshold used to define movements from high-throughput elevators. What is more, this denoted a 2.0% decrease from the 55.5-car average of the previous crop year. With the exception of tendered grain moving to Prince Rupert, a decline in the size of the average car block used in each of the primary export corridors was noted. [See Table 2A-17 in Appendix 4.]

In addition to having posted the only year-over-year increase in an average car block size, tendered grain movements in the Prince Rupert corridor reached a record annualized average of 61.5 cars. This was driven in

[63] A single contractual movement involving 300 or more cars from nine origins was recorded in the 2004-05 crop year. Owing to the limited frequency of such movements, the average is highly sensitive to such outlying data points. The five-year history shows that movements of this size are typically drawn from four or five stations. The reduction posted in the 2005-06 crop year denotes a return to this norm.

large part by a record-setting average of 82.2 cars in the second quarter, although the awarding of larger contracts also contributed to the production of these results.

Figure 33: Tendered Grain – Weighted Average Car Block



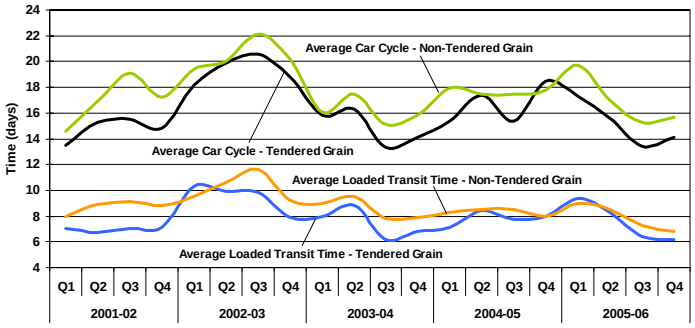
Among decliners, the most significant reduction came in the Churchill corridor, where the CWB's decision not to issue tenders resulted in the average block size falling to zero from a record-setting 89.3 cars a year earlier.[64] Although the annualized averages for Vancouver and Thunder Bay also declined, they fell by much lesser amounts. In the case of Vancouver, the 2005-06 crop year's average fell by 4.9% to 52.7 cars, well short of the 62.5-car record set two years earlier. As for Thunder Bay, the 10.7% reduction proved somewhat greater, with the average falling to 48.6 cars from 54.4 cars. Even so, the annualized average exhibited in the Thunder Bay corridor has proven to be the most stable, ranging from this crop year's record-setting low to a high of 55.5 cars in the 2002-03 crop year.

On the whole, the quarterly averages show a greater degree of variability. To a large extent, these values presented an undulating pattern very much in keeping with the one portrayed a year earlier, although the downward momentum presented throughout the 2004-05 crop year was largely absent.

Car Cycles

The average car cycle for tendered grain shipments amounted to 15.7 days in the 2005-06 crop year. This represented a 7.1% reduction from the 16.9-day average recorded a year earlier. The quarterly values also reveal a progressive reduction in cycle times. This reduction was consistent with the broader improvement in overall car cycles for the period.[65] [See Table 2A-18 in Appendix 4.]

Figure 34: Car Cycles – Tendered and Non-Tendered Grain



With 86.0% of the tendered grain volume originating at high-throughput elevators, the car cycle associated with these movements was noticeably lower than those of non-tendered grain shipments. In fact, the average car cycle for tendered grain was 6.5% less than that of non-tendered grain in the 2005-06 crop year, 15.7 days versus 16.8 days respectively.

By their very nature, high-throughput elevators aim to construct grain shipments in the largest car blocks possible. In general terms, this allows for faster railway movement since the grain is typically gathered from one point rather than a multiple of smaller, conventional elevators.[66] Over the course of the past five crop years, the time advantage enjoyed by tendered grain shipments has proven fairly consistent, amounting to an average of 1.1 days, or

[64] The values cited here are based on annualized averages, and not the individual quarterly records that may have been attained in any of the five crop years for which data has been collected.

[65] Car cycles are discussed more fully in section 3.3.

[66] A pilot project conducted by Saskatchewan Wheat Pool and CN in 2002 showed that back-to-back movements of 100-car shuttle trains from high-throughput elevators could achieve an average car cycle of 6.5 days.

6.7%, less than that of the car cycle for non-tendered movements. The greater portion of this advantage came from faster loaded transit times.

In the 2005-06 crop year, tendered grain's average loaded transit time amounted to 8.1 days. This represented a 2.5% increase over the previous crop year's 7.9-day average. When the five-year record is examined against that of non-tendered grain shipments, the loaded transit time advantage can be seen to have amounted to about 0.7 days, or 8.1%. The benefit derived from the difference between the average empty transit times for tendered and non-tendered grain proved somewhat less, and amounted to about 0.5 days, or 5.7%.

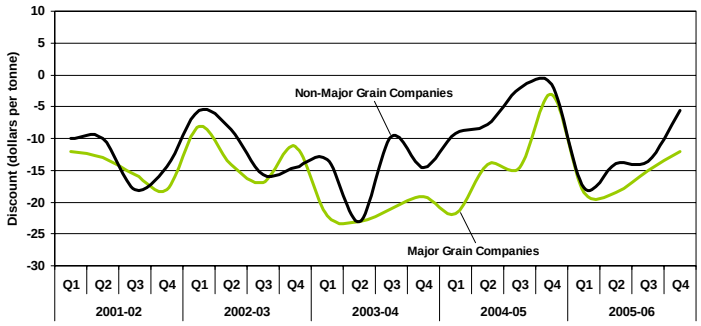
The proportion of grain that actually moves in trainload lots has also had a bearing on the car cycle. Although this volume has been increasing, a significant proportion still moves in less-than-trainload lots. Tendered grain's multiple-car-block average of 54.4 carloads underscores this. As long as tendered grain moves in less-than-trainload lots, whether because the tender contracts largely specified an insufficient volume or because the facility at which it originates can not physically accommodate their assembly, further improvement is likely to be hampered. Even so, the statistics presented here continue to indicate that the major grain companies have been moving steadily towards this objective.

Accepted Bids

With the CWB's tendering program having been intended to stimulate competition, the Monitor uses a series of indicators to assess market dominance. With a number of stakeholders having raised concern over the potential ability of major grain companies to outbid their smaller competitors in an effort to win tender contracts, the first of these involves measuring the bids advanced by both the major, and non-major, grain companies.[67]

Although the actual winning bids remain confidential, the CWB discloses the range of bids received for each tender issued. As "price takers," it is in the CWB's best interest to accept the most remunerative bid put forward.[68] 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.

Figure 35: Maximum Discount from Initial Price – Wheat



The maximum discounts put forward by both groups shows a significant degree of variation over the course of the past five crop years, be it on a quarterly or annual basis. To a large extent, these fluctuations reflected their response to changing marketplace conditions. As a rule, however, the maximum discounts offered by the major grain companies generally exceeded those offered by their smaller competitors by a factor of at least 25%, although there were numerous instances where the non-major grain companies outbid their larger rivals. In the 2001-02 crop year, the value of the bids put forward for the right to move tendered wheat increased steadily, reaching a maximum of $18.07 per tonne by year's end. In the 2002-03 crop year these bids retreated somewhat, pulling back to a lesser $16.99 per tonne. Although the bidding became more erratic in the 2003-04 crop year, the maximum discount increased to a record $23.04 per tonne. [See Table 2A-19 in Appendix 4.]

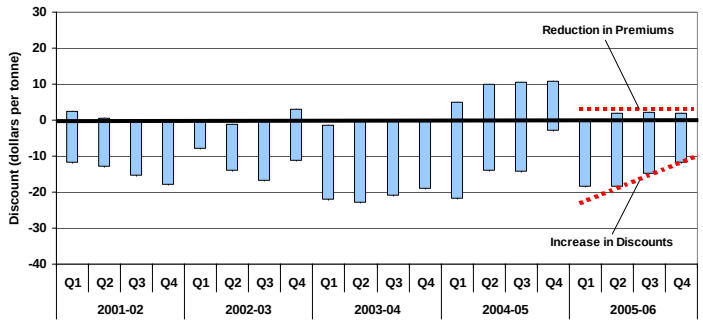
With tight supplies of high-quality grain, the nature of the bidding in the 2004-05 crop year was dramatically altered. The discounts that the CWB had been able to extract from the grain companies began to decline.

[67] As used here, the term "major grain companies" refers to Agricore United, Saskatchewan Wheat Pool, Cargill Limited and Pioneer Grain Company, Limited. These companies effectively constitute the four largest firms sourcing grain within western Canada, and also possess terminal elevator facilities at Thunder Bay and the west coast ports of Vancouver and Prince Rupert.

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

From an initial high of $21.86 per tonne in the first quarter, the maximum discount bid ultimately fell to just $3.06 per tonne by year's end. Notwithstanding this reduction in the discounts offered, what distinguished the 2004-05 crop year from those that preceded it was the fact that the bids advanced by the grain companies quickly began to require that the CWB pay a premium to move tendered grain. Whereas the CWB had effectively been able to dismiss such "positive bids" before, they were compelled to accept a significantly larger number of these as a result of the dramatic change in market conditions. The major grain companies generally proved to be more aggressive, taking the lead in asking that the CWB pay a premium of as much as $10.75 per tonne over the initial price to ensure that grain was moved into position for export.

Figure 36: Range of Tender Bids Accepted – Wheat



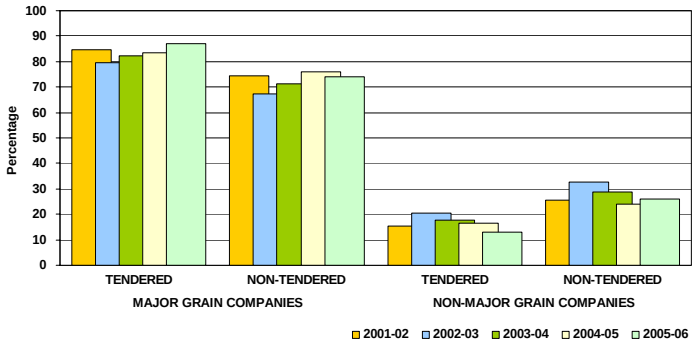
Given the realities tied to marketing another crop of comparatively poorer quality, the CWB proved more adept at refocusing its sales program in the 2005-06 crop year. With less emphasis on the movement of higher-quality grain, the CWB was better positioned to address the tendering of an abundant supply of lower-quality grains. As a result, the grain companies were largely unable to exploit the market demand pressures that allowed them to assess significant premiums against the movement of tendered grain the year before. With limited exception, premiums were dramatically reduced, reaching no more than $2.25 per tonne on select movements of high-quality wheat in the third quarter. At the same time, discounts rebounded substantially, initially rising to $18.58 per tonne in the first quarter before settling back to $12.00 per tonne in the fourth.

Despite these market gyrations, the major grain companies can still be seen to have maintained their position as the industry's price leaders. Whether offering deeper discounts, or demanding higher premiums, these actions continue to suggest that the major grain companies have adopted a more aggressive approach to tendering than have the non-majors. Moreover, what ultimately appears to distinguish the two groups is the non-majors' proclivity to respond more selectively to any of the tender calls issued by the CWB, while the major grain companies appear far less discriminatory.

Market Share

Unquestionably the best indicator of market dominance is the relative share held by both the major, and non-major, grain companies. Interestingly, the share secured by the larger grain companies in the movement of CWB grain, be it tendered or non-tendered, while having fluctuated over the course of the past five crop years, has not materially changed. In the 2001-02 crop year, the major grain companies controlled 84.6% of the tendered volume. Four years later, that share had increased only marginally to 87.1%. Much the same was true of non-tendered CWB grains, with the majors' share having declined by only a small amount, to 74.2% from 74.4%. [See Table 2A-20 in Appendix 4.]

Figure 37: Market Share – CWB Grains



Necessarily, the market shares held by the non-major grain companies also showed little material change. Over the course of the past five crop years they have lost 2.5 percentage points from their share of the tendered grain movement while adding 0.2 percentage points to its share of non-tendered grain movements.

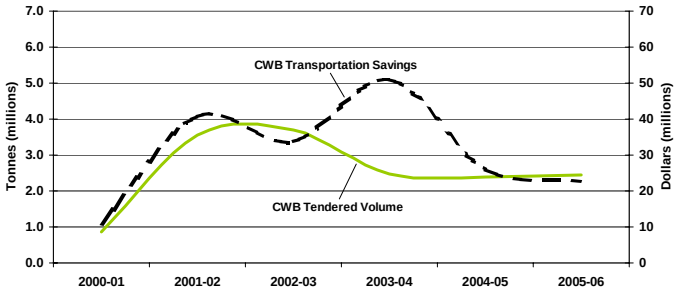
To be sure, these differentials are very small, and far too limited in scale to be indicative of any meaningful trend. Moreover, the limited nature of the changes observed suggests that the major grain companies, despite their apparent competitive advantages, have not been able to easily displace their smaller rivals.[69]

To an extent, this result can partially be explained by the heightened degree of competition that has existed between the grain companies themselves, whether it be in terms of the deeper discounts they put forward in their bids to secure tendered grain movements or in the higher trucking premiums they have been willing to pay producers in order to draw grain into their facilities. Another factor relates to the fact that tendered grain movements are effectively capped at 20% of the CWB's shipments to the four ports. Given the nature of the general car allocation mechanism used to accommodate the remaining 80% of this overall volume, this limit has helped maintain the market position currently held by the smaller grain companies.

Financial Savings

Despite a general increase in the discounts offered by the grain companies in their tender bids, as well as a sharp reduction in the amount of premiums paid on select tendered movements, the transportation savings accruing to the CWB – and ultimately passed back to producers through its pool accounts – actually declined in the 2005-06 crop year. Although derived largely from the savings in transportation costs arising from the bidding process itself, these proceeds also include freight and terminal rebates, as well as financial penalties for non-performance. The CWB estimates the net savings generated from these activities to have decreased by 12.3%, to $22.9 million from $26.1 million in the 2004-05 crop year.

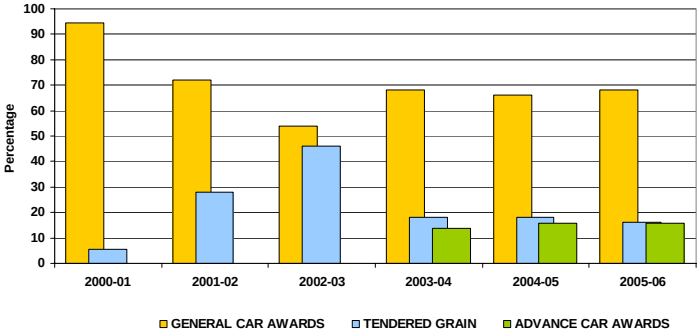
Figure 38: CWB Transportation Savings



2.2 Advance Car Awards Program *[Measurement Subseries 2B]*

A total of 2.4 million tonnes of grain moved under the CWB's advance car awards program during the 2005-06 crop year. This represented 15.6% of the CWB's total shipments to western Canadian ports, which constituted a loss of just 0.2 percentage points from the 15.8% share garnered a year earlier. In conjunction with the volume that moved under its tendering program, a combined 31.8% of the CWB's total shipments moved under these two programs. This fell somewhat short of the 40% that had been targeted, and

Figure 39: CWB Grain Movements – Western Canada



[69] The competitive advantage referred to here relates specifically to the number of high-throughput elevators operated by the major grain companies. With over 80% of tendered grain shipments moving in multiple-car blocks from high-throughput elevators, the major grain companies are deemed to have more of the strategic assets needed to exploit these efficiencies than do their non-major rivals. In addition, the major grain companies also operate their own terminal elevators. This makes their smaller rivals entirely reliant on them for any terminal handling services needed.

marginally below the 33.8% achieved in the 2004-05 crop year.[70]

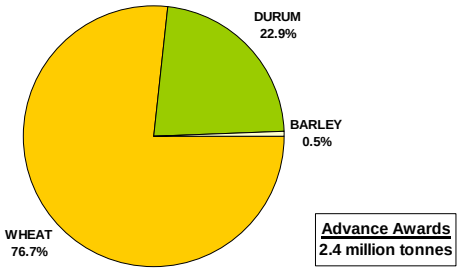
Despite the marginal reduction in its share of total CWB shipments, an additional 0.3 million tonnes were moved under the advance car awards program in the 2005-06 crop year. This constituted a year-over-year increase of 12.6%, which largely paralleled an 11.5% rise in total CWB shipments. Quarterly shipments under the program increased fairly steadily throughout the year, rising from just under 0.5 million tonnes, and a 13.0% share, in the first quarter to almost 0.9 million tonnes, and a 19.5% share, in the fourth.

This effectively countered a declining quarterly movement of tendered grain, which slid from a near-record high of 1.2 million tonnes in the first quarter to 0.4 million tonnes in the fourth. When combined with tendered grain movements, the year-to-date volumes shipped under both programs can be seen to have declined from a 49.6% share in the first quarter, to 37.4% in the second, to 33.2% in the third, and finally to 31.8% in the fourth.

Traffic Composition

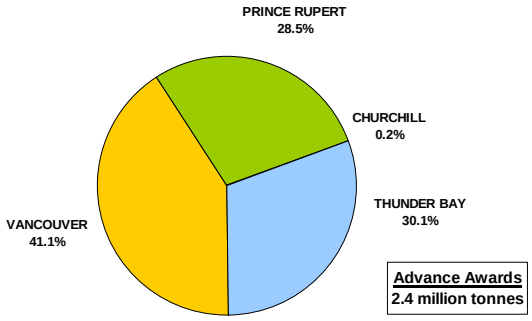
In a number of respects, the grain shipped under the advance car awards program paralleled that moved under the tendering program. The vast majority of the 2.4 million tonnes shipped consisted of wheat, some 1.8 million tonnes, or 76.7%. This was in turn followed by another 0.5 million tonnes, or 22.9%, of durum, and a residual barley component of 11,400 tonnes, or 0.5%. As compared to tendered grain movements, wheat secured an additional 23.5 percentage points in share while durum gained 6.7 percentage points. With only a limited barley movement under the advance car awards program, the comparative share accorded to these shipments fell by 30.2 percentage points. [See Table 2B-1 in Appendix 4]

Figure 40: Advance Car Awards – Grain Composition



As in the case of tendered grain, the largest portion of the volume moved under the advance car awards program was also destined to the port of Vancouver, just under 1.0 million tonnes, or 41.1%. This, however, significantly trailed the 54.6% share the port secured in the movement of tendered grain. Vancouver was followed in turn by Thunder Bay with 0.7 million tonnes and a 30.1% share; Prince Rupert with 0.7 million tonnes and a 28.5% share; and Churchill with 5,700 tonnes and a 0.2% share. [See Table 2B-2 in Appendix 4.]

Figure 41: Advance Car Awards – Destination Port



As with tendered grain, the share lost by Vancouver was recouped by Prince Rupert, which saw its share of total handlings under the program increase to 28.5% from 18.2% a year earlier. A further 2.6 percentage points were surrendered to it by Thunder Bay and Churchill as well. This increased partiality for Prince Rupert is manifest in other measures under the GMP regarding tendered as well as non-tendered grain movements.

[70] 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.

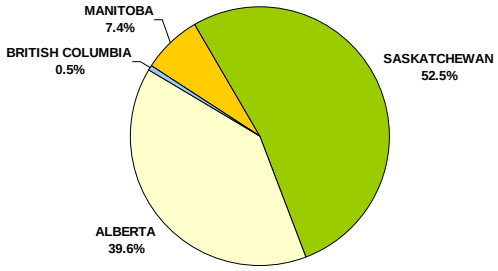
Originating Carrier

Over half, 52.5%, of the volume moved under the advance car awards program during the 2005-06 crop year originated at points local to CP. This proved marginally less than the 53.5% the carrier had secured a year earlier, but somewhat more than the 48.3% obtained as its share of the tendered grain movement. Despite these differences, the value remains consistent with the 50.0% share the carrier garnered with respect to the overall movement of grain in western Canada. [See Table 2B-3 in Appendix 4.]

Traffic Origination

Like tendered grain, the largest volume moved under the CWB's advance car awards program came from Saskatchewan, 1.2 million tonnes. This volume accounted for only a marginally lesser share of the total tonnage, 52.5% versus 53.2% for tendered grain. And like tendered grain, shipments from the provinces of Alberta and Manitoba were positioned behind it, originating 0.9 million tonnes and 0.2 million tonnes respectively. A total of 11,600 tonnes was also shipped from British Columbia. [See Table 2B-4 in Appendix 4.]

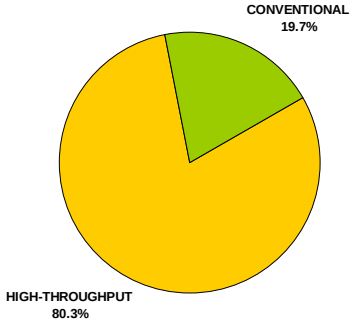
Figure 42: Advance Car Awards – Provincial Origin



The shares accorded to these latter provinces from shipments under the advance car awards program corresponded fairly closely with those obtained through tendering. In the case of Alberta, this amounted to 39.6% versus 37.2% respectively. Manitoba's 7.4% share of the advance car awards movement proved to be only slightly less than the 9.5% it secured for tendered grain. Although comparatively small, the shares on movements from British Columbia were sharply higher than those obtained under the tendering program, 0.5% versus 0.1% respectively.

As was the case with tendered grain, 80.3% of the grain shipped under the advance car awards program came from high-throughput elevators. This was only marginally less than the 83.4% originated from these facilities a year earlier. This share was also consistent with, but somewhat lower than, the 86.0% reported earlier for tendered grain movements.

Figure 43: Advance Car Awards – Elevator Origin



When the division between conventional and high-throughput elevators is examined against province of origin, little material difference is noted. With 81.9% of its traffic originating at high-throughput elevators, Alberta utilized these facilities the most. Saskatchewan and Manitoba followed with high-throughput shares of 81.4% and 68.9% respectively. On the whole, these provincial values were consistent with those observed for tendered grain shipments.

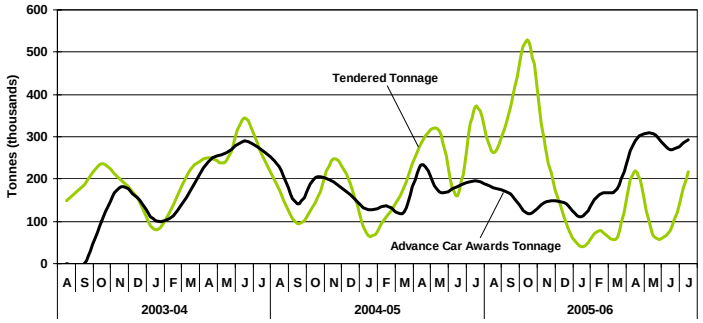
Monthly Distribution

The volume of grain moved under the CWB's advance car awards program averaged 197,100 tonnes per month, and varied from a low of 111,500 tonnes in January 2006, to a high of 308,000 tonnes in May 2006. Moreover, the distribution of these movements presented a pattern similar to that of tendered grain.

The similarity in these patterns effectively underscores what has been suggested by other indicators under the GMP: that grain moving under the advance car awards program does so largely in tandem with shipments

made under the tendering program. It also indicates that the grain companies have been exploiting the flexibility that the advance car awards program was intended to bring to their planning activities. By coupling together these movements the grain companies have been able to maximize the cost-saving potential of larger block shipments whenever possible.

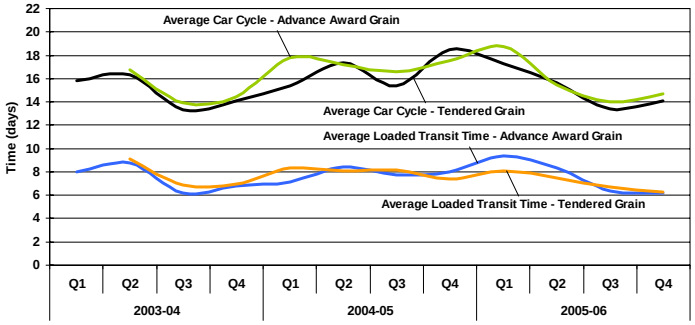
Figure 44: Advance Car Awards – Monthly Distribution



Car Cycles

The average car cycle for grain shipped under the CWB's advance car awards program amounted to 15.6 days in the 2005-06 crop year. However, this value proved to be 9.8% less than the 17.3-day average of the 2004-05 crop year. In addition, it was little different from the 15.7-day average observed for tendered grain shipments. In fact, the data collected showed that the quarterly car-cycle values for advance car awards movements closely tracked those observed under the tendering program, and were equally consistent with the broader improvement in overall car cycles for the period. [See Table 2B-6 in Appendix 4.]

Figure 45: Advance Car Awards – Car Cycle



Even so, the 7.0-day average loaded transit time for grain moved under the advance car awards program was substantially less than the 8.1 days given over to tendered grain shipments. Conversely, the average empty transit time proved to be longer than that of tendered grain shipments, 8.6 days versus 7.6 days respectively.

Although the comparative averages for advance car awards movements proved to be higher than those of tendered grain, they were marginally lower than those posted for non-tendered movements in general. With the overall car cycle of non-tendered movements averaging 16.8 days, however, this difference amounted to 7.1%. Although these similarities still lend credence to the observation that grain shipped under the CWB's tendering and advance car awards programs moved largely in concert, the data suggests that there were a number of instances where this was not the case.

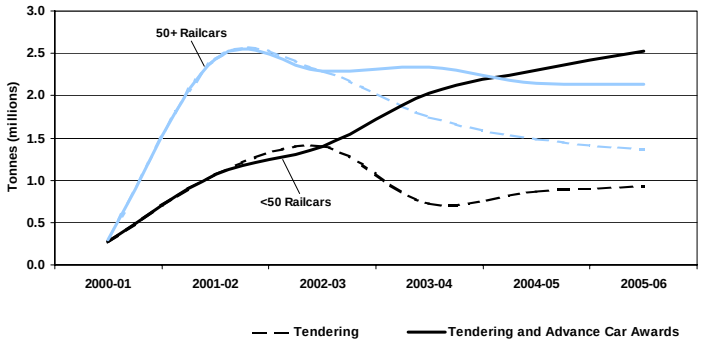
Multiple-Car Blocks

As mentioned previously, the proportion of grain moving in multiple-car blocks has been steadily increasing under the GMP. Moreover, with 88.6% of tendered grain shipments moving in blocks of 25 or more cars, the usage rate easily outpaced that of non-tendered grain. This was equally the case for movements in blocks of 50 or more cars, which represented 59.7% of the overall tendered volume in the 2005-06 crop year.

These values attest to the comparative strength of the major grain companies in moving tendered grain from high-throughput elevators in larger car blocks. Yet it is this very dominance that led the CWB and its agents to collectively roll back the proportion of total CWB movements that would be tendered, beginning in the 2003-04 crop year, from a minimum of 50% to a maximum of 20%. At the same time, this volume was to be complemented by another 20% that would move through the CWB's new advance car awards program. To an extent, the allocation mechanisms inherent in the advance car awards program partially protected the smaller

grain companies, and ensured that they would be able to exercise a comparatively greater role in the movement of this 40% than they had been under the tendering program alone.[71]

Figure 46: Grain Volumes Moved in Multiple Car Blocks



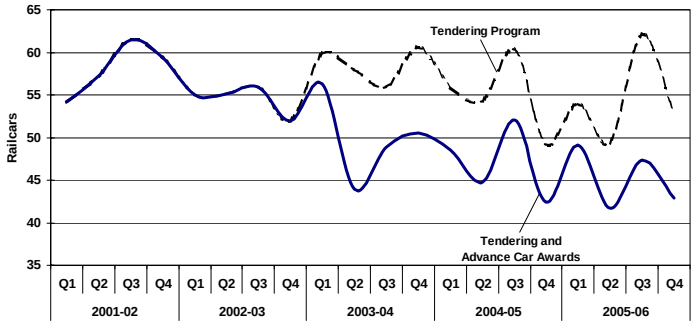
Given the generally smaller facilities used by the non-major grain companies, shipments made using the equipment provided through advance car awards are comparatively smaller in size than those moved under the tendering program alone. This is equally true of shipments made by the major grain companies since they frequently fill-out their tendered movements whenever possible to take advantage of the higher discounts available to them from doing so. When combined for comparative purposes, the result is an increased concentration of movements made in blocks of less than 50 cars, and a dilution of those made in blocks of 50 or more cars. Whereas 40.3% of tendered grain movements were in blocks of less than 50 cars, the proportion climbed to 54.3% when pooled with those made using advance car awards. Conversely, the proportion moving in blocks of 50 or more cars decreased from 59.7% in the case of tendered grain shipments alone, to 45.7% when combined with those moved under the advance car awards program.

The greater increase in the amount of grain moved under the advance car awards program produced a comparatively larger number of smaller shipments in the 2005-06 crop year. As a result, the share of movements in blocks of 50 or more cars fell to 45.7% from 48.1% a year earlier. Correspondingly, the share accorded to shipments of less than 50 cars increased, to 54.3% from 51.9%. [See Table 2B-7 in Appendix 4.]

Multiple-Car Block Size

In a parallel expression of these same forces, the average car-block size also fell. As seen earlier, car blocks averaged 54.4 cars under the CWB's tendering program in the 2005-06 crop year. When combined with movements under the advance car awards program, this average was reduced by 15.4% to 46.0 cars. The effects of this dilution can be seen in a comparison of the quarterly averages. [See Table 2B-8 in Appendix 4.]

Figure 47: Average Car Block – Tendering and Advance Awards



Despite only three years of data from the advance car awards program, the available statistics indicate that the joint movement of tendered and advance-car-awards grain has pulled down the tendering program's higher average by about eight cars. Moreover, these averages display similar patterns that draw attention yet again to the complementary nature of these movements.

[71] The 40% cited here refers to the total derived from combining tendering and advance car awards. Advance car awards are granted on the same administered basis as the general CWB car awards, with 50% based on the recent 18 weeks of producer deliveries and 50% based on future deliver intentions, with no bidding on the part of the grain companies.

2.3 Commercial Relations – Other Developments

2.31 Federal Government Retains Ownership of Hopper Car Fleet

Between 1972 and 1986, the federal government spent approximately $570M to purchase some 13,000 covered hopper cars for use in the movement of western Canadian grain. These, and another 6,000 publicly supplied covered hopper cars, are provided to CN and CP under operating agreements that allow for their use as part of the carriers' general grain fleet.[72]

While both railway companies supplement these cars with their own equipment in order to meet prevailing market demands, the public fleet remains the principal asset employed in moving grain through the GHTS. As a result, the deployment of these cars has always been an important matter to stakeholders. The general availability of these cars, as well as the mechanisms used to secure their use at any particular moment in time, has always figured prominently in discussions focusing on potential changes to the GHTS.

When the railways' right of first refusal in any potential sale of these cars expired on 30 June 2002, other groups expressed interest in acquiring them.[73] One in particular, a producer-backed organization called the Farmer Rail Car Coalition (FRCC), championed a plan that called for ownership to be transferred to a non-profit, farmer-led company for a nominal sum. The FRCC proposal revived the debate over the potential sale of these cars. Many stakeholders expressed scepticism over the FRCC's plan while others maintained that auctioning the cars to the highest bidder remained the only fair means of dealing with the issue. At the same time, some stakeholders urged the government to maintain the status quo. In the case of the railways, CN offered to purchase its share of the cars at fair market value, while CP advocated that the government maintain ownership but lease the cars back to the railways under a new operating agreement.

While this debate continued, the government pressed forward with its preparations for a possible transfer, including the commissioning of a mechanical inspection on the cars.[74] In addition, the House of Commons Standing Committee for Agriculture and Agri-Food, followed later by the Standing Committee on Transport, opened hearings into the various disposal options available to the government.[75] Finally, in March 2005, the government announced that it had elected to enter into formal negotiations with the FRCC on a potential transfer of the hopper car fleet.

This was followed in November 2005 by an announcement that the parties had in fact reached an agreement-in-principle on the transfer of the federal hopper car fleet to the FRCC. In general terms, this agreement provided for an initial five-year lease of the cars to the FRCC, with a permanent transfer at the end of that period. The transfer price was pegged at $205 million, and consisted of lease payments totalling $65 million, a credit of $35 million for car refurbishment work to be done by the coalition, and a final payment of $105 million over a further eight-year period.

However, the former Liberal government never finalized the agreement prior to the call for a federal election. Moreover, in the aftermath of the election held on 23 January 2006 the country's new Conservative government

[72] Over time, attrition has diminished the number of covered hopper cars still in the federal government's fleet. By the end of the 2005-06 crop year an estimated 12,100 cars remained. In addition, this fleet had at one time also been supplemented by another 2,000 cars owned by the CWB; 2,000 cars administered by the CWB on leases paid by the federal government; 1,000 cars owned by the government of Alberta, and 1,000 cars owned by the Saskatchewan Grain Car Corporation. Although these cars have also been reduced through attrition, a combined publicly-owned fleet of about 19,000 covered hopper cars had at one time been directed towards the movement of western Canadian grain.

[73] In 1996, the federal government announced that it intended to sell its fleet of 13,000 covered hopper cars. However, under the operating agreement then governing the use of these cars, the railways held a right of first refusal (ROFR) in any potential sale. Deeming that any sale should be open to a broader number of potential purchasers, the federal Minister of Transport issued a five-year notice to the railways that he was exercising his right to terminate the operating agreement as of 31 December 2001. The railways' ROFR automatically expired six months later.

[74] The inspection was undertaken as a means of assessing the general condition of the government's covered hopper fleet, as well as identifying any repairs that might be necessary. The inspection was performed on a representative sample amounting to about eight percent of the cars still in service.

[75] The House of Commons Standing Committee for Agriculture and Agri-Food concluded its hearings on the matter in December 2004. The Standing Committee on Transport held its hearings two months later in February 2005.

indicated that the whole matter was being reconsidered. On 4 May 2006, Lawrence Cannon, the newly appointed Minister of Transport, Infrastructure and Communities announced that the Government of Canada had decided not to proceed with the transfer of the cars to the FRCC, and that it would instead retain ownership of the fleet in order to maximize benefits for farmers and taxpayers.

Still, one of the more contentious issues that arose during this period related to the actual costs incurred in maintaining the government's hopper car fleet. The FRCC's proposal was founded on the principle that these costs could effectively be reduced to an estimated annual average of $1,500 per car from the $4,329 per car that the railways were allowed under the revenue cap.[76] A subsequent examination into these costs suggested that the railways' actual maintenance costs did in fact fall well below the allowance granted under the revenue cap. As a result, the government also announced that it was proposing amendments to the Canada Transportation Act that would permit the Canadian Transportation Agency to adjust the maintenance allowances accorded under the revenue cap. By more closely aligning this compensation with the actual cost of maintaining the hopper cars in regulated grain service, it was estimated that allowable carrier revenues could be reduced by as much as $2.00 per tonne. However, by the close of the 2005-06 crop year these amendments had still not been enacted into law.

2.32 Competition Bureau Moves to Prevent Proposed Industry Transactions

The Competition Bureau acted on two unresolved transactions for the future operation of terminal elevators in the port of Vancouver. The first of these related to a proposed joint operation of the adjacent terminals of Saskatchewan Wheat Pool (SWP) and James Richardson International Limited (JRI) on the north shore of Burrard Inlet.[77] The proposal had been aimed at improving the operational efficiency of both facilities by permitting each to specialize in specific commodities, as opposed to all grains. In addition to the physical integration of storage capacity, vessel loading activities and supporting railway infrastructure, it was also anticipated that the new arrangement would make it easier to deal with the industry's emerging needs respecting identity preservation, product tracing, food safety and special handling.[78] To this end, Pacific Gateway Terminal Ltd. (PGTL), in which SWP and JRI held an equal ownership, was established as an arm's-length entity to oversee the management of these two terminal elevators.

Although this transaction required the formal approval from the Competition Bureau, PGTL began operating with the interim consent of the Bureau in July 2005. This was to allow certain aspects of the integration to proceed while the Bureau considered the matter. However, in November 2005 the Bureau filed an application with the Competition Tribunal challenging the joint venture under Section 92 of the Competition Act. In its application, the Bureau alleged that the joint venture would increase concentration in the control of port grain terminals at Vancouver, which combined with other market conditions, would likely result in a substantial lessening of competition and in a reduction of the competitive options open to farmers and other companies shipping grain to the port.

Although SWP and JRI indicated that they intended to contest the challenge before the Competition Tribunal, they agreed to abide by an interim order aimed at ensuring that both companies marketed their grain handling services at the port independently. The Tribunal is not expected to rule in the case prior to the end of the 2006-07 crop year.

The second matter related to an order issued by the Bureau in 2001 as a prerequisite to its approval of the merger between Agricore Cooperative Ltd. and United Grain Growers Limited (UGG), that required the emerging Agricore United (AU) to sell the Vancouver terminal elevator that had been owned and operated by UGG. Although the company had actively searched for a potential buyer, it had ultimately been unable to

[76] The annual average of $4,329 per car cited here was developed by the Canadian Transportation Agency at the request of Transport Canada using the 1992 costing base, and represents an estimate of the associated maintenance costs embedded in the CN and CP revenue caps for the 2003-04 crop year. It should be noted that this estimate was specific to the FRCC proposal and, therefore, did not take into consideration other cost elements where some maintenance provisions may have been excluded

[77] The SWP terminal elevator has a licensed storage capacity of 237,240 tonnes as compared to that of 108,000 tonnes for the JRI facility. The combined capacity of the two facilities would total 345,240 tonnes and account for just over one-third of Vancouver's total licensed storage capacity.

[78] SWP and JRI physically connected their existing railway infrastructures in order to facilitate the exchange of railcars between, and integrate the operations of, what were designed as two stand-alone facilities.

conclude a sale over the course of the succeeding four years. In May 2005, however, AU announced that it had reached a tentative agreement for the sale of the facility to Terminal One Vancouver Ltd., a consortium representing five farmer-owned inland grain terminals operating in Saskatchewan.

(Photograph courtesy of the Vancouver Port Authority)

Figure 48: An aerial view of the former UGG terminal elevator belonging to Agricore United in Vancouver, British Columbia.

Even so, the consortium appeared unable to amass on its own the 1.6 million tonnes in annual grain volume that would be needed to make the venture economically viable. As such, the consortium attempted to entice other shippers into joining with them, or – in the alternative – into signing grain-handling agreements with Terminal One. This proved difficult as many of these shippers already had pre-existing contracts with other terminal operators. As such, AU and Terminal One were unable to conclude a final transfer before the 2004-05 crop year came to an end.

In light of this, AU reported to the Competition Bureau on 29 July 2005 that a sale of the UGG facility to Terminal One was not expected to close by the deadline that had been imposed by the Bureau, requesting that the timeframe be extended in order to allow both parties sufficient time to conclude the transaction.[79] However, the Bureau denied the request, which effectively put an end to the sales deal that AU and Terminal One had been working towards. Faced with the forced disposal of the facility, AU filed an application with the Competition Tribunal seeking, among other things, an order rescinding the original consent agreement made between the Commissioner of the Competition Bureau and AU for the sale of its former UGG facility.

However, shortly following the opening of hearings into the matter on 27 March 2006, AU moved to withdraw its application to rescind the consent agreement along with any objections it still had to moving forward with the disposal of the UGG facility. In the weeks that followed AU's abandonment of this legal challenge, the Competition Bureau announced that the elevator had been turned over to a Vancouver-based trustee, Grant Thornton LLP, for disposal under a process that was expected to take four months. With the close of the 2005-06 crop year, however, this asset had yet to be sold.

2.33 Ocean Freight Rates

As discussed in previous editions of the Monitor's reports, ocean freight rates have fluctuated dramatically in the past three crop years. Half way through the 2003-04 crop year, they had climbed to a level that was five-and-a-half times what they had been just 18 months earlier. Ultimately, this marked a plateau from which they began to tumble in the second half. This pattern was largely repeated in the 2004-05 crop year, with ocean freight rates spiking in midyear before then again beginning to slide. By the end of July 2005, the Baltic Dry Index had fallen to a level not seen since the close of the 2002-03 crop year.[80]

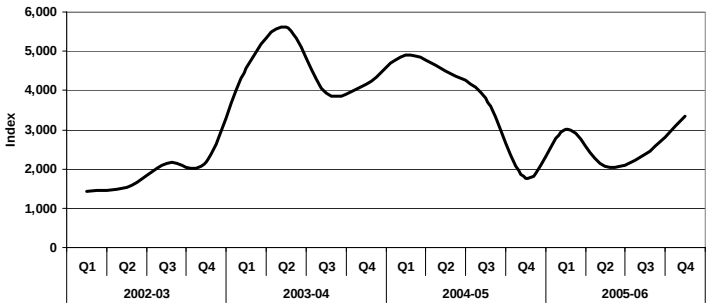
Much of this price movement reflected the prevailing, and perceived future, demand for vessels to service China's growing trade in raw materials and finished goods. This had a significant impact on the export programs for CWB as well as non-CWB grains. In some cases, grain importers consciously deferred buying Canadian grain in the hope that ocean freight rates would moderate. In others, they simply turned to less-distant grain-exporting nations in an effort to contain these costs.

[79] The Commissioner had granted extensions for the sale of the UGG facility on several previous occasions. Under the most recent of these, if a sale could not be concluded by 1 August 2005, the facility was to be turned over to a trustee for divestiture.

[80] The Baltic Dry Index is produced by The Baltic Exchange Limited, a London-based organization that provides independently gathered real-time freight market information such as daily fixtures, indices for the cost of shipping wet and dry cargos, route rates, as well as a market for the trading of freight futures. The Baltic Dry Index is a price index of ocean freight rates based on a composite of daily rate quotes for 24 shipping routes. The information presented in the accompanying chart is drawn from publicly available secondary sources.

Even in North America, the rise in these costs changed traditional routing decisions. Canadian grain exports to Mexico, which had long used ocean-going vessels in movements from west coast ports, were being displaced by direct-rail shipments. In addition, the growing spread between other benchmark ocean freight rates resulted in the temporary movement of more grain through ports in the US Pacific Northwest and Canada's east coast.

Figure 49: Baltic Dry Index of Ocean Freight Rates



China's economic expansion continues to be viewed as the main driver in all this, with its demand for bulk shipping capacity expected to remain high over the course of the next few years. In fact, many analysts believe that until a sufficient number of new vessels has been built to address the underlying imbalance between the supply and demand for carrying capacity, any reduction in ocean freight rates is likely to be graduated, rising and falling in the same cyclical manner as witnessed in each of the last two crop years. An observed initial increase in ocean freight rates during the first quarter of the 2005-06 crop year, followed by a decline in the second and a moderate rise in the second half, is entirely consistent with this viewpoint. And although the Baltic Dry Index has registered a net increase of about 90% in the last twelve months, it remains substantially below the values recorded in either of the two preceding crop years. Although this suggests that ocean freight rates have indeed been moderating, they clearly remain highly volatile.

2.34 Pulse Growers Eye Trade Action

The surging pace of US pulse exports to Canadian processors during the post harvest period led to calls for the Canadian Government to pursue an antidumping countervailing duty. Canadian producers were alarmed that both processing and transportation capacity were being usurped by subsidized American production, thereby restricting their own ability to deliver products.

In 2002, the US government passed a new Farm Bill, which for the first time extended the "loan rate", widely perceived to be a production subsidy, to peas and lentils. The loan rate establishes a floor price for the commodity. If producers sell their production at anything below the loan rate, the US government makes up the difference. The subsidy applies to products marketed in Canada, just as it would if they were marketed domestically.

Since 2001, there has been a dramatic increase in US production of peas and lentils, with increases approaching 400% and 100% respectively. With no corresponding increase in processing capacity or domestic demand in the US, their producers looked north to the well established industry in Canada. By trucking their production to Canadian processors, they were also able to access the favourable statutory freight regime in western Canada, and mitigate the impact of what they perceived to be poor service and exorbitant rate increases by the BNSF railway, which holds a virtual monopoly on service in the northern tier of the US grain producing states.

The more than plentiful supply of pulses and the willingness of US producers to deliver at any price, knowing that their government would provide the top up to the loan rate, was cited as the reason that the already depressed pulse market was sinking even further throughout the fall. The Saskatchewan Pulse Growers association launched an investigation into the allegations raised by its members.[81] A consulting firm was retained to quantify the product coming into Canada, the price it was selling for, cost of production in the US

[81] This internal investigation came shortly after the Canadian Border Services Agency announced a formal investigation into alleged dumping of subsidized American corn at the behest of the Ontario Corn Producers Association. Ontario, Quebec and Manitoba corn producers alleged that the depressed prices which they were facing were largely the result of the large volume of American corn crossing the border into the feed market and to meet the growing demands of ethanol production.

and the level of subsidy paid. Simultaneously, the association encouraged processors to buy Canadian products.

Ultimately, the Pulse Growers decided against requesting that the government pursue trade action against American imports. Their rationale was that such action would not discourage the US overproduction and competition for export markets. Other factors were seen as contributing to the depressed prices – such as successive years of record production in Canada, large carryover stock and the significant rise in the value of the Canadian dollar. The investigation did determine that the pace of US exports to Canada is accelerating and that the commodities are being sold in Canada at prices well below the cost of production.

2.35 Joint Task Force Releases Final Report on Vancouver Truckers Strike

On 25 June 2005, following a month-long series of failed negotiations between the Vancouver Container Truckers' Association (VCTA) and 46 west coast trucking companies, over 1,000 members of the VCTA went on strike in a protest over low wages and rising fuel costs. With trucks transporting more than 40% of the container volume handled by the port of Vancouver, movements into and out of the container terminals located there were brought to a virtual standstill. The action also disrupted the normal flow of traffic through the port, and had a negative affect at other facilities in British Columbia's Lower Mainland.

By mid July 2005, the strike's impact was beginning to be felt over a wider geographic area. Shipping lines were reportedly holding back goods destined for Vancouver at Asian origins as well as in European ports. With goods piling up elsewhere in Canada, many within the industry claimed that the nation's transportation system was being compromised. Later that month, a mediator appointed by the provincial and federal governments proposed a two-year deal that called for an immediate increase in the haulage rates and fuel surcharges applicable on container movements in the Vancouver area. Although the VCTA's negotiating body recommended that the striking truckers accept the offer, the trucking companies that engage their services unanimously rejected the deal.

In an effort to bridge the impasse while the search for a long-term solution continued, the Vancouver Port Authority (VPA) announced on 1 August 2005 that trucking companies trying to service the port's container terminals would have to obtain a license under an interim system to be put in place for a period of 90 days. In doing so, these companies would be required to pay truckers a minimum of $200 for each container they delivered, a rate that had been set out in the mediator's recent proposal. This was supported by a federal Order in Council issued in accordance with section 47 of the Canada Transportation Act that allowed such extraordinary steps to be taken in the interest of stabilizing the national transportation system.

Concurrent with this, a joint task force created by the provincial and federal governments was formed to examine the various issues surrounding the movement of containers in the Lower Mainland. Its ultimate purpose was to recommend a long-term strategy aimed at improving industry relations, preventing future disruptions to the movement of containers, and maintaining the efficiency and effectiveness of the transportation system as a whole. Although these actions brought about an immediate restoration of service, clearing the backlog of traffic required more than a month of active effort on the part of all stakeholders.

In November 2005, the joint task force released its final report, which recognized the complicated contractual relationships between the port, container terminals, shipping lines, shippers and carriers. Among others, its recommendations included provisions for the adoption of a licensing scheme aimed at better managing the number of drivers and vehicles involved in transporting containers in the lower mainland; implementing a mandatory reservation system and extending the hours of operation at container terminals in order to eliminate congestion; enhancing information systems; clarifying the jurisdictions of federal, provincial and local authorities; amending the Competition Act as well as federal and provincial Labour Codes; and promoting best practices throughout the port sector.

In response to this, the VPA announced a program aimed at gradually extending the hours of operations at Vanterm, Centerm and DeltaPort over the next five years. While these measures have helped stabilize drayage activity since the beginning of the 2005-06 crop year, many stakeholders continue to express concern over the potential for another disruption to trucking services at the port. If this were to arise, they fully expect the various governing authorities to respond far more quickly in protecting the commercial interests of the port of Vancouver.

2.36 CWB Exercises Option to Purchase 1,660 Covered Hopper Cars

In November 2005, the CWB announced that it intended to exercise the purchase options on 1,660 covered hopper cars that they had been leasing since 1980.[82] In doing so, the CWB increased its pool of owned equipment from 1,850 to 3,510 cars. This purchase came on the heels of the federal government's own announcement to negotiate a plan to lease or sell its fleet of 12,400 covered hopper cars to the Farmer Rail Car Coalition (FRCC).[83]

Although the CWB's purchase would not physically add to the number of hopper cars in its fleet, its plan to revise the operating agreement under which it allowed the railways to use them marked a significant divergence from past practices. In general terms, the CWB stated that it intended to eliminate the standing practice of supplying these cars to the railways free of charge so long as they were used to move western Canadian grain.[84] In fact, much of the impetus for this change built on the oft-stated plans of the FRCC to later lease the hopper cars they bought from the federal government back to the railways, a financial mechanism that would allow the FRCC to raise the capital funds necessary to provide for the longer-term replacement of the cars themselves. Although the federal government later decided not to proceed with the transfer of its hopper car fleet to the FRCC, by the end of the third quarter the CWB had already concluded new operating agreements with both CN and CP that included provisions for the leasing of its cars to the railways at prevailing market rates.[85]

However, this change had ramifications for the industry at large. While the leasing of the CWB's cars to the railways might generate additional financial benefits to producers as a result of its flow back to them through the CWB's pool accounts, the railways would be entitled to compensation for these additional costs under the revenue cap. This could in turn result in farmers facing potentially greater freight rate increases than would have otherwise been allowed. In fact, the Canadian Transportation Agency made just such an adjustment when it determined in April 2006 that the Volume-Related Composite Price Index (VRCPI) would be escalated by 6.6% for the 2006-07 crop year. In its determination, the Agency specifically stated that the costs to be incurred by the railways for the leasing of the CWB's cars accounted for almost one-fifth, or 1.24 percentage points, of the allowed increase in the VRCPI.[86]

2.37 CN and CP Expand Cooperative Efforts in the Greater Vancouver Area

In late January 2006, CN and CP announced that they had reached agreement on a further series of cooperative actions aimed at improving rail service in the greater Vancouver area. These actions, which went into effect in March 2006, effectively extended the scope of the co-production initiative that had been adopted several years earlier for train movements in the Fraser Canyon.[87] Under what was being called a new routing and switching agreement, the destination trains operated by both carriers would be allowed to bypass yards

[82] These cars were obtained under a 25-year lease by the CWB. Although the CWB administered the leases, the Government of Canada reimbursed them for the costs incurred.

[83] In March 2005 the Government of Canada announced that it had elected to enter into negotiations with the FRCC for the potential transfer of its fleet of hopper cars. Readers are referred to section 2.31 for further information on the proposal put forward by the FRCC, and the federal government's later decision not to proceed with the transfer of these cars.

[84] This practice mirrored that employed by the Canadian government with respect to its own fleet of 12,400 covered hopper cars, as well as those supplied by the governments of Saskatchewan and Alberta, which numbered about 1,000 apiece. Although these cars were provided to CN and CP free of charge when they were used to move western Canadian grain to the ports of Vancouver, Prince Rupert, Thunder Bay and Churchill, a charge was assessed whenever they were used in alternate service.

[85] With no final agreement on the transfer of the federal hopper car fleet to the FRCC having been concluded before the fall of the previous Liberal government, the country's new Conservative government announced on 4 May 2006 that it had decided not to proceed with the transfer, and that it had opted to retain ownership instead.

[86] See Canadian Transportation Agency Decision Number 253-R-2006 dated 28 April 2006.

[87] In July 2000, CN and CP announced that the two carriers would engage in directional running over a 155 route-mile section of largely parallel mainline track between Mission and Ashcroft, British Columbia. The westbound trains of both companies would be routed through the Fraser Canyon over CN's mainline while those moving eastward would be directed over the track owned by CP. The agreement's common aims were to alleviate congestion, enhance capacity, and improve the overall fluidity of operations in the Vancouver corridor.

and avoid traditional railway interchanges. More specifically, CN would be responsible for handling all trains destined to terminals located on the North Shore of Burrard Inlet, while CP would handle all trains destined to the South Shore.

In addition to providing both railways with a further means of preventing terminal congestion, the agreement also allowed the railways to avoid some of the capital spending that would otherwise have been necessary to enhance the capacity of their own plants. From the vantage point of the GHTS, the handling of destination trains through to the grain terminals located on both the north and south shores held the promise of faster turnaround times. By avoiding the delays that traditionally come from interchanging traffic between the carriers themselves, it is entirely possible that terminal handling times in the greater Vancouver area could be reduced through such actions. This, theoretically, should result in a modest improvement to both the loaded and empty transit times in the Vancouver corridor.

2.38 Bio-Fuels and the GHTS

Significant developments in the bio-fuels industry during the past year have emphasized the growing importance of this area to western Canadian agriculture and, by extension, to the GHTS. As governments in both Canada and the United States develop policies and programs aimed at increasing the use of bio-fuels as a complimentary energy source, the impact on the western Canadian grain industry and the GHTS will be felt proportionally.

Three primary issues drive the demand for bio-fuels:

- Agricultural and energy economics – Historically the production costs of bio-fuels, be it ethanol or bio-diesel, were prohibitively high in comparison to traditional "fossil fuels." With technological advances enabling the reduction of bio-fuel production costs, combined with the ever-increasing cost of oil, the economics of deriving fuel from biomass (grain and cellulose products) becomes viable. Further, as producers face increasing pressures as a consequence of falling farm income, they will aggressively pursue new marketing opportunities.

- Environmental concerns – Rising from issues related to climate change and global warming, alternative energy options derived from bio-mass become an attractive means to lower carbon emissions.

- Secured energy supply in the United States – As a consequence of an increasing dependence on foreign oil suppliers in the United States, US government policies are increasingly being directed at securing a greater domestic energy supply and reducing its dependence on foreign oil. Bio-fuels play a major part in this strategy.

Government policies dictating a minimum ethanol blend in gasoline (expected to be 5%) for both Canada and the US, along with the increased use of bio-diesel are triggering changes in the grain industry.[88] With grain being the source for much of the biomass required for ethanol and bio-diesel production, the impact on the GHTS will stem from the redirection of certain grains away from their traditional markets and into the bio-fuels market. The provinces of Ontario, Manitoba, and Saskatchewan have already mandated blending rates ranging from 5% to 10% for ethanol in gasoline, with varying implementation dates and criteria. The movement towards the increased use of bio-fuels will have a considerable influence on both the volumes handled through the GHTS and in the industry's approach to emerging logistical needs.

Ethanol

Ethanol has been blended into gasoline for over 10 years by many Canadian and US suppliers, and marketed as an environmentally friendlier fuel. The impending federal implementation of regulated blend rates of 5% will

[88] On December 12, 2006, the Honourable Rona Ambrose, Minister of the Environment, announced the government's intention to introduce legislation that would regulate an annual average renewable content of five per cent in gasoline by 2010, adding that the government intended to regulate a two per cent requirement for renewable content in diesel fuel and heating oil by 2012. This is to be accomplished under the Canadian Environmental Protection Act, 1999 (CEPA 1999) through amendments to the Fuels Division of CEPA 1999 that are proposed under Canada's Clean Air Act, which at the time of writing, remained in committee.

drive the annual equivalent of approximately 5.5 million tonnes of bio-mass, predominantly corn and wheat, into the ethanol feedstock markets in order to meet those demands.[89] At present, this demand amounts to less than 1.0 million tonnes annually.

Although Canadian ethanol production lags behind that of the US, a variety of new plant construction projects are progressing. Moreover, a series of additional plans to augment Canada's production capacity were also initiated in the last year. In July 2006, Suncor opened the largest ethanol production facility in Canada. The plant, whose output is expected to total some 200 million litres per year, was intended to draw on eastern Canadian and US corn production for feedstock. Among those facilities nearing completion was a 130-million-litre per year ethanol plant being built by Husky Oil at Lloydminster, SK, which is expected to source 350,000 tonnes of wheat from local producers. At the same time, the company was also engaged in a major expansion of its existing facility at Minnedosa, MB. In support of these efforts, the federal government also announced $11 million in new funding initiatives to encourage farmers and rural communities to participate in the expansion of bio-fuel production.[90]

One area of significant discussion revolves around a more defined determination of biomass feedstock – how much corn, wheat and cellulose will be required, and from where will these commodities be sourced? While there is consistency in the various estimates that 5.5.million tonnes of bio-mass will be required, there are varying estimates on the split of products that will be used and what their origins might be. These range from 100% corn, sourced from US origins alone, to a majority of Canadian-sourced wheat. The possibility that at least a portion of Canada's ethanol requirements may be supplied through direct imports from the US has also been raised.

In any scenario, there will be a resultant impact at some level on the GHTS. For the purpose of the ensuing discussion, it has been assumed that ethanol production in Canada will use corn and wheat as its principal feedstocks, with median estimates placing that annual need at 2.8 and 2.0 million tonnes respectively. A variety of other cellulose sources are assumed for the remaining 0.7 million tonnes in bio-mass needed.

Figure 50 provides a comparison between the estimated feedstock requirements and actual Canadian corn and wheat production levels, split geographically between eastern and western Canada. With respect to corn, some 9.4 million metric tonnes are produced nationally, mainly in eastern Canada.[91] As such, it is likely to be the dominant feedstock sourced for ethanol production in that area. With an expected 30% of this production being redirected towards the production of ethanol, there will undoubtedly be an impact on the industry's

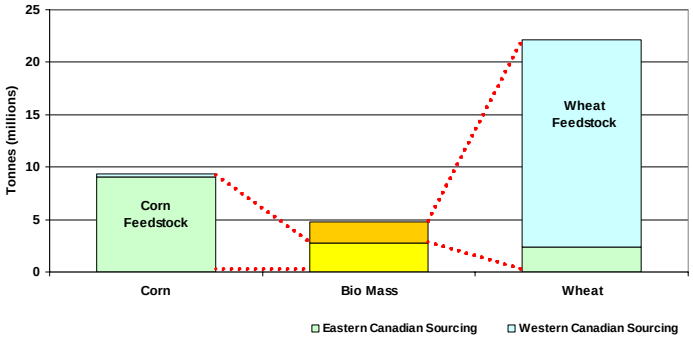


Figure 50: Comparison between Canadian corn and grain production in both eastern and western Canada and ethanol feedstock requirements

Statistical source: Statistics Canada Field Crop Reporting. Quorum estimate of feedstock requirements based on methodologies developed by: Don O'Connor is his presentation to the 2005 World Ethanol Conference; Bioprocess and Metabolic Engineering Technologies for Biofuels and Value-Added Products, Northern Regional Research Center, Peoria, Illinois; and Saskatchewan Ethanol Development Council.

[89] Current annual gasoline consumption in Canada is 40.8 billion litres (Stats Can). At a 5% blend rate this equates to a requirement for 2.0 billion litres of ethanol. One tonne of bio-mass yields approximately 380 litres of ethanol (O'Connor – World Ethanol Conference) resulting in a requirement for 5.5 million tonnes of bio-mass to meet this demand.

[90] 17 July 2006, the Honourable Chuck Strahl, Minister for Agriculture and Agri-Food and Minister for the Canadian Wheat Board announced $10 million for the Bio-fuels Opportunities for Producers Initiative for development of business proposals and feasibility studies, and $1 million added to the existing Co-operative Development Initiative to local co-operative initiatives associated with bio-fuels and other value-added activities.

[91] The 9.4 million tonnes of annual corn production cited here is based on an average for the 2005 and 2006 production years.

logistical needs. Depending on the distance inherent in moving this corn to a particular production facility, truck or rail transportation could easily be employed.

With an additional 2.0 million tonnes of feedstock being attributable to non-durum wheat, the comparative proportion of Canada's total output – which averaged 22.2 million tonnes in the last two years – to be redirected into the production of ethanol, will undoubtedly be substantially smaller, around 9%. Since wheat is primarily grown in western Canada, it is likely that ethanol production in this area will draw on local supplies. Again, truck or rail transportation remains the most viable means of moving this feedstock to emerging production centers.

As ethanol has some caustic properties, the option of transporting the final product by pipeline to gasoline refineries is not a preferred one. Rather, it is expected that the movement of ethanol to these facilities will be predominantly conducted through the use of rail. With some 2.0 billion litres of expected ethanol production, this represents approximately 12,900 tank-car loads of annualized railway traffic.[92] As with the inbound movement of the feedstock itself, this is not a volume that will have a particularly significant impact on overall railway capacity. However, it will require close coordination between shippers and railways in order to ensure that the logistical processes put in place to support the movement are adaptive to the growth in volume over time.

The ethanol manufacturing process could also yield as much as 1.7 million tonnes of dried distilled grains (DDGs), a by-product used predominantly as feed. In much the same way as the sourcing of inbound feedstock is expected to have significant influence over the future location of ethanol plants, the need to dispose of relatively low value DDGs will have an equally important bearing on these decisions. Feedlots or intensive livestock production facilities constitute a natural market for a portion of these by-products. Although this implies an expanded role for local trucking, there can be little doubt that the servicing of more distant domestic and export markets will necessitate the use of rail transportation as well.

To gauge the potential impact of the feedstock movements on the GHTS, it is helpful to consider the larger context into which it fits. With an estimated 5.5 million tonnes of bio-mass being required for the domestic production of ethanol, the inbound movement of corn and wheat would constitute less than 15% of the 31.6 million tonnes produced in Canada each year. This amounts to an equivalent of approximately 60,000 carloads annually. And while this is a significant volume, it is not necessarily burdensome, particularly if much of the volume is to be redirected towards domestic production facilities. As such, it is expected that the existing system can reasonably accommodate this movement, using some combination of truck and rail, in much the same way as it does today.

Bio-diesel

The outlook for increased production of bio-diesel has had significant impact on the Canadian canola industry within the past year. Seed exports in the 2005-06 crop year exceeded projected demand as countries such as Pakistan and United Arab Emirates imported exceptional volumes of canola from Canada, much of which was crushed for oil to feed the European bio-diesel market. Some canola oil was also shipped directly to Europe in support of a record domestic canola crush during the crop year.

Coupled with the growing demand for canola oil as a healthy alternative in the food industry, this demand surge has resulted in considerable optimism within the oilseed industry and influenced the announcement of canola crushing capacity expansion in western Canada during this past crop year. January 2006 saw Bunge Limited announce the expansion of their oilseed crushing plant and oil refinery at Nipawin, SK. In early July, James Richardson International announced plans to locate a new 840,000-tonne canola crushing plant in either Manitoba, Saskatchewan, or North Dakota.[93] Also in July, Cargill announced plans to expand the canola crushing capacity at their plant at Clavet, SK, by 25%. Collectively, these initiatives are expected to increase Canada's current canola crushing capacity of 3.5 million tonnes per year by more than 50%.

[92] The estimate of 12,900 tank-car loads cited here is based on a total estimated weight of 1.4 million tonnes in ethanol production and standard tank-car loading weights of 108 tonnes.

[93] Subsequently, on 7 September 2006, JRI announced that it would build this plant at Yorkton, SK. Coincidentally, on the same day, Louis Dreyfus Canada announced plans to build a similar sized crushing plant, also at Yorkton, SK.

Given its relatively high cost, a debate continues as to whether or not canola will prove to be a viable feedstock for bio-diesel production over the longer term. However, owing to canola's superior performance in colder climates, its use in the production of bio-diesel for at least the next five years seems assured.

Ultimately, the growth in canola production as well as the domestic crushing industry, whether it is aimed at feeding the food or industrial markets, will have an impact on western Canadian logistics.[94] Further processing on the prairies will require the sourcing of significant amounts of raw canola by truck. The oil produced will predominantly be shipped in tank cars, whether it be for domestic or export markets. In addition, the canola meal produced as a by-product to the crushing process will also have to move by truck to local feed markets, and by rail to more distant domestic and export markets. These will present both challenges and opportunities for the GTHS's various stakeholders. Even so, the Monitor anticipates that they will be met.

2.4 Summary Observations

The 2005-06 crop year denoted the sixth for the Canadian Wheat Board's (CWB) tendering program, and the third in which the CWB targeted to move a fixed 40% of its overall grain movements to the four ports in western Canada using a combination of tendering and advance car awards.[95] Under the terms of this arrangement, about half of this volume – representing a maximum of 20% of its overall grain movements – was to be tendered.

In having to adapt to the realities of an unexpected reduction in the supply of higher-quality grain a year earlier, the CWB found itself in a better position to deal with the industry on the tendered movement of a second lower-quality crop. As a result, the behavioural patterns of the industry at large were largely restored to what they had been two years earlier.

The CWB issued a total of 282 tenders calling for the shipment of approximately 5.3 million tonnes of grain, 14.4% less than the 6.2 million tonnes sought a year earlier. To a large extent, the smaller scope of these calls reflected the CWB's reduced emphasis on drawing in higher-quality grain.

As in past years, the vast majority of the grain put out to tender, 63.6%, called for the movement of wheat. For the 2005-06 crop year this entailed a potential movement of 3.4 million tonnes, a value substantially less than the previous crop year's record-setting 4.3 million tonnes. More strikingly, barley displaced durum as the second largest commodity for which tenders were issued. Barley calls amounted to 1.3 million tonnes, which constituted 23.8% of the overall total as compared to 13.5% the year before. Durum calls, which fell to a 12.6% share from an 18.1% share a year earlier, accounted for the remaining 0.7 million tonnes.

There was also a noticeable shift in the comparative amounts these tenders sought to direct to the four ports in western Canada. A record 84.6% of the volume called was intended for export through the west coast ports of Vancouver and Prince Rupert. Although this was consistent with the previous crop year's 81.8% share, there was a significant shift in the allocation between the two ports. Prince Rupert's share climbed to 26.3% from 10.9% a year earlier, while Vancouver's declined to 58.3% from 70.9%. The shares accorded to the ports of Thunder Bay and Churchill also declined: to 15.4% from 16.9% in the case of Thunder Bay; and to 0.0% from 1.3% in the case of Churchill.

The CWB's tender calls were met by 955 bids offering to move 7.1 million tonnes of grain, about one-third more than the amount sought. The majority of these bids, 51.8%, responded to calls for the movement of wheat. Another 33.4% responded to those issued for barley, while the remaining 14.8% answered those for durum. Although the bidding was reflective of the tonnage called, it also showed a preference for Prince Rupert. It also proved somewhat stronger than in the previous crop year.

---

[94] Current industry targets are to produce 15 million tonnes of canola by the year 2015. The record production to date was 9.6 million tonnes in 2005.

[95] The CWB's tendering program was significantly modified for the 2003-04 crop year following consultations with its 26 agents. The 2002-03 crop year was the last in which the CWB had been committed to tender a ***minimum*** of 50% of its overall volume.

A total of 342 contracts were subsequently signed for the movement of just over 2.4 million tonnes of grain, only 46.0% of the amount called. This represented 16.2% of the tonnage shipped by the CWB to western Canadian ports, and fell somewhat short of its 20% target. Owing to the difficulty in securing adequate supplies of higher-quality grain, particularly in the fourth quarter, a total of 2.9 million tonnes went either partially, or completely, unfilled. This constituted 54.7% of the overall volume called, and marked only a modest reduction from the 58.7% recorded a year earlier.

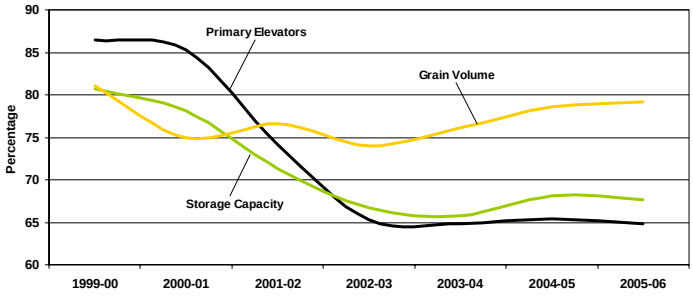
With less emphasis on the movement of higher-quality grain, the CWB was better positioned to address the tendering of an abundant supply of lower-quality grains. As a result, the grain companies were largely unable to exploit the market demand pressures that allowed them to assess significant premiums against the movement of tendered grain the year before. With limited exception, premiums were dramatically reduced, reaching no more than $2.25 per tonne on select movements of high-quality wheat. At the same time, discounts rebounded substantially, initially rising to $18.58 per tonne in the first quarter before settling back to $12.00 per tonne in the fourth.

Despite a general increase in the discounts offered by the grain companies in their tender bids, as well as a sharp reduction in the amount of premiums paid on select tendered movements, the transportation savings accruing to the CWB – and ultimately passed back to producers through its pool accounts – actually declined by 12.3%, to $22.9 million from $26.1 million a year earlier.

A total of 2.4 million tonnes of grain also moved under the CWB's advance car awards program. This represented 15.6% of the CWB's total shipments to western Canadian ports, which constituted a loss of just 0.2 percentage points from the 15.8% share garnered a year earlier. In conjunction with the volume that moved under its tendering program, a combined 31.8% of the CWB's total shipments moved under these two programs. This fell somewhat short of the 40% that had been targeted, and marginally below the 33.8% achieved in the 2004-05 crop year.

In a number of respects, the grain shipped under the advance car awards program had a make-up that largely paralleled that moved under the tendering program. These similarities effectively underscore the fact that grain moving under the advance car awards program did so largely in tandem with that shipped under the tendering program. This strongly hints at a structural dynamic that links the two programs, and suggests that grain companies have been exploiting the flexibility that the advance car awards program was intended to bring to their planning activities.

Figure 51: Relative Shares of the Four Largest Grain Companies



Despite the concern raised by a number of stakeholders respecting the potential ability of major grain companies to displace their smaller competitors in the marketplace, the overall market share secured by the larger grain companies has not changed significantly in the last seven crop years, falling to 79.2% from 81.1%. At the same time the major grain companies' dominance over the primary elevator network, be it in terms of number or storage capacity, also diminished. As of 31 July 2006, the major grain companies held sway over 64.8% of the elevators, and 67.6% of the storage capacity. This marked a significant reduction from the 86.5% and 80.7% shares respectively held at the end of the GMP's first year.

These shifts are at odds with the expectations of those who, at the outset of the GMP, voiced the concern that industry rationalization would significantly reduce competition. To some extent, these shifts indicate that the level of competition in the GHTS has actually been heightened. The emergence and subsequent increase in number, of a variety of independent elevator operations has undoubtedly helped to build the market position of the non-major grain companies. In addition, the establishment of licence-exempt producer-car loading facilities, and the relative gain in producer-car movements, has also been a contributory factor.

There were also a number of events that had an impact on the commercial affairs of the industry during the last crop year:

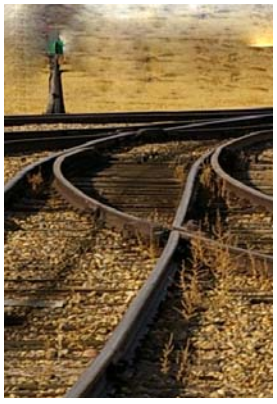
- The federal government chose not to transfer the ownership of its hopper car fleet, choosing instead to establish a long term operating agreement with the two Class 1 Canadian railways.
- The Competition Bureau continued to challenge two transactions involving terminal elevators located on Vancouver's waterfront.
- Ocean Freight rates continued to fluctuate dramatically and at levels twice that known at the beginning of the GMP.
- Pulse growers contemplated requesting a trade action against US exports of peas and lentils into Canada.
- The CWB elected to exercise its option to purchase 1,660 hoppers that had previously been leased.
- CN and CP expanded their cooperative efforts in the Greater Vancouver Area.

Possibly one of the most talked about commercial issues in the grain industry during the 2005-06 crop year was bio-fuels, and the potential impact they would have on supply and market price. While much is not yet known, there is no doubt that the production of ethanol and bio-diesel will have an influence over supplies of corn, wheat and canola in Canada. There is equally no question that there will be an impact on the logistics and grain supply chain as well, although its degree has yet to be determined.

Section 3: System Efficiency

One of the chief aims in the government's decision to move the GHTS towards a more commercial orientation was to improve overall system efficiency. This stems from the belief that a more efficient system will ultimately enhance the competitiveness of Canadian grain in international markets to the benefit of all stakeholders.

The indicators presented here are intended to examine the relative change in the efficiency of the GHTS. A preceding section – Industry Overview – addressed changes observed in the basic components of the GHTS (country elevators, railways, and terminal elevators). In comparison, the following series of indicators largely concentrates on how these assets are utilized, and the overall time it takes grain to move through the system.



Highlights – 2005-06 Crop Year

Trucking

- *The Composite Freight Rate Index for short-haul trucking climbed by 8.6%.*
  - *Second significant rise in trucking costs in as many years.*
    - *Driven by significant increase in fuel prices.*
  - *Composite Freight Rate Index climbed to 120.9 by year-end.*

Country Elevators

- *Throughput for 2005-06 increased by 12.3% to 32.1 million tonnes.*
- *The average elevator capacity-turnover ratio increased 10.7% to a record 6.2 turns.*
  - *Performance was bolstered by a 1.2-million-tonne reduction in elevator storage capacity over the past seven crop years.*
- *Average weekly stock levels increased 14.6% to 2.7 million tonnes.*
  - *Inventory increases largely tied to 2005-06's heightened throughput.*
  - *Long-term reduction reflects sensitivity to declining storage capacity.*
- *Average number of days-in-store increased by 2.0% to 30.1 days.*
  - *Second lowest average since the beginning of the GMP.*
- *Average weekly stock-to-shipment ratio increased by 4.9% to 4.3.*
  - *Reflected changes in average stock levels.*
  - *Second lowest average since the beginning of the GMP.*
- *Posted tariff rates for elevator handling activities all increased:*
  - *Receiving, elevation and loading – increased by 2.3%.*
  - *Cleaning – increased by 5.6%.*
  - *Storage – increased by 17.5%.*

Rail Operations

- *Average car cycle fell by 7.5% to 17.3 days.*
  - *Empty transit fell by 12.8% to 8.8 days; loaded transit fell 1.3% to 8.6 days.*
  - *Significant narrowing in CN and CP car cycles.*
    - *Indicated in all corridors, but especially that of Prince Rupert.*
- *Proportion of grain traffic moving in multiple-car blocks increased marginally to 75.6%.*
  - *Proportion in blocks of 50 or more railcars increased marginally to 71.3%.*
  - *Reflected modest decline in the use of smaller car blocks and a further restructuring of incentive discounts.*
    - *CN increased discount for movements in blocks of 100 cars.*
  - *Railway incentive payments estimated at $89.9 million – up 32.9%.*
    - *Driven largely by increase in overall grain volumes.*
    - *Average discount increased 6.5% to $4.81 per tonne.*
- *Posted freight rates adjusted in multiple phases.*
  - *CP raises rates about 8.1% over the course of the 2005-06 crop year.*
  - *CN increases amount to 7.0% for shipments to the west coast, and 7.5% for movements to Thunder Bay and Churchill.*
- *Canadian Transportation Agency established Revenue Cap of $790.8 million.*
  - *Determined statutory grain revenues for CN and CP totalled $795.0 million.*
    - *Total grain revenues $4.2 million greater than allowed.*
    - *CN and CP ordered to pay 5% on excess revenues.*
  - *Average revenue increased 8.2% to $28.00 per tonne.*

Terminal Elevators and Port Performance

- *Terminal throughput increased by 25.2% to 23.7 million tonnes.*
- *The average elevator capacity-turnover ratio increased by 16.0% to 8.7 turns.*
- *Average weekly stock level increased 13.7% to 1.3 million tonnes.*
- *Average time in port decreased 2.0% to 4.8 days.*
  - *Vessel loading in Vancouver and Prince Rupert continued to be adversely affected by inclement weather conditions.*
  - *Thunder Bay posts record-low average of 1.8 days.*
- *Posted tariff rates for terminal elevator handling activities increased.*
  - *Receiving, elevation and loading – increased by 1.9%.*
  - *Storage charges – increased by 3.6%.*

Indicator Series 3 – System Efficiency

Table	Indicator Description	Notes	BASE 1999-00	CURRENT REPORTING PERIOD (1) 2004-05	2005-06	% VAR	
	Trucking [Subseries 3A]						
3A-1	Composite Freight Rate Index – Short-haul Trucking		100.0	111.3	120.9	8.6%	▲
	Primary Country Elevators [Subseries 3B]						
3B-1	Grain Volume Throughput (000 tonnes)		32,493.9	28,593.5	32,105.2	12.3%	▲
3B-2	Average Elevator Capacity Turnover Ratio		4.8	5.6	6.2	10.7%	▲
3B-3	Average Weekly Elevator Stock Level (000 tonnes)		3,699.3	2,314.3	2,651.2	14.6%	▲
3B-4	Average Days-in-Store (days)		41.7	29.5	30.1	2.0%	▲
3B-5	Average Weekly Stock-to-Shipment Ratio – Grain		6.2	4.1	4.3	4.9%	▲
3B-6	Average Handling Charges – Country Delivery Points	(2)					
	Rail Operations [Subseries 3C]						
3C-1	Hopper Car Grain Volumes (000 tonnes) – Province						
3C-2	Hopper Car Grain Volumes (000 tonnes) – Primary Commodities		25,659.6	20,259.9	24,720.4	22.0%	▲
3C-3	Hopper Car Grain Volumes (000 tonnes) – Detailed Breakdown						
3C-4	Railway Car Cycle (days) – Empty Transit Time		10.7	10.1	8.8	-12.8%	▼
3C-4	Railway Car Cycle (days) – Loaded Transit Time		9.2	8.7	8.6	-1.3%	▼
3C-4	Railway Car Cycle (days) – Total Transit Time		19.9	18.7	17.3	-7.5%	▼
3C-5	Hopper Car Grain Volumes (000 tonnes) – Non-Incentive		12,715.8	5,294.1	6,037.5	14.0%	▲
3C-5	Hopper Car Grain Volumes (000 tonnes) – Incentive		12,943.8	14,965.3	18,682.9	24.8%	▲
3C-6	Hopper Car Grain Volumes ($millions) – Incentive Discount Value		$31.1	$67.7	$89.9	32.9%	▲
3C-7	Traffic Density (tonnes per route-mile) – Grain-Dependent Network		442.3	337.1	439.0	30.2%	▲
3C-7	Traffic Density (tonnes per route-mile) – Non-Grain-Dependent Network		292.4	249.1	297.8	19.5%	▲
3C-7	Railway Traffic Density (tonnes per route-mile) – Total Network		330.3	269.8	330.4	22.5%	▲
3C-8	Composite Freight Rates – Rail	(2)					
3C-9	Multiple-Car Shipment Incentives – Rail	(2)					
3C-10	Effective Freight Rates – CTA Statutory Revenue ($ per tonne)		n/a	$25.87	$28.00	8.2%	▲
	Terminal Elevator and Port Performance [Subseries 3D]						
3D-1	Annual Port Throughput (000 tonnes) – Grain		23,555.5	18,943.5	23,722.7	25.2%	▲
3D-2	Average Terminal Elevator Capacity Turnover Ratio		9.1	7.5	8.7	16.0%	▲
3D-3	Average Weekly Terminal Elevator Stock Level (000 tonnes)		1,216.2	1,127.5	1,281.8	13.7%	▲
3D-4	Average Days-in-Store – Operating Season (days)		18.6	19.9	17.9	-10.1%	▼
3D-5	Average Weekly Stock-to-Shipment Ratio – Grain	(2)					
3D-6	Average Weekly Stock-to-Shipment Ratio – Grade	(2)					
3D-7	Average Vessel Time in Port (days)		4.3	4.9	4.8	-2.0%	▼
3D-8	Distribution of Vessel Time in Port	(2)					
3D-9	Distribution of Berths per Vessel	(2)					
3D-10	Annual Demurrage Costs ($millions)		$7.6	$16.0	$6.7	-58.0%	▼
3D-10	Annual Dispatch Earnings ($millions)		$14.5	$17.5	$15.2	-12.9%	▼
3D-11	Average Handling Charges – Terminal Elevators	(2)					

(1) – In order to provide for more direct comparisons, the values for the 1999-2000 through 2005-06 crop years are "as at" or cumulative to 31 July unless otherwise indicated.

(2) – Changes in the data cited cannot be depicted within the summary framework presented here. The reader is encouraged to consult the detailed data tables found in Appendix 4 as required.

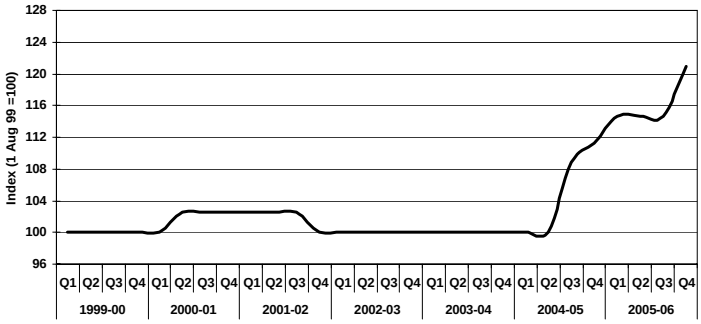
3.1 Trucking *[Measurement Subseries 3A]*

The first step in the process of moving grain through the GHTS typically involves its shipment by truck to a country elevator. Although the distance traveled in doing so can be as little as a few miles, it can also extend to upwards of 100 or more. Furthermore, a wide assortment of equipment is employed to accomplish this. These include not only comparatively smaller producer-owned vehicles, but the higher-capacity trucks used in for-hire trucking operations. In addition, a number of the larger grain companies also offer their own "in-house" trucking services. This gives the producer the option of contracting directly with the grain company for the on-farm pick-up of their grain, and its delivery to the elevator.

The GMP tracks the freight rates posted by the principal grain companies for local grain pick-up and delivery services in, and around, a representative sample of 37 specific delivery points. These rates have been combined to create a composite rate scale for commercial truck movements within western Canada, and indexed to measure changes in these costs over time.

As outlined in the Monitor's earlier reports, this survey revealed that the larger grain companies offered producers similar trucking services, albeit at marginally differing costs. Moreover, with the exception of fuel surcharges, which were selectively applied over an 18-month period that straddled the 2000-01 and 2001-02 crop years, the underlying structure of these commercial freight rates effectively remained unchanged throughout the course of the GMP's first five years.

Figure 52: Composite Freight Rate Index – Short-Haul Trucking



To a large extent, an excess of capacity in the face of reduced demand also helped to contain these rates. Furthermore, the competition existing between the largest grain companies offering commercial trucking services also proved instrumental. Even so, the input costs for these services – most notably that of fuel – had been rising steadily. By the end of the first half of the 2004-05 crop year, the price of oil was quickly approaching $50 US a barrel. With fuel prices climbing as a result, an escalation in the rates for hauling grain became unavoidable. By the end of the crop year the larger grain companies had all brought forward rate increases, which raised the GMP's price index for short-haul trucking by 11.3%.

This was followed in the first quarter of the 2005-06 crop year by a further 3.1% increase in rates. Additional increases in the fourth quarter pushed the index up another 5.4 points, to a value of 120.9. As a result, the index closed out the 2005-06 crop year 8.6% higher. [See Table 3A-1 in Appendix 4.]

3.2 Primary Country Elevators *[Measurement Subseries 3B]*

The 2005-06 crop year provided the GMP with its third consecutive opportunity to gauge the impact of recent changes in the GHTS on the operational efficiency of the primary country elevator system under near-normal volumes. This stemmed largely from the fact that the system's throughput increased by 12.3%, to 32.1 million tonnes from the previous crop year's 28.6 million tonnes.[96] This volume, however, fell 3.5% short of the 33.3-million-tonne record set under the GMP in the 2000-01 crop year.

All producing provinces save that of Manitoba recorded a year-over-year increase in its primary elevator shipments. With a 26.2% increase in throughput, Saskatchewan posted the largest comparative gain. Moreover, its shipment of 17.2 million tonnes proved second only to the 17.8 million tonnes it originated in the 2000-01 crop year. This was in turn followed by Alberta, which in addition to posting an increase of 10.3%, also reported a record 10.3 million tonnes of throughput under the GMP. In a reflection of Manitoba's comparatively poorer growing conditions, shipments from the province fell by 20.4%, to 4.4 million tonnes from 5.5 million tonnes a year earlier. This represented the lowest value recorded by the province under the GMP. British Columbia trailed the pack with 0.3 million tonnes in primary elevator throughput, although a year-over-year increase of 59.1% was actually the largest posted among the producing provinces. [See Table 3B-1 in Appendix 4.]

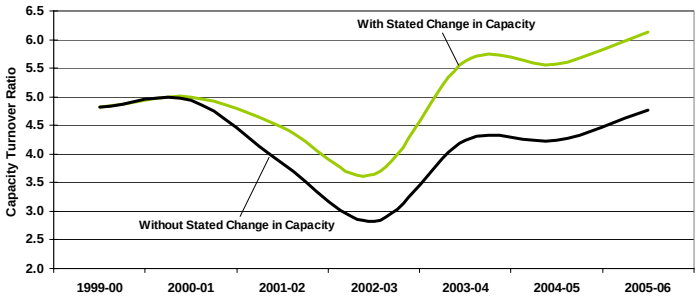
[96] In gauging the throughput of the country elevator system, the GMP focuses on both the truck and railway shipments made from primary elevators. The volume of grain passing through process elevators is excluded from this calculation.

Capacity Turnover

The effect of changes in both throughput and storage capacity are reflected in the primary elevator system's capacity-turnover ratio. With throughput in the 2005-06 crop year having risen by 12.3%, the ratio increased by 10.7% to 6.2 turns, the highest value recorded under the GMP. This comparatively lesser gain was due in large part to the offsetting influence of the year's 25,200-tonne net increase in storage capacity.

Significant changes were noted among the ratios of the various provinces. The ratio for Alberta continued its move into higher territory, increasing another 4.2% to 7.4 turns from the previous crop year's record-setting 7.1 turns. An increase was also posted by Saskatchewan, which reported 6.1 turns as compared to 4.8 turns a year earlier. Rounding out the gainers was British Columbia, where a 65.4% increase pushed its ratio to 4.3 from 2.6. These improvements were chiefly driven by the increases in provincial throughput already mentioned. For Manitoba, a sharp reduction in volume resulted in the ratio falling by 20.3%, to 4.7 turns from 5.9 turns the year before. [See Table 3B-2 in Appendix 4.]

Figure 53: Change in Capacity – Impact on Capacity Turnover Ratio



Although the gains recorded since the 2002-03 crop year have largely been volume related, the real improvement in the capacity-turnover ratio made since the beginning of the GMP has come from an 16.4%, or 1.2-million-tonne, reduction in storage capacity. In a broad sense, this reduction reflects the effects of the grain companies' elevator rationalization programs, and their efforts to improve the utilization of these assets.

The progressive decline in throughput over the 2001-02 and 2002-03 crop years effectively camouflaged the efficiencies that were being made. In truth, had storage capacity not been reduced during this period, the 2005-06 crop year's ratio would have been 4.8 turns instead of 6.2 turns. This 1.4-turn differential draws attention to the fact that the primary elevator system has improved its handling efficiency by an estimated 28.8% over the course of the last seven crop years.

Elevator Inventories

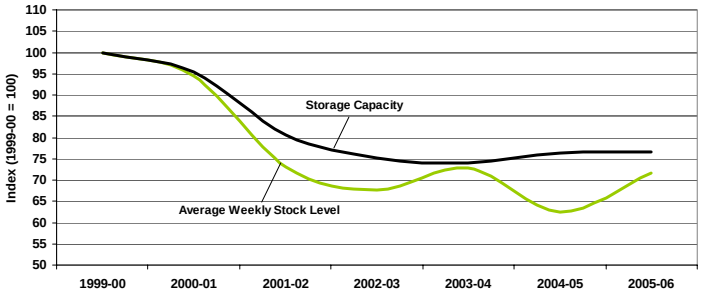
In assessing the operational efficiency of the primary elevator system, the GMP also considers the impact of any change in the amount of grain maintained in inventory. Beyond measuring actual stock levels, this examination also takes into account the amount of time grain spent in inventory, as well as its ability to satisfy immediate market demand.

In concert with the general reduction in storage capacity, grain inventories have also been declining. By the end of the 2002-03 crop year, the primary elevator network's average weekly stock level had fallen to 2.5 million tonnes. And even though the 2003-04 crop year's average climbed to 2.7 million tonnes, it still remained below the GMP's first year benchmark of 3.7 million tonnes. This downward trend was accentuated even further in the 2004-05 crop year when a late harvest heightened the demand for high-quality grain and reduced the average to a record low of 2.3 million tonnes. [See Table 3B-3 in Appendix 4.]

The 2005-06 crop year produced a modest reversal to this trend, with the average having risen by 14.6% to 2.7 million tonnes. This was fuelled in large part by a sharp increase in the amount of grain held in storage in the first half of the crop year, which reached a height of 2.9 million tonnes in the second quarter before falling back to 2.1 million tonnes in the fourth as a result of tightening year-end grain supplies.

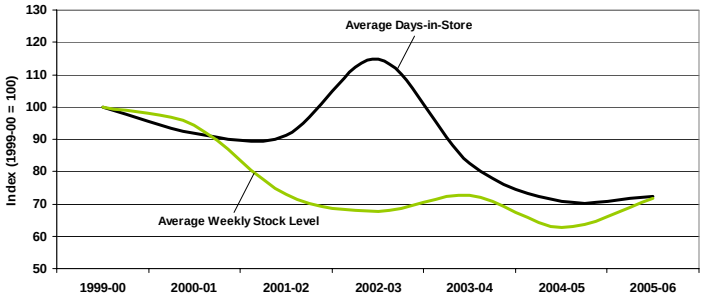
It is worth noting that the 28.3% net decline in primary elevator inventories over the course of the last seven crop years exceeds a corresponding 23.3% reduction in storage capacity. This becomes evident when the average inventories of the past seven crop years are compared with the system's year-end storage capacity, where inventories can be seen to have fallen from an average of 54.3% of total capacity to 50.8%. This suggests that average inventories have fallen in real terms, and that slightly less grain is being maintained in inventory per unit of storage capacity than at the beginning of the GMP.

Figure 54: Relative Change in Primary Elevator Storage Capacity and Average Stock Levels



Just as the average stock level has moved generally lower, so has the average amount of time spent by grain in inventory. From a benchmark 41.7 days in the GMP's base year, to 29.5 days in the 2004-05 crop year, the average number of days-in-store fell by 29.3%.[97] As was the case with stocks, the 2005-06 crop year saw the average number of days grain spent in inventory increase by a marginal 2.0%, to 30.1 days. Fluctuations in the quarterly values followed the same pattern presented earlier for inventories: rising to an average of 33.7 days in the second quarter before falling back to a low of 22.9 days in the fourth.[98] [See Table 3B-4 in Appendix 4.]

Figure 55: Relative Change in Average Weekly Stock Levels and Average Days in Store



Substantial year-over-year reductions in the average number of days-in-store were noted for most provinces and grains, and are summarized as follows:

Province	Days-in-Store	Change	Grain	Days-in-Store	Change
British Columbia	37.1 days	Down 11.5%	CWB Grains		
Saskatchewan	29.5 days	Down 10.1%	Barley	20.2 days	Down 26.8%
Alberta	26.7 days	Up 5.1%	Durum	41.5 days	Down 3.7%
Manitoba	40.2 days	Up 43.1%	Wheat	36.8 days	Up 17.9%
			Non-CWB Grains		
			Oats	29.3 days	Down 12.8%
			Flaxseed	20.6 days	Down 8.8%
			Peas	17.9 days	Down 2.7%
			Canola	20.0 days	Up 3.6%

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. In the event that

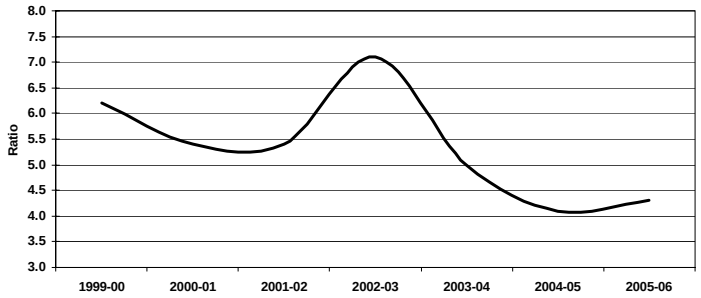
[97] It should be noted that this downward trend was disrupted in the 2002-03 crop year when a sharp reduction in the sales programs for CWB, as well as for non-CWB, grains resulted in the average climbing to a record 47.9 days.

[98] The 22.9-day average recorded in the fourth quarter ranks as the second lowest observed under the GMP. The fourth quarter of the 2003-04 crop year produced a record low of 22.7 days.

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.[99]

A review of the average weekly stock-to-shipment ratios recorded during the GMP's first five years reveals that the quarterly average seldom fell below a value of 5.0. As such, the inventory on hand at the close of any given week generally exceeded that required in the next by a factor of at least five. Notwithstanding the anomaly of the 2002-03 crop year, when reduced grain sales prompted a build-up in primary-elevator stocks that greatly inflated the ratio, by the 2004-05 crop year the annual average had declined by 33.9%, to 4.1 from 6.2.[100]

Figure 56: Primary Elevators – Stock-to-Shipment Ratio



The same forces that led to increased stock levels in the 2005-06 crop year also contributed to a marginal increase in these ratios. For the first quarter, the average weekly stock-to-shipment ratio climbed to a high of 4.9. And although the value of the quarterly ratio subsequently decreased in concert with the reduction in inventories, reaching a low of 3.2 in the fourth quarter, the higher initial quarterly values helped push the annual average up by 4.9%, to 4.3 from the previous year's record low of 4.1. [See Table 3B-5 in Appendix 4.]

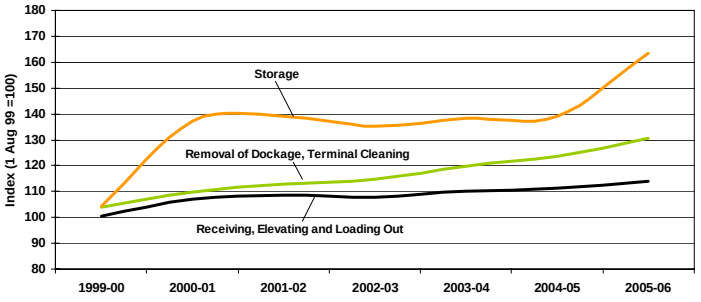
Average Handling Charges

The rates assessed by grain companies for a variety of primary elevator handling activities vary widely. These differences reflect not only the specific services offered – be it elevation, cleaning or storage – but the diversity of grains involved and the province in which the service is performed. Given the myriad of tariff rates, the GMP necessarily uses a composite price index to track the movement in these rates.[101]

The per-tonne rates assessed by the grain companies for these various services are the primary drivers of corporate revenues. Comparatively, the per-tonne charge assessed for the receiving, elevating and loading out of grain is the most costly for producers. This in turn is followed by the charges levied for the removal of dockage (also referred to as terminal cleaning), as well as storage.

The rates for all of these services have risen steadily since the beginning of the GMP. The lowest pace has been set by the tariff rates for receiving, elevating and loading out grain. Through to the end of

Figure 57: Relative Change in Elevator Handling Charges



[99] It should be noted that the value of 1.0 constitutes a lower limit for the stock-to-shipment ratio as calculated under the GMP. This arises because primary elevator shipments are effectively constrained by the actual level of grain held in inventory.

[100] The highest annual weekly stock-to-shipment ratio recorded under the GMP was 7.1, and occurred in the 2002-03 crop year. Similarly, a record quarterly value of 8.8 was set in this same crop year's third quarter.

[101] For the purposes of the discussion presented here, price movement with respect to any particular handling activity is based on a composite index of nominal tariff rates.

the 2004-05 crop year, these rates had risen by a total of 11.3%. During the 2005-06 crop year they increased a further 2.3%, bringing the cumulative increase for the last seven years to 13.8%.[102]

The rates in place for the removal of dockage are the only ones to have posted increases in each of the last seven crop years.[103] For the 2005-06 crop year, these rates were raised by about 5.6%. This resulted in the composite price index for dockage increased 30.6% under the GMP.

The most substantive rate escalation observed thus far has been with respect 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, minor annual increases were applied in each of the following two crop years. However, the 2005-06 crop year witnessed a second major escalation in storage costs with rates having risen by 17.5%. As a result, storage charges in place at the end of the 2005-06 crop year were effectively 63.3% higher than at the beginning of the GMP. [See Table 3B-6 in Appendix 4.]

3.3 Rail Operations *[Measurement Subseries 3C]*

The volume of grain moved in covered hopper cars during the 2005-06 crop year posted a year-over-year increase of 22.0%, rising to 24.7 million tonnes from 20.3 million tonnes the year before.[104] All ports, but most particularly those located on the west coast, experienced a sharp increase in the amount of grain shipped by rail. Movements to Vancouver climbed by 21.5%, to 13.5 million tonnes from 11.1 million tonnes a year earlier, giving it a 54.7% share of the total railway volume. Thunder Bay saw its volume increase by 8.2%, to 6.5 million tonnes from 6.0 million tonnes the year before. After an increase of 57.2% from the previous crop year's 2.7 million tonnes, railway shipments to Prince Rupert under the GMP reached a record 4.2 million tonnes. In fourth place was traffic destined to Churchill, which increased by 11.5% to 0.4 million tonnes.

Railway shipments from every province in western Canada posted an increase. The most significant net gain was registered by Saskatchewan, where rail shipments increased by 30.9%, or 3.1 million tonnes, to 13.1 million tonnes. This was followed by shipments from Alberta, which increased by 15.0% to 9.0 million tonnes. A modest gain of 4.9% was noted for the 2.4 million tonnes of grain originated by Manitoba. Although British Columbia registered the largest year-over-year increase in volume, 66.2%, total originations amounted to just over 0.2 million tonnes.[105] [See Tables 3C-1, 3C-2, and 3C-3 in Appendix 4.]

Car Cycles

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. The railways' average car cycle for the 2005-06 crop year fell by 7.5%, to 17.3 days

[102] By way of comparison, the Industrial Product Price Index increased by 11.8% during this period.

[103] Charges for the removal of dockage (terminal cleaning) fall under the provisions of Licensed Primary Elevator Tariffs and are assessed at the time producers deliver their grain.

[104] The overall volume of grain cited here as having moved by rail to western Canadian export positions in the 2005-06 crop year contrasts with the 25.3 million tonnes mentioned in Section 1.2. This latter value is a broader measurement that includes grain movements in boxcars, trailers and containers. For more consistent comparisons, the values presented here (and in Tables 3C-1 through 3C-3), deal exclusively with that portion moving in covered hopper cars, and through the terminal elevator system only. Such adjustments typically account for a reduction of less than 5.0% from the broader tonnage value.

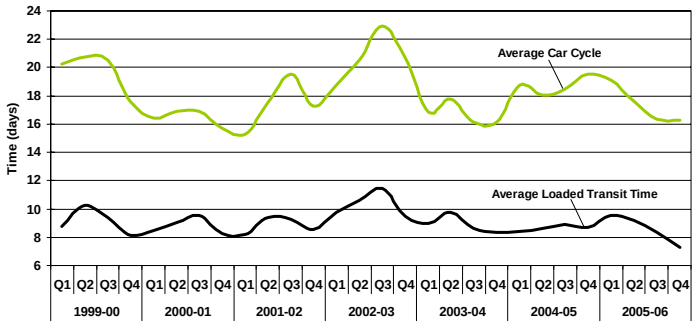
[105] Statistics relating to the railway movement of grain in western Canada centre on the volume handled by federally regulated carriers. Given that much of the grain originating in British Columbia was handled by BC Rail, the volume handled by federally regulated carriers prior to CN's acquisition of BC Rail in July 2004 proved comparatively small – amounting to well below 100,000 tonnes annually. As a result of the CN acquisition, all grain moving from points formerly served by BC Rail is now federally regulated. The volume cited here for the 2005-06 crop year reflects a second full year of statistics relating to railway grain movements from British Columbia.

from 18.7 days a year earlier.[106] Despite this improvement, the overall average remained largely consistent with the annualized values reported for previous crop years under the GMP.[107]

Although reductions were noted in all primary corridors, the most significant decline was noted in the Prince Rupert corridor, where the car cycle fell by 15.1%, to an average of 15.6 days from 18.4 days a year earlier. In comparison, the average car cycles in both the Vancouver and Thunder Bay corridors fell by 4.5% and 5.6% respectively. For the Vancouver corridor, this resulted in the average falling to 18.3 days from 19.2 days, while the average in the Thunder Bay corridor fell to 17.2 days from 18.2 days twelve months before. [See Table 3C-4 in Appendix 4.]

Notwithstanding these corridor-specific results, a 12.8% decline in the total empty transit time, which fell to an average of 8.8 days from 10.1 days a year earlier, proved to have been the key force in drawing down the overall car cycle by 1.4 days. Still, there were significant crosscurrents at work in this result. Foremost among these was a 21.0% reduction in the average empty transit time posted by CN while the CP average rose 1.7%. This was furthered by a 1.3% decrease in the average loaded transit time, which fell to 8.6 days from 8.7 days a year earlier. Much of this 0.1-day improvement was due to a 2.5% reduction in the CP average.

Figure 58: Average Railway Car Cycle



Unlike prior years, where the quarterly values exhibited some degree of seasonality, the 2005-06 crop year presented a record of steady reduction. To an extent, this pattern could have been the result of comparisons with a somewhat-higher-than-normal average in the first quarter. Almost every autumn the demand for railway transportation strains the capacity of the GHTS. Moreover, the larger the size of the crop, the more intense those strains become. In the face of one of the largest movements in several years, these overarching influences undoubtedly put added pressure on railway resources. This was reflected in somewhat longer cycle times for both carriers, particularly in the busy Vancouver corridor. In the second quarter, however, these averages – be it with respect to a particular operating corridor or carrier – moved generally lower. The same was true for the third and fourth quarters.

These improvements underscored a general enhancement in the efficiency with which grain was moved during the period. Moreover, with a renewed focus on unit train operations, CN was able to significantly narrow the performance gap that had been opened between itself and CP almost two years earlier.[108] Even so, CP posted overall averages in the competitive Vancouver and Thunder Bay corridors that continued to fall below those achieved by CN.[109]

---

106 Western Canada's average car cycle of 17.3 days is derived from 183,873 movements: 81,992 in the Vancouver corridor; 59,812 in the Thunder Bay corridor; and 42,069 in the Prince Rupert corridor. The relative weighting accorded these movements is dependent on the number of acceptable records received, which can vary from period to period. The statistics presented here are intended to reveal general trends respecting the amount of time taken by covered hopper cars in moving grain throughout western Canada.

107 Drought-induced reductions in the productivity of the hopper car fleet were largely responsible for the elongation in car cycles observed in the 2001-02 and 2002-03 crop years. The upturn in grain traffic since then has had a generally positive impact on the railways' average car cycle, with improvements noted in all corridors.

108 CN returned to the practice of using grain to fill-out its manifest trains early in the 2004-05 crop year. This resulted in a significant elongation of the loaded and empty transit times for CN movements. With CP's continued focus on moving grain in unit trains, the comparative averages for these two carriers began to diverge. This ultimately manifested itself in a measurable performance advantage for CP movements. Since CN renewed its focus on moving grain in unit-train service early in the 2005-06 crop year, this gap in comparative performance has steadily narrowed.

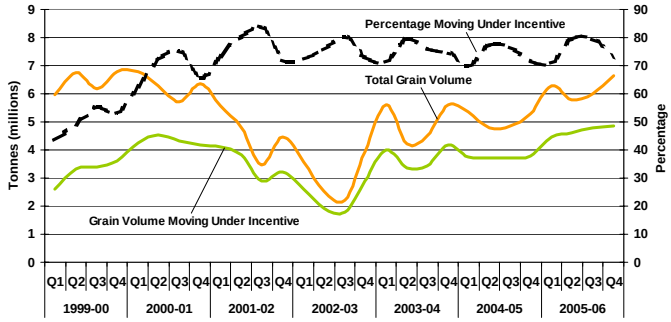
109 With CN's comparatively longer lengths of haul, there is a structural dimension to the advantage CP generally holds in these corridors. As a result, it is the relative change in the respective averages for CN and CP over time that has greater relevance.

One additional factor helping to reduce the average car cycle over the last twelve months has been the growing influence of movements to Prince Rupert. The transit times posted by CN in this corridor were significantly lower than those recorded for movements to either Vancouver or Thunder Bay. Moreover, when the corridor's 15.1% reduction in average transit time was coupled with a 57.2% increase in volume, a significant amount of downward pressure was brought to bear on the weighted averages for CN as well as the GHTS.[110]

Multiple-Car Blocks

During the course of the 2005-06 crop year, the railways handled a total of 18.7 million tonnes of grain under the incentive programs they use to encourage shippers to move grain in multiple-car blocks. This represented an increase of 24.8% from the 15.0 million tonnes handled a year earlier, and marked a new record for the volume moved under these programs since the beginning of the GMP.[111]

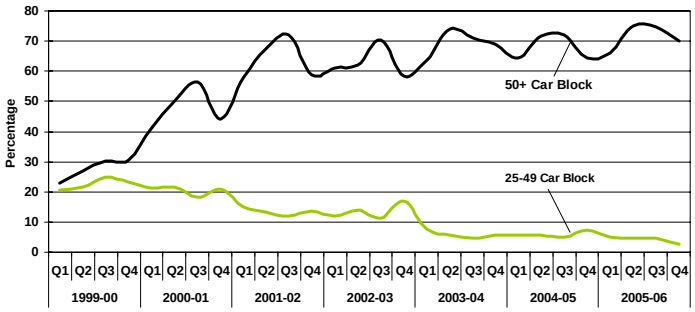
Figure 59: Railway Volume Moving Under Incentive



Although the droughts of the 2001-02 and 2002-03 crop years negatively impacted the volumes handled under these programs, the structural changes made to the programs themselves have also had a bearing. One of these was CN's decision to eliminate its discount for shipments in blocks of 25-49 railcars at the beginning of the 2003-04 crop year. Even so, the overall proportion of grain that earned incentive discounts remained largely unchanged, falling to an estimated 75.6% in the 2005-06 crop year from 75.9% three years earlier. Moreover, since the beginning of the GMP this proportion has risen steadily from 50.4%.[112] Despite this longer-term trend, the quarterly values have seldom exceeded 80%, suggesting that a ceiling in this area has now formed.[113] [See Table 3C-5 in Appendix 4.]

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, and allow the grain companies to realize the greatest financial returns. Data gathered through to the end of the 2003-04 crop year showed that movements in blocks of 50-99 cars proved to be the most expansive, going from a 20.2% share in the 1999-2000 crop year to an estimated 45.1% by the end of the 2003-04 crop year. At the same time, movements in blocks of 100 or more railcars went from 7.6% of the total to 24.0%.

Figure 60: Composition of Multiple-Car Block Incentive Movements



[110] These forces are estimated to have accounted for a 0.5-day reduction in the GHTS's average car cycle.

[111] A total of 12.9 million tonnes of grain was shipped under these programs in the 1999-2000 crop year.

[112] Annualized proportions temper the observed variation in quarterly values, which ranged from a low of 43.6% in first quarter of the 1999-2000 crop year, to a height of 83.9% in the third quarter of the 2001-02 crop year.

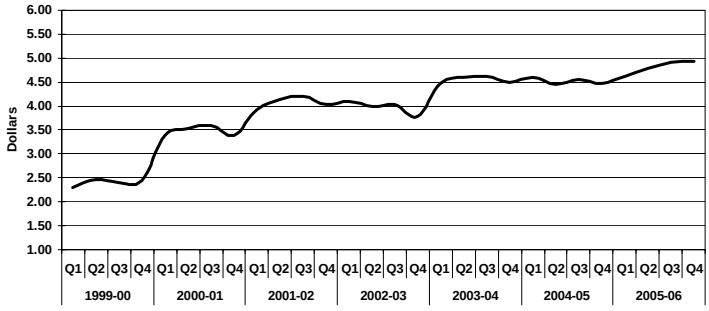
[113] As a corollary to this, non-incentive based movements have accounted for about one-quarter of all grain shipments in the last five crop years.

However, owing to the restructuring of the incentive discounts offered by both CN and CP in the 2004-05 crop year, the Monitor can no longer examine these shipments in a consistent manner.[114] Rather, the elimination or redefinition of the car blocks used in both programs has effectively reduced the direct comparisons that can be made to two: incentive shipments in blocks of less than 50 cars; and those in blocks of 50 or more cars.

Since the GMP began, the share of the total volume moving in blocks of 50 or more cars has climbed from 27.8% to a record-setting 71.3%. Although increases in the incentive discounts offered by the railways largely fuelled this migration, there can be little doubt that a rollback in the discounts applicable on shipments in blocks of 25-49 railcars also contributed. During this period, shipments earning these lesser discounts fell from a 22.6% share to just 4.2%.

The annual value of the discounts earned by grain shippers – estimated as a gross savings in railway freight charges – has almost tripled in the last seven years, climbing to $89.9 million from $31.1 million. Yet only $13.8 million, or 23.5%, of this $58.8-million increase was derived from the additional volume of grain that was actually shipped under these programs. The majority, $45.0 million, came from the expanded use of the larger car blocks, which carried the higher per-tonne discounts offered by the railways.

Figure 61: Average Incentive Discount Earned (dollars per tonne)

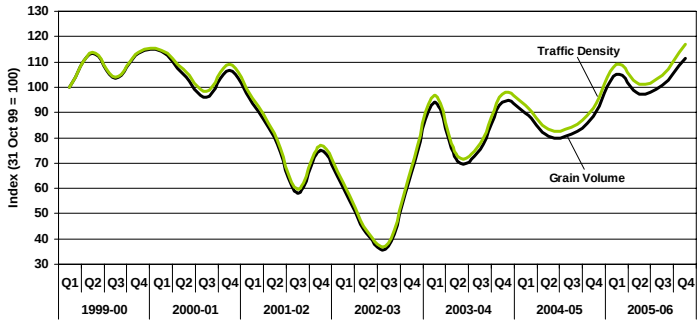


The average discount earned underscores the incremental gains realized by the grain companies. Between the 1999-2000 and 2004-05 crop years, the average discount earned under these programs climbed to an estimated annualized average of $4.52 per tonne from $2.40 per tonne.[115] The 2005-06 crop year saw this average gain a further 6.5%, climbing to a record $4.81 per tonne. Again, this increase largely reflects the growth in the proportion of movements that went in blocks of 50 or more cars. [See Table 3C-6 in Appendix 4.]

Traffic Density

A broad indicator of railway efficiency is traffic density. With a quarterly average of 330.4 originated tonnes per route-mile, overall density in the 2005-06 crop year was 22.5% greater than the 269.8 tonnes per route-mile observed a year earlier. Furthermore, this marked the first instance where the value actually rose above the 330.3 tonnes per route-mile recorded in the first year of the GMP.[116]

Figure 62: Relative Change in Traffic Density and Grain Volume



The limited transformation of the railway network over the past seven years has largely sensitized this indicator to changes

[114] Some of the more significant changes made to the structure of these incentives are presented in the discussion on freight rates found later in this section.

[115] The estimated discount per tonne deals exclusively with incentive movements to the four ports located in western Canada.

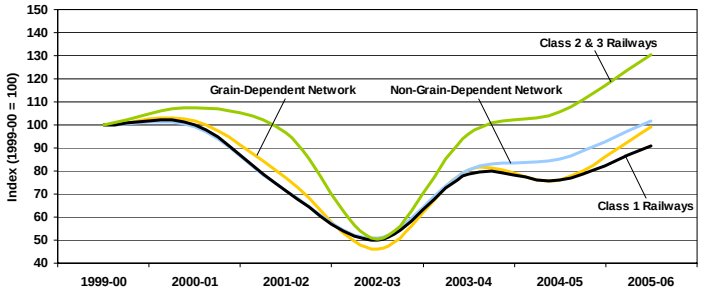
[116] Traffic density is determined by relating grain volumes for a specific period of time to the number of route-miles comprised within the western Canadian railway network at the end of that same period. Although year-over-year measurements are comparable, they cannot be directly gauged against quarterly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

in traffic volume.[117] This can best be seen when comparing quarterly changes in traffic density with that of grain volume, patterns that are virtually indistinguishable. It is for this same reason that any examination of traffic density, be it with respect to differences between railway classes or railway line classes, ultimately accentuates the same volume-related changes outlined in Section 1.4.

When examining traffic density by railway class, a comparatively greater degree of volatility can be seen with respect to the Class 2 and 3 carriers than with their Class 1 counterparts. This chiefly reflects the changes that have been made with respect to the underlying infrastructure itself, be it through sale or abandonment. A significant improvement in the traffic density of the smaller railways came at the end of the 2003-04 crop year when CN acquired BC Rail, a railway originating very little in the way of grain volumes. However, this same transaction had a dampening effect on the density of Class 1 operations. Recent railway line discontinuances coupled with the reversion back to CN of the infrastructure operated by several smaller carriers – specifically those of the Prairie Alliance for the Future and RailAmeriaca – has had a similar impact, enhancing the traffic density of the remaining shortlines while tempering that of the Class 1 carriers.

These gyrations can largely be avoided if the networks being examined are less prone to continual redefinition. Such is the case when the densities of the grain-dependent, and non-grain-dependent, networks are compared. Through to the end of the 2003-04 crop year, the traffic densities of these lines moved largely in tandem. This arose not as a result of comparatively similar changes in either of the underlying infrastructures or traffic volumes, but because the grain-dependent network's steeper decline in infrastructure tempered the impact of its greater reduction in originated tonnage.

Figure 63: Relative Change in Railway Traffic Density



This was not the case in the 2004-05 crop year when a gain in volume for the non-grain-dependent network, coupled with a decline in that for the grain-dependent network, caused their traffic densities to begin moving in opposing directions. Volume increases for both networks in the 2005-06 crop year, however, largely reinstated the previous pattern. In the case of the non-grain-dependent network, traffic density increased by 19.5% to an average of 297.8 tonnes per route-mile, while the grain-dependent network's average increased 30.2% to 439.0 tonnes per route-mile. The latter network's density was also buoyed by a corresponding 1.7% reduction in its railway infrastructure. On the whole, these measurements reflect the effects of further erosion in the grain-dependent network's existing traffic base. [See Table 3C-7 in Appendix 4.]

Railway Freight Rates

As one of the reforms aimed at making the GHTS more commercial, competitive, and accountable, the federal government ended its long-standing policy of regulating maximum railway freight rates for the movement of grain in western Canada. Instead, it adopted a policy that provided the railways with greater latitude in pricing, but limited the overall revenues that they could derive from moving grain in western Canada.[118]

To achieve this, the railways chose a two-pronged approach that involved adjusting both their published single-car freight rates as well as the incentive discounts applicable on the movement of grain in multiple-car blocks. As outlined in the Monitor's previous reports, although the revenue cap accorded both CN and CP greater

[117] With traffic volume held constant, the resultant effect of all changes to railway infrastructure under the GMP has been a 4.5% improvement in traffic density.

[118] This "revenue cap" was set at a level 18% below the estimated grain revenues that would have been derived without the reform, and came into effect on 1 August 2000. The revenue cap has specific annual limits for both CN and CP, and was set under the Canada Transportation Act (2000) at a combined level of $710.9 million. Each year, the Canadian Transportation Agency adjusts these "base year" limits to reflect changes arising from inflation, the actual grain tonnage moved, and the average distance over which it was moved.

freedom in setting freight rates, their pricing actions remained largely similar through to the end of the 2002-03 crop year, with nominal freight increasing by about 3.8% from their 1999-2000 crop year levels.[119] At the same time, they had also increased the incentive discounts applicable on larger car-block movements.[120]

With the beginning of the 2003-04 crop year CN and CP broke with the practice of making largely parallel rate adjustments. At the same time, they also made the first substantive changes to the incentive discounts that they had been offering for movements in multiple-car blocks since the beginning of the 2000-01 crop year. Over the next two crop years, a new process appeared to have emerged. Although this primarily involved the setting of new single-car rates at the beginning of the crop year followed by at least one other rate adjustment in the second half, changes to the incentive programs were also noted. There is no doubt that this new process was aimed at maximizing the revenues carriers were entitled to receive under the revenue cap. Moreover, if the narrowness of the margins by which CN and CP have missed these targets serves as any indication, both carriers have become quite skilful at managing their revenues under the current regulatory framework.

For the 2005-06 crop year, both railways published noticeably greater rate increases than the 4.4% escalation that had been suggested by the Volume-Related Composite Price Index.[121] This was due in part to comparisons with rates that had been hurriedly reduced in the third and fourth quarters of the 2004-05 crop year in order to safeguard the carriers' compliance with the revenue cap.[122] In the case of CN, the carrier increased its single-car rates to the west coast ports of Vancouver and Prince Rupert by 7.0%, while increasing those applicable on movements to Thunder Bay and Churchill by a slightly greater 7.5%. In comparison, CP initially increased its single-car rates in both the Vancouver and Thunder Bay corridors by 7.0%. This was followed by a further 1.0% increase in March 2006, which brought the effective total rise in CP rates since the beginning of the 2005-06 crop year to 8.1%.[123] Viewed over the entire span of the GMP, single-car freight rates in the Thunder Bay and Vancouver corridors have increased by about 6.0% and 6.6% respectively, with CN's rates having marginally exceeded those of CP.[124] [See Table 3C-8 in Appendix 4.]

At the outset of the new crop year, there were no substantive changes made to the incentive programs offered by both railways. CN's discounts for movements in blocks of 50-99 cars and 100 or more cars remained at $4.00 per tonne and $6.00 per tonne respectively. Similarly, CP chose to maintain the $4.00-per-tonne discount it offered for movements in blocks of 50-111 cars, as well as the $7.50-per-tonne maximum it offered for shipments in blocks of 112 cars.[125] In addition, both programs continued to emphasize the benefits of their advance booking options, all of which were supported by a diverse series of financial rewards and penalties. In March 2006, however, CN increased the discount it offered on movements of 100 cars from $6.00 per tonne to

[119] The 3.8% increase cited here represents a composite average based on published tariff rates for both CN and CP.

[120] As of 1 August 2000, shipments in blocks of 25-49 cars received a discount of $1.00 per tonne from the published tariff rate for a single-car movement; those in blocks of 50-99 cars, $4.00 per tonne; and those in blocks of 100 or more cars, $6.00 per tonne. In addition to the general discounts cited, the railways also provided incentive discounts for shippers who committed to move a multiple number of trainload lots (100 or more cars) during a specified period of time. Deemed generically by the Monitor as "shuttle services," these discounts provided an additional $0.50 per tonne when applied to movements of 100 or more railcars. CP also offered a further $0.50 per tonne discount when these involved trainload movements of 112 railcars.

[121] The revenue cap is adjusted annually for inflation by the Canadian Transportation Agency. For the 2005-06 crop year, the Agency determined that Volume-Related Composite Price Index used to accomplish this was to be increased by 4.4%. See Canadian Transportation Agency Decision Number 251-R-2005 dated 28 April 2005.

[122] The reductions leading to these lower rates varied but amounted to about 4% for CN, and 6% for CP. These actions are detailed more fully in the Monitor's Annual Report for the 2004-05 crop year.

[123] CP was the only carrier to initiate a second round of rate increases in the 2005-06 crop year. The single-car rates posted by CN remained unchanged throughout the 2005-06 crop year.

[124] The Thunder Bay and Vancouver corridors are deemed the most competitive since both CN and CP offer direct rail services to these ports. Notwithstanding minor differences, the rate increases noted here are intended to reflect the general pricing actions of both carriers in these two corridors. With only one serving carrier at the ports of Churchill and Prince Rupert, inter-carrier comparisons of rate changes are not possible. An examination of CN's published rates to these ports shows a net increase of about 6.5% for Churchill, and a net reduction of about 5.4% for Prince Rupert, over the same period of time.

[125] To earn the maximum discount of $7.50 per tonne, a shipper must load the 112 cars in a 10-hour window. Shippers unable to do so can instead earn the $7.00-per-tonne discount that is available for cars loaded in a 24-hour window.

$7.00 per tonne. This action effectively made CN more price competitive as it widened the gap that had been opened when CP reduced the discount it offered on 100-111 cars from $7.00 per tonne to $4.00 per tonne at the beginning of the 2004-05 crop year. [See Table 3C-9 in Appendix 4.]

CP also instituted a series of secondary adjustments to its incentives in mid June 2006. As CN had done some three years earlier, CP eliminated its discount on movements in blocks of 25-49 cars. Furthermore, they also reduced the discount that had applied on movements in blocks of 50-111 cars from $4.00 per tonne to $3.75 per tonne. Like rate adjustments made in the latter half of previous crop years, the changes instituted by both carriers were undoubtedly aimed at ensuring the maximization of revenues under the revenue cap.[126]

The Revenue Cap

Under the federal government's revenue cap, the revenues that CN and CP were entitled to earn from the annual movement of regulated grain were not to exceed a maximum of $348.0 million and $362.9 million respectively. These amounts had been determined 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.[127]

The revenue cap for each carrier, however, is not a static target. Each year, the limits attributable to CN and CP are adjusted to take into account changes in the actual volumes of grain handled, the average distances over which these volumes moved, and the effects of inflation on railway costs. 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.[128] For the 2005-06 crop year, these adjustments resulted in CN and CP being accorded individual revenue caps of $395.7 million and $395.0 million respectively, or $790.8 million on a combined basis.[129] [See Table 3C-10 in Appendix 4.]

At the same time, the Agency determined that the statutory grain revenues for CN and CP amounted to $398.4 million and $396.5 million respectively, or $795.0 million on a combined basis. This meant that the industry's grain revenues came in $4.2 million above the maximum allowed. Moreover, it also denoted the first instance where the revenues of both carriers actually exceeded their respective limits: by $2.7 million in the case of CN; and by a somewhat lesser $1.5 million in the case of CP. As a result, the Agency ordered both carriers to pay out their excess revenues, along with a 5% penalty, to the Western Grains Research Foundation.

For a third consecutive year, the collective result indicates that the amount of revenue the railways actually did earn came within but a small fraction of what they were entitled to earn under the revenue cap. In fact, the comparative margin by which these revenues missed their allowable limit widened slightly, to 0.53% from 0.06% a year earlier. More importantly, these values continue to denote much narrower margins than those initially achieved in the 2000-01 through 2002-03 crop years.[130]

[126] All things being equal, a reduction in the discount offered results in a net increase in carrier revenues under the revenue cap.

[127] The values cited here in determining the revenue cap were drawn from railway traffic statistics for the 1998 calendar year.

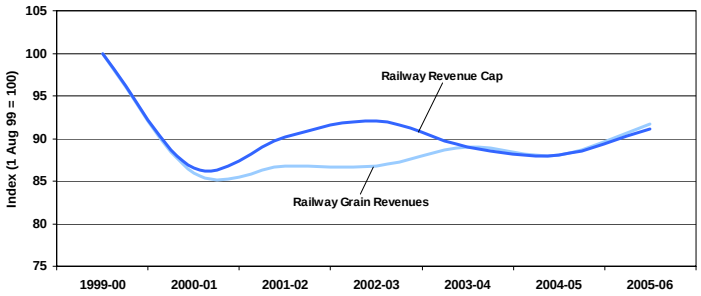
[128] A volume-related composite price index, which is used to adjust for inflation under the revenue cap regime, is determined annually by the Canadian Transportation Agency in advance of the crop year. For the 2005-06 crop year, the Agency determined the value of the volume-related composite price index to be 1.0553, which represented a year-over-year increase of 4.4%. See Canadian Transportation Agency Decision Number 251-R-2005 dated 28 April 2005.

[129] See Canadian Transportation Agency Decision Number 719-R-2006 dated 29 December 2006.

[130] The margins recorded during this period increased from 0.8% in the 2000-01 crop year, to 3.8% in the 2001-02 crop year, and to 5.6% in the 2002-03 crop year.

To an extent, the initial widening of this margin to 5.6% in the 2002-03 crop year was attributable to the expanded use by grain companies of the incentive discounts applicable on grain shipped in blocks of 25 or more railcars. By the 2002-03 crop year, an estimated 74.8% of all shipments in covered hopper cars earned such discounts as compared to 68.6% two years earlier. Even so, it must be remembered that statutory revenues are derived not only from the assessment of applicable freight rates and any earned discounts, but from a variety of other elements as well.[131] The relatively fixed, rather than variable, nature of some of these latter elements undoubtedly also contributed to the widening of this margin during a period when grain volumes were declining due to drought.[132] Even though increased grain volumes has done much to reduce the gap between allowable, and actual, railway revenues, the narrowness of the margins in the 2003-04 through 2005-06 crop years suggests that both carriers have become more adept at managing their revenues since the inception of the revenue cap regime.

Figure 64: Railway Revenue Cap – Compliance



When the revenue cap was instituted with the 2000-01 crop year, CN and CP initially chose to follow the convention of instituting any change to its single-car freight rates at the beginning of the crop year. Through the first three years of the new regime, the pricing adjustments made by both carriers through this process were similar, if not identical. This changed in the 2003-04 crop year when both carriers adopted a decidedly non-traditional approach to pricing. The most prominent feature in this new approach took the form of secondary rate adjustments in the third quarter. As discussed previously, the 2004-05 and 2005-06 crop years largely mirrored this, although additional rate adjustments were also noted in the fourth quarters. The nature of these latter adjustments leaves little doubt that they were but short-term corrective measures taken by the carriers to ensure the maximization of their revenues, while still respecting the limits imposed by their revenue caps.

3.4 Terminal Elevator and Port Performance *[Measurement Subseries 3D]*

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 23.7 million tonnes in the 2005-06 crop year.[133] This marked a significant increase from the previous year, having climbed by 25.2% from 18.9 million tonnes. [See Table 3D-1 in Appendix 4.]

Increases in throughput were noted for all four ports. For the largest of these, Vancouver, total marine shipments from the port rose by 27.0%, to 12.7 million tonnes from 10.0 million tonnes a year earlier. Moreover, these accounted for just over half, 53.4%, of the GHTS's total throughput volume. Shipments

[131] The calculation of prescribed railway's grain revenues under the revenue cap also takes into consideration a number of secondary elements, such as the amounts received for ensuring car supply or premium service. In addition, certain reductions from these revenues are also allowed, and include amortized contributions for the development of grain-related facilities not owned by the railway (Industrial Development Fund contributions), and amounts paid for interswitching. For a complete listing of the elements included in the calculation of statutory grain revenues, please consult Canadian Transportation Agency decisions 114-R-2001.

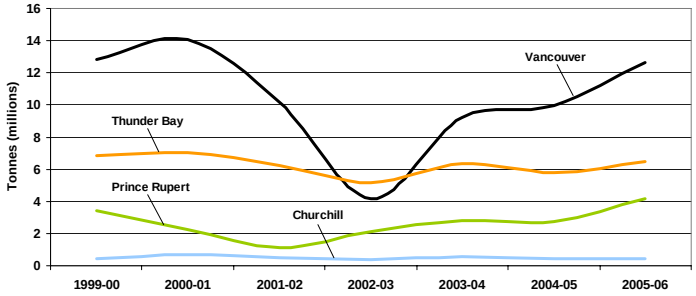
[132] The Canadian Transportation Agency does not make public any information pertaining to the specific makeup of the reductions applied when calculating the statutory grain revenues of either CN or CP. Nevertheless, a fixed annual reduction, such as might be embodied in the annualized contributions made by a railway from its Industrial Development Fund, implies that the margin would widen in the face of falling grain volumes. By the same token, a narrowing of this margin would be expected in the face of an increase in grain volumes.

[133] Includes grains, oilseeds and special crops covered by the Canada Grain Act as reported by the Canadian Grain Commission. This may differ from the data based on origination as supplied by the railways.

through Prince Rupert climbed to their highest level under the GMP, increasing by 51.9% from the 2.7 million tonnes handled the year before, to a record 4.2 million tonnes. When combined, the volume passing through these two west coast ports accounted for 70.9% of the overall total. This marked the third consecutive gain in the share for these ports since they fell to 53.3% in the 2002-03 crop year. Moreover, it also marked the first instance where the share actually climbed above the 68.8% they garnered in the first year of the GMP.

Clearly the comparative increase in the share of grain that moved through west coast ports came at the expense of the system's other two. On a combined basis, the share accorded the ports of Thunder Bay and Churchill fell to 29.1% from 32.9% the year before. At Thunder Bay, the dominant eastern gateway, throughput increased by 11.3%, to 6.5 million tonnes from 5.8 million tonnes a year earlier. Churchill, the port with traditionally the lowest volume, saw its throughput increase by just 1.8%, to 441,100 tonnes from 433,500 tonnes.

Figure 65: Western Canadian Ports – Grain Throughput

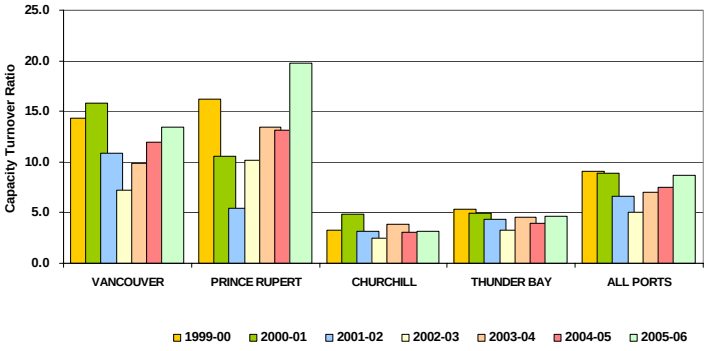


Capacity Turnover

The increased volume accorded to all ports in the 2005-06 crop year was the underlying force behind a 16.0% gain in the GHTS's capacity-turnover ratio, which climbed to an average of 8.7 turns from 7.5 turns a year earlier.[134] The ratio for the port of Prince Rupert itself increased by 51.1%, climbing to a record 19.8 turns from 13.1 turns a year earlier. Gains in keeping with the increase in throughput volume were noted for each of the remaining three ports. Thunder Bay, with an increase of 15.0%, posted the next largest comparative gain, 4.6 turns versus 4.0 turns a year earlier. This was followed in turn by Vancouver, which posted an 11.7% increase to 13.4 turns; and Churchill, with a 3.2% increase to 3.2 turns. [See Table 3D-2 in Appendix 4.]

Owing to the limited transformation of the terminal elevator network over the past seven years, the capacity turnover ratio has shown itself to be highly sensitive to changes in terminal throughput. As such, a comparison of the changes in these measures reveals patterns that are virtually indistinguishable. The only material change to the capacity turnover ratio came as a result of the de-licensing of Agricore United's "M" terminal in Thunder Bay at the close of the 2002-03 crop year. This was because the removal of the facility's 91,000 tonnes of idle storage capacity helped bolster the handling efficiency of the port as well as the terminal elevator network at large.[135]

Figure 66: Average Terminal Capacity Turnover Ratio



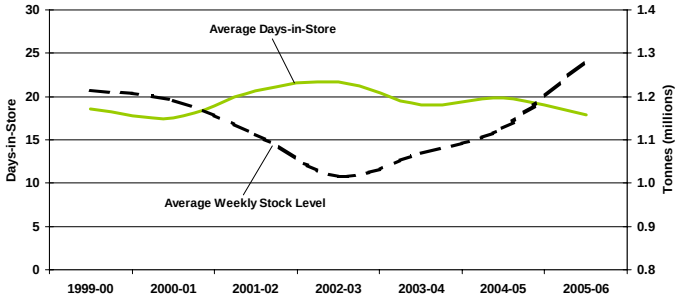
[134] The capacity turnover ratio of the terminal elevator network is a simple average based on each facility's individual handlings. As such, the measures for Vancouver and Thunder Bay, as well as the GHTS at large, can be skewed by outlying values. The magnitude of the year-over-year changes cited here do not necessarily correspond with those of throughput alone.

[135] The de-licensing of Agricore United's "M" terminal resulted in a 3.3% improvement to the network's handling efficiency.

Terminal Elevator Inventories

Over the course of the GMP, the amount of grain held in inventory at terminal elevators has proven itself to be sensitive to changes in the system's overall handlings, seldom straying too far from about 6% of the total throughput. With a 25.2% increase in throughput for the 2005-06 crop year, the average weekly stock level rose by 13.7% to almost 1.3 million tonnes. Increased stock levels were reported by all ports, with the magnitude of the gains roughly following those observed for throughput. Since Prince Rupert posted the largest gain in throughput, its stock levels also rose by the greatest amount, 23.6%. Vancouver, Thunder Bay, and Churchill followed with average inventory increases of 15.7%, 10.9%, and 9.5% respectively.

Figure 67: Terminal Elevators – Weekly Stock Level and Days-in-Store



Wheat stocks traditionally account for about half of the system's overall inventories. However, in the last crop year, wheat stocks were partially displaced by other commodities. Increasing by only 1.4% to just over 0.5 million tonnes, their share of the overall total fell to 42.1% from 47.3% a year earlier. Durum stocks, which were allocated the second largest amount of storage space, climbed by 9.6% to an average of 0.2 million tonnes. The largest relative stock increases were made by canola and peas, which rose by 73.9% and 48.1% respectively, and accounted for over 0.3 million tonnes collectively. The remaining 0.2 million tonnes of inventory, composed chiefly of barley, but including oats and flaxseed as well, remained largely unchanged from the previous year. [See Table 3D-3 in Appendix 4.]

To a large extent, the increase in terminal stocks was accompanied by a decrease in the amount of time grain spent in inventory. The overall average number of days-in-store for the 2005-06 crop year shows a year-over-year decline of 10.1%, falling to 17.9 days from 19.9 days the year before. Even so, this decrease did not reflect an across-the-board reduction in storage times. Mention must be made of the fact that reductions of 1.4 days at Vancouver and 4.8 days at Prince Rupert did much to allay the upward pressure that came as a result of increases amounting to 0.4 days and 7.5 days at Thunder Bay and Churchill respectively. [See Table 3D-4 in Appendix 4.]

To a large extent, the greater increase in west coast throughput meant that inventories maintained in Vancouver and Prince Rupert would turn over faster than those of Thunder Bay and Churchill. In fact, the 15.0-day average posted by Vancouver, as well as the 9.1-day average produced by Prince Rupert, ranked among the lowest values recorded for these ports under the GMP. Some of the more pronounced changes are summarized as follows:

	Days in Store	Change	Remarks
Terminal Ports			
Prince Rupert	9.1 days	Down 34.5%	Lowest average number of days-in-store
Vancouver	15.0 days	Down 8.5%	
Thunder Bay	27.0 days.	Up 1.5%	
Churchill	27.9 days	Up 36.8%	Highest average number of days-in-store
Notable Grains			
Canola	14.6 days	Down 2.0%	Lowest average number of days-in-store
Barley	16.9 days	Down 55.8%	
Wheat	17.1 days	Down 7.6%	
Flaxseed	27.9 days	Up 2.6%	Highest average number of days-in-store

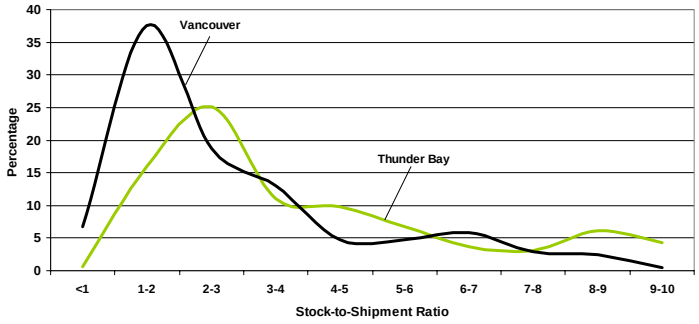
Whether sufficient stocks were on hand to meet demand can best be gauged by the average weekly stock-to-shipment ratios. This ratio provides an indication of how terminal stock levels related to the volume of grain loaded onto ships during the course of any particular week.[136] For Vancouver, the average for all stock-to-shipment ratios came in comfortably above a value of 2.0. Aside from durum and pea stocks, which posted increases of 25.6% and 29.7% respectively, these ratios all posted decreases. Reductions ranged from a low of 9.3% on wheat, which fell to 2.6, to a high of 24.0% on canola, which fell to 2.1. [See Table 3D-5 in Appendix 4.]

As with Vancouver, the average ratios at Thunder Bay were well above a value of 2.0. However, the port's increased throughput was not always supported by larger inventories, which produced equally mixed changes in these ratios. The most sizeable increase was posted by canola, which climbed 86.3% to 4.1. Among the decliners, flaxseed stocks showed the largest relative decrease, falling 36.5% to 3.3, while that for wheat fell only 2.1% to 5.9. At Prince Rupert, although the average ratio for wheat fell by 22.9% to 1.4, the averages for durum and barley both posted significant increase as a result of unusually large movements in the year.[137] The ratios posted by Churchill decreased by 11.7% to 1.9 in the case of wheat, while virtually doubling to 4.1 in the case of durum.

On the whole, these measures affirm that sufficient terminal stocks were generally maintained in the face of prevailing demand. Although stock shortages were periodically experienced at each of the four ports, these instances were most frequent in the latter half of the crop year when the supply of grain tightened. And 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. [See Table 3D-6 in Appendix 4.]

Even so, stock shortages were not entirely avoided. 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 be seen to have had a lesser incidence of such occurrences in the 2005-06 crop year.[138] In the case of Vancouver, this happened in 6.7% of all instances, about one-quarter less often than the preceding crop year's 8.5% rate would indicate. The decrease was even more substantial at Thunder Bay were the incidence of occurrence fell to just 0.6% from 6.6% a year earlier.

Figure 68: Distribution of Weekly Stock-to-Shipment Ratios (occurances)



Port Operations

A total of 780 vessels called for grain at western Canadian ports during the 2005-06 crop year. This represented a 12.2% increase over the 695 that arrived for loading a year earlier. Although this was consistent with a 25.2% increase in throughput, the comparatively modest gain in vessel calls underscores the expanding role of larger vessels in moving export grain. This has been particularly evident in the movement of grain from Prince Rupert, where 85.5% of the 83 ships that arrived took on loads in excess of 30,000 tonnes.[139]

[136] 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.

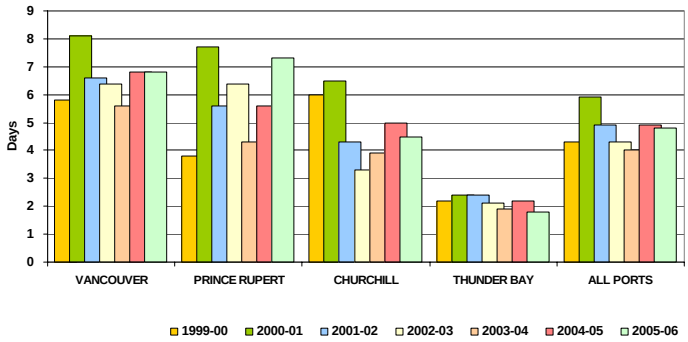
[137] Wheat is the only grain with sufficient consistency in shipments from Prince Rupert to allow for the calculation of stock-to-shipment ratios for each of the seven crop years covered by the GMP.

[138] 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. Direct-hit railway movements can effectively accommodate demand while negating any real need for grain to be stored at all.

[139] Feed wheat and feed barley accounted for a large portion of the increased volume of grain passing through Prince Rupert in recent years. These commodities are generally shipped in larger quantities than higher-quality grains. Comparatively, only 66.2%

Despite the variation in volume witnessed over the course of the GMP's first five years, the amount of time spent by vessels in port generally fluctuated between 4.0 and 4.5 days.[140] However, the quarterly averages posted for the 2004-05 crop year showed a comparatively greater degree of variability, reaching a height of 6.1 days in the third quarter. Although more muted than in the preceding crop year, the variability exhibited in the 2005-06 crop year proved equally significant. The quarterly average climbed to 5.9 days in the second quarter before descending to 4.0 days in the fourth. The overall impact was a modest reduction in the average for the 2005-06 crop year, which fell by 2.0% to 4.8 days from 4.9 days a year earlier. On the whole, waiting times decreased by an average of 0.2 days (or 9.1%) to 2.0 days, while the amount of time given over to the actual loading of these vessels increased by 0.1 days (or 3.7%) to an average of 2.8 days.[141]

Figure 69: Average Vessel Time in Port



As was the case a year earlier, much of the influence in these overall results can be traced back to activity in Vancouver and Prince Rupert, where loading delays were largely responsible for lengthened times in port. Although Vancouver's annualized 6.8-day average was unchanged from the 2004-05 crop year, it remained among the highest recorded for the port under the GMP.[142] In Prince Rupert, the average time spent in port jumped by 30.4%, to 7.3 days from 5.6 days the year before. It must be noted, however, that the overall performance in both ports was adversely affected by inclement weather conditions, with unusually heavy rains having led to frequent loading interruptions and significant rain delays in the second quarter.[143]

With a 1.8-day average, the overall amount of time spent by vessels in Thunder Bay came in 18.2% below the previous crop year's 2.2-day average. Moreover, this bettered the port's previous record low of 1.9 days by 5.3%. Much of this improvement came from a reduction in the amount of time waiting to load, which fell to an average of 0.5 days from 0.8 days a year earlier. A further gain of 0.1 days was derived from a reduction in the average loading time, which fell to 1.3 days. These results underscore the fact that Thunder Bay continues to post the lowest comparative average among the four ports in western Canada. This stems 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.

The average for Churchill also decreased by 10.0%, falling to an average of 4.5 days from 5.0 days the year before. As with Thunder Bay, this was largely driven by a 53.3% reduction in the amount of time vessels spent waiting to load, which fell to an average of 0.7 days from 1.5 days a year earlier. Much of this gain was

---

of the ships loaded at Prince Rupert in the 2003-04 crop year took on loads in excess of 30,000 tonnes. This increased to 83.9% in the 2004-05 crop year, and to 85.5% in the 2005-06 crop year, as a result of the shift towards handling more of these commodities. Moreover, vessel loadings during this period went from an average of 37,400 tonnes in the 2003-04 crop year, to 42,200 tonnes in the 2004-05 crop year, and to 49,300 tonnes in the 2005-06 crop year.

[140] During the course of the GMP, there were instances where the quarterly average actually exceeded 4.5 days. The most significant quarterly deviations from this value were observed in the 2000-01 crop year.

[141] 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.

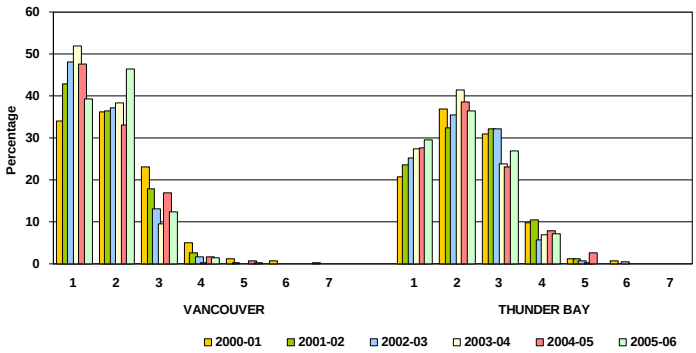
[142] For the 2000-01 crop year, the average amount of time spent by vessels in Vancouver reached a record 8.1 days.

[143] Unseasonably heavy rains began to fall in Vancouver in mid December 2005, with total precipitation for the second quarter ultimately amounting to 581.0 millimetres. Almost half of this, 283.6 millimetres, fell in the month of January 2006 alone. This denoted an 84.6% increase over the city's thirty-year average of 153.6 millimetres (based on data from 1971 through 2000). In comparison, Prince Rupert, which is considered to have one of the wettest climates in Canada, received 734.5 millimetres of rain in the second quarter.

attributable to a comparative improvement in the amount of grain flowing into the port during the first quarter.[144] [See Table 3D-7 in Appendix 4.]

The distribution of vessel time in port also shows that ships calling at west coast ports required more time to clear. At Vancouver, the proportion of vessels requiring more than five days in port rose to 50.5% from 44.9% a year earlier. Similarly, Prince Rupert saw its proportion increase to 53.0% from 32.3% in the same period. At Thunder Bay, where the proportion is traditionally even lower, 2.4% required stays of this duration versus 4.9% a year earlier. Finally, Churchill also saw the proportion of vessels in port for longer than five days decrease sharply, to 13.3% from 28.6% the year before. [See Table 3D-8 in Appendix 4.]

Figure 70: Number of Berths per Vessel



To an extent, these results were also the product of an increase in the number of vessels requiring more than one terminal berthing to load its cargo. The proportion of vessels requiring multiple berths to load at Vancouver increased to 60.6% from 52.3% a year earlier. At Thunder Bay, the proportion remained largely unchanged, falling only marginally to 70.4% from 72.3% in the same period.[145] [See Table 3D-9 in Appendix 4.]

Demurrage and Dispatch

Members of the WGEA and the CWB reported total vessel demurrage costs and dispatch earnings to the Monitor.[146] For the most part, dispatch earnings fell moderately while demurrage costs declined significantly in the 2005-06 crop year as a result of reduced vessel delays. As a result, net earnings increased by a factor of more than five times what it had been a year earlier, to $8.5 million from $1.5 million. Much of the overall improvement was due to a 58.0% reduction in demurrage costs, which fell to $6.7 million from $16.0 million the year before. This was driven by a 55.7% decrease in the demurrage costs incurred along the Pacific Seaboard, which fell to $6.2 million from $14.0 million. In comparison with those from the west coast, the charges arising from the delay of vessels at Churchill, Thunder Bay, and along the St. Lawrence Seaway, decreased by 74.2% in the 2005-06 crop year, to $0.5 million from $2.0 million the year before.

Total dispatch earnings for the 2005-06 crop year decreased by 12.9%, falling to $15.2 million from $17.5 million a year earlier. On the west coast, dispatch earnings climbed by 19.8% to $9.6 million. A reduction of 40.7% in dispatch earnings was posted for Churchill, Thunder Bay, and the St. Lawrence Seaway, which fell to $5.6 million from $9.4 million a year earlier. [See Table 3D-10 in Appendix 4.]

The reporting of both the amount of demurrage paid, and dispatch earned, by vessels is intended to provide an indication of the effectiveness with which grain flows through western Canadian ports. The modest reduction in the average amount of time vessels spent in port along with the increase in net earnings indicates that vessels were being loaded more in accordance with the lay days provided in their charters.

[144] The previous year's late harvest precipitated a comparatively large number of vessel delays at Churchill in the first quarter of the 2004-05 crop year.

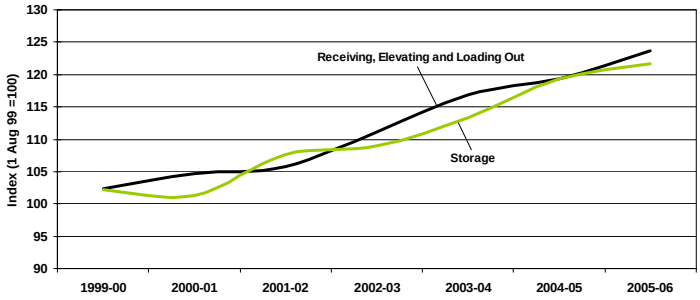
[145] It should be noted that the number of berths each vessel may make prior to the assessment of any financial penalties is negotiated as part of a charter contract. Larger vessels may have terms permitting them to berth more frequently than smaller ships without incurring any such charges.

[146] Note should be made of the fact that the data – which is both un-audited and aggregated – pertains to vessel shipments made during each crop year and, as such, may vary from the figures presented in the financial statements of these organizations.

Average Handling Charges

As with the rates posted for primary elevator handling activities, those for terminal elevator activities also vary greatly. Here too, an examination of price movement is best performed using a composite index. As was the case for primary elevator handling activities, the rates for the receiving, elevating and loading out of grain are the terminal elevator system's most costly. At the end of the 2005-06 crop year these ranged from a low of about $8.08 per tonne for wheat delivered at Churchill, to a high of $13.15 for canola shipped to Vancouver. The daily charge for storage ranged from about $0.06 to $0.12 per tonne.

Figure 71: Relative Change in Terminal Handling Charges



With respect to the rates posted for the receiving, elevating and loading out of grain, increases were noted for virtually all terminal elevators in the 2005-06 crop year. Increases posted by Vancouver's terminal elevators ranged from 2.2% to 2.4%. At Prince Rupert, this spread went from 2.9% to 3.1%. Thunder Bay put forward increases that ranged from 1.8% to 4.1%. Churchill, where these rates remained unchanged for a second year in a row, proved to be the exception. The composite price index used by the Monitor shows that the cost of these services effectively rose by a further 1.9% in the last crop year, and that the combined value of all increases made since the beginning of the GMP had reached 21.7%. [See Table 3D-11 in Appendix 4.]

The charges for terminal storage have also risen since the beginning of the GMP. In the 2005-06 crop year, these rates rose by 3.6%, and brought the accumulated price increase over the last seven years to 23.7% as well. Prince Rupert reported the largest year-over-year gain, with an increase of 7.9%. The terminals at Vancouver and Thunder Bay followed with increases that averaged 6.5% and 3.4% respectively. The overall increase in the composite price index was tempered by the fact that Churchill also chose to extend its existing storage rates a second consecutive year.[147]

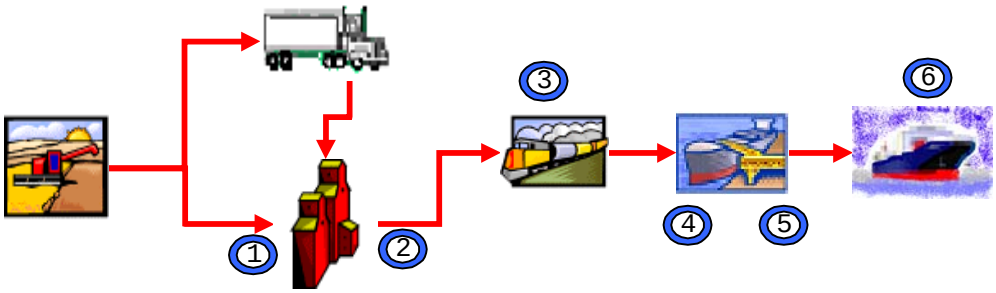
3.5 Summary Observations

As outlined in earlier editions of the Monitor's quarterly and annual reports, the supply chain model provides a useful framework by which to examine the speed with which grain moves through the GHTS. In this regard, the Monitor's annual report for the 2004-05 crop year concluded that the amount of time taken by grain as it moved through the supply chain had fallen to its lowest recorded value under the GMP, 58.1 days.

However, this result was chiefly driven by an unusually steep decline in the amount of time spent by grain in storage in the primary elevator system, which fell to a record low of 22.7 days in the first quarter. The late harvest and temporary reduction in grain supplies that were responsible for this improvement were not repeated in the 2005-06 crop year. As a result, the average for the 2005-06 crop year rebounded – at least initially – to more normative levels. Still, a draw down of stocks in the fourth quarter brought about an acceleration that limited the increase to 0.6 days, producing an overall average of 30.1 days for the crop year.

[147] It should be noted that these observations are based solely on those terminals that did not adopt a system of *escalating storage charges*. These figures should, therefore, be viewed as a lower estimate of posted rate increases. Five terminals – two at Thunder Bay and three along the West Coast – posted tariffs based on a system of escalating storage charges, which define a series of incrementally higher rates as storage time increases. Without average days-in-store data for the terminals using such rates, it is not possible to calculate an accurate rate for incorporation into the wider port averages.

Figure 72: The GHTS Supply Chain



	SUPPLY CHAIN ELEMENT	TABLE	1999-00	2001-02	2002-03	2003-04	2004-05	2005-06	SUPPLY CHAIN EFFECT
	SPEED RELATED								
2	Country Elevator – Average Days-in-Store	3B-4	41.7	38.0	47.9	34.4	29.5	30.1	▲
3	Average Railway Loaded Transit Time (days)	3C-4	9.2	8.8	10.1	8.9	8.7	8.6	▼
5	Terminal Elevator – Average Days-in-Store	3D-4	18.6	20.6	21.7	19.0	19.9	17.9	▼
	Average Total Days in GHTS		69.4	67.4	79.7	62.3	58.1	56.6	▼
	SERVICE / ASSET RELATED								
1	Average Country Elevator Capacity Turnover Ratio	3B-2	4.8	4.5	3.7	5.6	5.6	6.2	▲
4	Average Terminal Elevator Capacity Turnover Ratio	3D-2	9.1	6.6	5.0	7.0	7.5	8.7	▲
3	Average Railway Car Cycle (days)	3C-4	19.9	17.1	20.4	16.7	18.7	17.3	▼
6	Average Vessel Time in Port (days)	3D-7	4.3	4.9	4.3	4.0	4.9	4.8	▼

Running counter to this increase was a 2.0-day reduction in the amount of time grain spent in inventory at terminal elevators, which fell by 10.1% to an average of 17.9 days. Compounding this was a 1.3% reduction in the railways' average loaded transit time, which fell to an average of 8.6 days from the preceding crop year's 8.7-day average, and subtracted another 0.1 days from the time taken by grain to move through the supply chain.

As a result, grain took an average of 56.6 days to move through the supply chain during the 2005-06 crop year. This proved to be 1.5 days less than the record-setting 58.1-day average of the 2004-05 crop year, thereby making it the lowest value recorded under the GMP. In conjunction with this, a number of other observations concerning the supply chain's performance during the 2005-06 crop year should be made:

- Firstly, with a grain supply of 66.8 million tonnes, the 2005-06 crop year's potential grain movement actually constitutes the largest ever made available under the GMP. Moreover, the 23.7 million tonnes of grain that passed through western Canadian ports in the 2005-06 crop year proved to be the second largest volume under the GMP, falling just 0.9% short of the record 23.9 million tonnes that were handled in the 2000-01 crop year. As a result, the pressures brought to bear on the GHTS can be deemed comparable to those experienced at the beginning of the GMP, and prior to those crop years where grain handlings were adversely affected by drought.

- Secondly, although the volume of grain moved through the GHTS was greater than it had been a year earlier, the movement was heavily influenced by other factors. In general terms, grain quality was significantly diminished for a second consecutive year. This influenced the mix of both grains and grades that moved through specific ports. By way of example, the west coast ports handled an

unusually large volume of feed barley, a large portion of which moved under the CWB's tendering program. This was one of a number of factors that contributed to a significant increase in their workload for the period.

- Finally, even though the demand for carrying capacity increased as a result of the larger crop, problems with car supply appeared to be a continuing concern for many GHTS stakeholders. Loaded transit times that are not largely different from what they were several years before underscores the fact grain continues to move through the supply chain in much the same manner as it did at the beginning of the GMP. In fact, with the exception of the amount of time spent by grain in inventory at country and terminal elevators, comparatively little material change has been noted in the speed with which grain moves through the GHTS.

Section 4: Service Reliability

The true test of any logistics chain is its ability to provide for the timely delivery of product, as it is needed – whether it is raw materials, semi-processed goods, component parts, or finished products. This applies in equal measure to both industrial and consumer products, and is summarized by a widely used colloquialism within the logistics industry: "to deliver the right product, to the right customer, at the right time." The indicators that follow are largely used to determine whether grain is indeed moving through the system in a timely manner, and whether the right grain is in stock at port when a vessel calls for loading.

Highlights – 2005-06 Crop Year

Port Performance

- *Overall reliability reflected in:*
  - *Adequate terminal stock levels at the ports of Vancouver and Thunder Bay.*
    - *Stock-to-vessel requirement, and stock-to-shipment, ratios generally maintained at levels well above 2.0.*
- *Increased grain inventories reflected in generally higher average weekly stock-to-vessel-requirements ratios.*
  - *Vancouver*
    - *Wheat – 3.4; up by 23.6% from last crop year.*
    - *Canola – 2.3; down 17.5%.*
  - *Thunder Bay*
    - *Wheat – 6.6; up by 10.4% from last crop year.*
    - *Canola – 4.4; up by 103.0%.*
- *Stock-to-shipment ratios revealed generally modest reductions.*
  - *Vancouver*
    - *CWB grains – 3.2; down by 1.9% from last crop year.*
    - *Non-CWB grains – 3.2; down by 10.5%.*
  - *Thunder Bay*
    - *CWB grains – 6.8; down by 5.3% from last crop year.*
    - *Non-CWB grains – 3.6; down by 1.1%.*
- *Terminal handling revenues increased by 42.5% to $312.4 million.*
  - *Vancouver revenues totalled $225.5 million.*
    - *Up by 49.4% from last crop year.*
  - *Thunder Bay revenues totalled $86.9 million.*
    - *Up by 27.1% from last crop year.*
- *CWB carrying costs increased by 21.7% to $133.9 million.*
  - *Pacific Seaboard carrying costs totalled $95.4 million.*
    - *Up by 29.3% from last crop year.*
  - *Thunder Bay carrying costs totalled $38.5 million.*
    - *Up by 6.4% from last crop year.*

Indicator Series 4 – Service Reliability

Table	Indicator Description	Notes	BASE 1999-00	CURRRENT REPORTING PERIOD (1) 2004-05	2005-06	% VAR	
	Port Performance [Subseries 4A]						
4A-1	Avg. Weekly Stock-to-Vessel Requirements Ratio – VCR – Wheat		3.1	2.7	3.4	23.6%	▲
4A-1	Avg. Weekly Stock-to-Vessel Requirements Ratio – VCR – Canola		2.5	2.8	2.3	-17.5%	▼
4A-1	Avg. Weekly Stock-to-Vessel Requirements Ratio – TBY – Wheat		5.6	6.0	6.6	10.4%	▲
4A-1	Avg. Weekly Stock-to-Vessel Requirements Ratio – TBY – Canola		2.8	2.2	4.4	103.0%	▲
4A-2	Avg. Weekly Stock-to-Vessel Requirements Ratio – Grade	(2)					
4A-3	Avg. Weekly Stock-to-Shipment Ratio – VCR – CWB Grains		3.5	3.2	3.2	-1.9%	▼
4A-3	Avg. Weekly Stock-to-Shipment Ratio – VCR – Non-CWB Grains		3.6	3.6	3.2	-10.5%	▼
4A-3	Avg. Weekly Stock-to-Shipment Ratio – TBY – CWB Grains		4.6	7.2	6.8	-5.3%	▼
4A-3	Avg. Weekly Stock-to-Shipment Ratio – TBY – Non-CWB Grains		3.3	3.6	3.6	-1.1%	▼
4A-4	Terminal Handling Revenue ($millions) – Vancouver		$192.7	$150.9	$225.5	49.4%	▲
4A-4	Terminal Handling Revenue ($millions) – Thunder Bay		$82.1	$68.4	$86.9	27.1%	▲
4A-4	CWB Carrying Costs ($millions) – Pacific Seaboard		$63.3	$73.8	$95.4	29.3%	▲
4A-4	CWB Carrying Costs ($millions) – Thunder Bay		$31.3	$36.1	$38.5	6.4%	▲

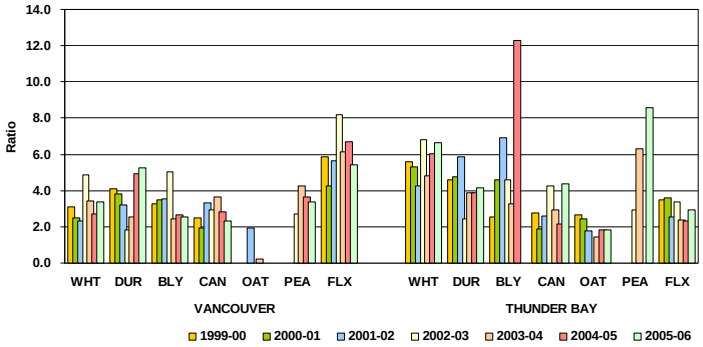
(1) – In order to provide for more direct comparisons, the values for the 1999-2000 through 2004-05 crop years are "as at" or cumulative to 31 July unless otherwise indicated.
(2) – Changes in the data cited cannot be depicted within the summary framework presented here. The reader is encouraged to consult the detailed data tables found in Appendix 4 as required.

4.1 Port Performance *[Measurement Subseries 4A]*

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. By way of example, a ratio of 2.5 would indicate that 2.5 tonnes of grain was being held in inventory for each tonne of grain needed for loading onto vessels arriving in the next week.[148]

With respect to the average weekly stock-to-vessel requirements ratios for grains held in inventory at the port of Vancouver, the 2005-06 crop year produced some sharp year-over-year changes. Among CWB grains, the ratio posted for wheat climbed by 23.6%, to 3.4 from 2.7 a year earlier. This was joined by a 5.8% rise in the average ratio for durum, which increased to 5.2 from 5.0. The ratio for barley, on the other hand, remained unchanged at 2.6. In the case of non-CWB grains, the results showed a movement towards lower values.

Figure 73: Stock-to-Vessel Requirements Ratio



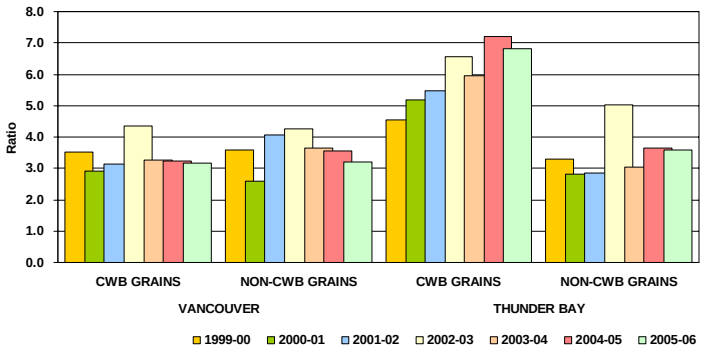
The results were far less mixed for Thunder Bay, where the ratios all moved higher. In the case of CWB grains, the ratios for wheat and durum showed moderate gains from the previous year, climbing by 10.4% in the case of the former to 6.6, and by 7.4% to 4.2 in the case of the latter. Among the non-CWB grains, the ratios for canola and flaxseed increased by 103.0% and 27.3% respectively, while that of oats increased by just 0.8%. None of the average ratios, save that for oats, fell below a value of 2.0. [See Table 4A-1 in Appendix 4.]

[148] Ratio values of one or more denote sufficient volume on hand to meet short-term demand. Upward or downward movements in this ratio are indicative of a relative change in short-term inventory levels. It should be noted that these ratios can display great variability owing to the uneven nature of grain flowing into, and through, the ports.

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, few of the grade-specific averages ever fell below a value of 1.0 at either Vancouver or Thunder Bay. [See Table 4A-2 in Appendix 4.]

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.

Figure 74: Stock-to-Shipment Ratio



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 a marginal 1.9% during the 2005-06 crop year, remaining unchanged at 3.2. The average ratio for non-CWB grains fell by a greater 10.5%, to 3.2 from 3.6. At Thunder Bay, the average ratio for CWB grains fell by 5.3%, to 6.8 from 7.2, while a decrease of 1.1% in the average for non-CWB grains left the ratio unchanged at 3.6. Clearly, these values reveal that ample stocks were generally on hand to meet the prevailing short-term demand. [See Table 4A-3 in Appendix 4.]

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. It should be noted here, however, that differences in accounting practices make direct comparisons between total revenues and CWB costs difficult. The terminal revenue and cost data presented here is un-audited. [See Table 4A-4 in Appendix 4.]

Total reported terminal revenues for the 2005-06 crop year increased by 49.4% at Vancouver, rising to $225.5 million from $150.9 million. At Thunder Bay, total reported terminal revenues rose by a notably lesser 27.1%, to $86.9 million from $68.4 million.

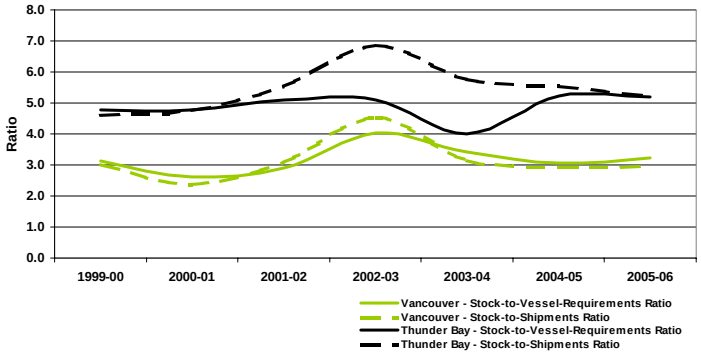
Total CWB carrying costs along the Pacific Seaboard rose by 29.3% in the 2005-06 crop year, to $95.4 million from $73.8 million the year before. At Thunder Bay carrying costs increased by 6.4%, to $38.5 million from $36.1 million a year earlier.

4.2 Summary Observations

As a means of gauging the reliability of the GHTS, the GMP examines terminal stock levels against both the stated requirements and actual shipments of vessels loading at western Canadian ports. The resultant ratios provide an indication of whether or not sufficient quantities of grain were available at the terminals to meet the demand presented by the vessels loading during any particular week. Since the inception of the GMP it has

been observed that these stocks generally exceed the immediate needs of these vessels by a comfortable margin. In fact, when examining the weighted ratios for both Vancouver and Thunder Bay it can be seen that three to five times the tonnage needed to accommodate the loading of these vessels was typically already in inventory. These values are well above those necessary to consider a delivery system as having meet the minimum standards for reliability. In short, to the extent that the reliability of any supply chain can be gauged by its ability to actually deliver product at the time and place specified, the western Canadian GHTS can be deemed reliable.

Figure 75: Average Stock-to-Vessel Requirements and Stock-to-Shipment Ratios – Vancouver and Thunder Bay



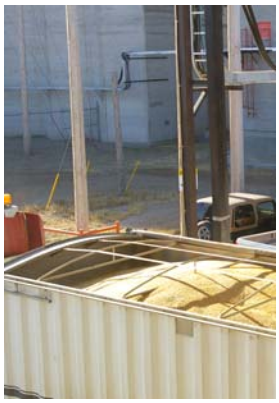
For the GHTS as a whole, stock-to-vessel-requirement, and stock-to-shipment, ratios with values of about 1.0 might be considered optimal targets since they would denote an effective balance between supply and demand. While the higher averages observed under the GMP indicate that the GHTS has proven itself quite reliable in positioning grain for export, the ratios attributable to individual commodities and grades have also been noted to fall below this threshold for short periods of time. In most instances, these occurrences pinpoint the system's failure to deliver grain as required, whether as a result of an inadequate supply of inland grain, covered hopper cars or some other force. The irregular nature of these events suggests that they are not systemic problems, but rather the product of periodic breakdowns in the GHTS's various subsystems.

Despite some evidence implying that there has been an effort to reduce these ratios for certain grades of grain, the overall values remain comparatively high. In fact, there has been little real change in the values posted since the beginning of the GMP. This strongly suggests that the grain industry, and more particularly those concerned with the operation of the terminal elevators, have focused their efforts on protecting the GHTS's overall reliability in delivering grain to port. While in itself positive, it must be noted that this is generally done at the expense of system efficiency since inventories are often maintained at levels well in excess of those required to meet prevailing demand.

Section 5: Producer Impact

One of the key objectives of the GMP rests in determining the producer impacts that stem from changes in the GHTS. The principal measure in this regard is the producer netback – an estimation of the financial return to producers after deduction of the "export basis."

The methodology employed in calculating these measures was developed following an extensive study conducted as a Supplemental Work Item under the GMP, and approved for incorporation into the mainstream indicators of the GMP by Transport Canada and Agriculture and Agri-Food Canada.



Highlights – 2005-06 Crop Year

Producer Netback and Sampling Methodology

- *Sampling methodology defined 43 grain-delivery stations drawn from 9 geographic areas across western Canada.*

Export Basis and Producer Netback – CWB Grains

- *Producer netback:*
  - *Reductions largely price-driven.*
    - *Wheat – decreased 7.3% to $141.17 per tonne.*
    - *Durum – decreased 12.9% to $148.94 per tonne.*
- *Final Realized Price:*
  - *Modest reductions attributable to higher global grain supplies.*
    - *Wheat – decreased 4.9% to $195.14 per tonne.*
    - *Durum – decreased 9.5% to $199.35 per tonne.*
- *Export Basis:*
  - *Wheat – increased 7.0% to $61.81 per tonne.*
  - *Durum – increased 2.7% to $72.61 per tonne.*
- *Average direct costs:*
  - *Weighted applicable freight costs increased 3.1% for wheat, and 1.5% for durum.*
  - *Trucking costs increased by 10.7%.*
  - *Primary elevation costs increased by 1.0% for wheat, and 2.1% for durum.*
  - *Gross CWB costs increased by 40.9% for wheat, and 3.2% for durum.*
- *Total producer benefits:*
  - *Increased due to more aggressive trucking premiums.*
  - *Average trucking premiums:*
    - *Wheat – increased 23.9% to $4.56 per tonne.*
    - *Durum – increased 12.3% to $4.76 per tonne.*
  - *CWB transportation savings decreased by 11.4% to $1.32 per tonne.*

Export Basis and Producer Netback – Non-CWB Commodities

- *Producer netback:*
  - *Reductions largely price-driven.*
    - *Canola – decreased 13.1% to $234.87 per tonne.*
    - *Yellow Peas – decreased 1.2% to $118.75 per tonne.*
- *Average prices for non-CWB commodities declined as a result of weak international markets.*
  - *Canola – decreased 11.2% to $276.38 per tonne.*
  - *Yellow Peas – decreased 8.8% to $171.69 per tonne.*
- *Average western Canadian export basis for non-CWB commodities:*
  - *Canola – increased 1.3% to $41.51 per tonne.*
  - *Yellow Peas – decreased 22.1% to $52.94 per tonne.*

Producer Car Loading

- *Number of producer-loading sites decreased by one to 483.*
  - *Class 1 railways gain 25 sites due to shortline acquisitions.*
    - *Posted increase of 7.6% to 354 sites.*
  - *Shortline railways posted net reduction of 26 sites.*
    - *Closure of one site reduced count to 129.*
- *Producer-car shipments increased 40.7% to 11,345 carloads.*
  - *Denoted largest producer-car volume recorded under the GMP.*
    - *Share of total hopper car movement rebounded to 4.1%.*
  - *Volume increase substantially exceeded gain in other railway shipments.*

Indicator Series 5 – Producer Impact

Table	Indicator Description	Notes	BASE 1999-00	CURRRENT REPORTING PERIOD (1) 2004-05	2005-06	% VAR	
	Export Basis [Subseries 5A]						
	Manitoba East						
5A-1A	1 CWRS Wheat ($ per tonne)	(2)	$54.20	$58.20	$59.64	2.5%	▲
5A-1B	1 CWA Durum ($ per tonne)	(2)	$60.29	$63.34	$65.42	3.3%	▲
5A-1C	1 Canada Canola ($ per tonne)	(2)	$61.58	$44.24	$37.08	-16.2%	▼
5A-1D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.93	$67.48	$52.44	-22.3%	▼
	Manitoba West						
5A-2A	1 CWRS Wheat ($ per tonne)	(2)	$57.80	$61.86	$64.80	4.8%	▲
5A-2B	1 CWA Durum ($ per tonne)	(2)	$65.37	$68.64	$70.82	3.2%	▲
5A-2C	1 Canada Canola ($ per tonne)	(2)	$58.67	$46.21	$41.80	-9.5%	▼
5A-2D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.93	$67.25	$51.40	-23.6%	▼
	Saskatchewan Northeast						
5A-3A	1 CWRS Wheat ($ per tonne)	(2)	$58.10	$62.68	$67.36	7.5%	▲
5A-3B	1 CWA Durum ($ per tonne)	(2)	$68.31	$73.27	$74.46	1.6%	▲
5A-3C	1 Canada Canola ($ per tonne)	(2)	$54.38	$49.15	$47.68	-3.0%	▼
5A-3D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.93	$68.12	$52.51	-22.9%	▼
	Saskatchewan Northwest						
5A-4A	1 CWRS Wheat ($ per tonne)	(2)	$56.42	$59.89	$64.60	7.9%	▲
5A-4B	1 CWA Durum ($ per tonne)	(2)	$70.53	$74.08	$76.69	3.5%	▲
5A-4C	1 Canada Canola ($ per tonne)	(2)	$50.88	$47.50	$45.72	-3.8%	▼
5A-4D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.84	$68.08	$52.89	-22.3%	▼
	Saskatchewan Southeast						
5A-5A	1 CWRS Wheat ($ per tonne)	(2)	$59.40	$64.51	$67.73	5.0%	▲
5A-5B	1 CWA Durum ($ per tonne)	(2)	$65.22	$69.10	$70.96	2.7%	▲
5A-5C	1 Canada Canola ($ per tonne)	(2)	$57.47	$49.15	$44.16	-10.2%	▼
5A-5D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.72	$68.01	$53.05	-22.0%	▼
	Saskatchewan Southwest						
5A-6A	1 CWRS Wheat ($ per tonne)	(2)	$57.22	$58.67	$61.66	5.1%	▲
5A-6B	1 CWA Durum ($ per tonne)	(2)	$68.12	$71.09	$72.09	1.4%	▲
5A-6C	1 Canada Canola ($ per tonne)	(2)	$55.75	$46.84	$39.81	-15.0%	▼
5A-6D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.66	$67.93	$52.97	-22.0%	▼
	Alberta North						
5A-7A	1 CWRS Wheat ($ per tonne)	(2)	$53.20	$51.27	$58.36	13.8%	▲
5A-7B	1 CWA Durum ($ per tonne)	(2)	$71.67	$74.65	$76.24	2.1%	▲
5A-7C	1 Canada Canola ($ per tonne)	(2)	$50.39	$36.95	$37.34	1.1%	▲
5A-7D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.29	$68.06	$52.82	-22.4%	▼
	Alberta South						
5A-8A	1 CWRS Wheat ($ per tonne)	(2)	$48.81	$50.66	$56.28	11.1%	▲
5A-8B	1 CWA Durum ($ per tonne)	(2)	$66.06	$65.70	$68.04	3.6%	▲
5A-8C	1 Canada Canola ($ per tonne)	(2)	$48.07	$35.60	$33.91	-4.7%	▼
5A-8D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.93	$68.12	$53.03	-22.1%	▼
	Peace River						
5A-9A	1 CWRS Wheat ($ per tonne)	(2)	$53.57	$55.23	$61.44	11.2%	▲
5A-9B	1 CWA Durum ($ per tonne)	(2)	$71.00	$76.14	$78.29	2.8%	▲
5A-9C	1 Canada Canola ($ per tonne)	(2)	$52.14	$40.48	$41.54	2.6%	▲
5A-9D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.93	$67.90	$52.98	-22.0%	▼
	Western Canada						
5A-10A	1 CWRS Wheat ($ per tonne)	(2)	$54.58	$57.77	$61.81	7.0%	▲
5A-10B	1 CWA Durum ($ per tonne)	(2)	$67.63	$70.73	$72.61	2.7%	▲
5A-10C	1 Canada Canola ($ per tonne)	(2)	$52.51	$40.97	$41.51	1.3%	▲
5A-10D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.76	$67.98	$52.94	-22.1%	▼
	Producer Loading [Subseries 5B]						
5B-1	Producer Loading Sites (number) – Class 1 Carriers		415	329	354	7.6%	▲
5B-1	Producer Loading Sites (number) – Class 2 and 3 Carriers		122	155	129	-16.8%	▼
5B-1	Producer Loading Sites (number) – All Carriers		537	484	483	-0.2%	–
5B-2	Producer Car Shipments (number) – Covered Hopper Cars		3,441	8,061	11,345	40.7%	▲

(1) – In order to provide for more direct comparisons, the values for the 1999-2000 through 2005-06 crop years are "as at" or cumulative to 31 July unless otherwise indicated.

(2) – The export basis includes the following elements where applicable: freight (adjusted by the FAF and CFAR); trucking; elevation; dockage; weighing and inspection; CWB costs; trucking premiums; and CWB transportation savings.

5.1 Introduction to the Export Basis and Producer Netback *[Measurement Subseries 5A]*

One of the principal objectives set for the GMP by the Government of Canada involved gauging the overall logistics cost associated with moving prairie grain to market – what is commonly referred to as the "export basis" – and the resultant "netback" arising to producers.[149] 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). These charges also take into consideration any incentives or discounts that may be applicable.

With several hundred delivery points scattered across the prairies, and four principal export gateways, the number of distinct origin-destination pairs that can be employed to move western Canadian grain exceeds 1,000.[150] 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 netbacks of individual producers takes on unimaginable dimensions. Such calculations can easily swell into hundreds of 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.

In recognition of this, the GMP consciously limited these estimates to four specific grains: wheat; durum; canola; and peas.[151] In addition, a weighted-scale model was then used to select 43 separate grain stations as a representative sample in the calculation of the export basis and producer netback. These grain stations were then grouped into nine geographically based areas, comprising between four and six grain stations each, namely: [152]

- Manitoba East;
- Manitoba West;
- Saskatchewan Northeast;
- Saskatchewan Northwest;
- Saskatchewan Southeast;
- Saskatchewan Southwest;
- Alberta North;
- Alberta South; and
- Peace River.

These areas are depicted in Figure 76. Within a larger context, these 43 grain stations currently encompass:[153]

- 31 stations with one or more high-throughput grain elevators;
- 18 stations with one or more conventional grain elevators;
- 12 stations that are local to the branch line railway network; and
- 5 stations that are directly served by regional and shortline railway carriers.

[149] In its basic form, producer netback equates to the residual left after subtracting the logistics cost from a grain's sale price.

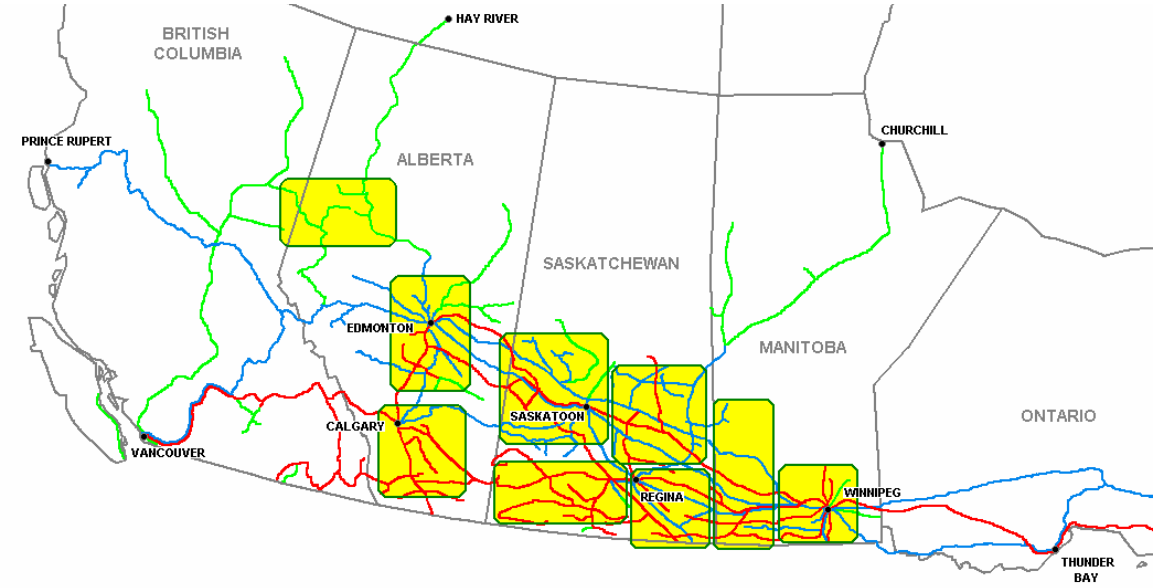
[150] Grain delivery points denote locations where at least one licensed primary elevator is situated. These do not include railway-designated producer-loading sites.

[151] 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).

[152] 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.

[153] Over the course of the GMP, changes in the elevator and railway infrastructure have altered the original station mix. At the outset, this mix encompassed 30 stations with one or more high-throughput grain elevators; 27 stations with one or more conventional grain elevators; 19 stations that were local to the branch line railway network; and 10 stations that were directly served by regional and shortline railway carriers.

Figure 76: Sampling Areas



Components of the Calculation

The means by which the Monitor calculates both the export basis and producer netback was developed through extensive consultation with GHTS stakeholders. Although a number of useful suggestions were made, and many subsequently acted upon, unanimous agreement on the use of a particular methodology ultimately proved elusive. The methodology adopted by the Monitor in calculating the values that follow, was approved for use in the GMP in the summer of 2002.[154]

It is important to remember that every individual producer's cost structure differs. As a result, no general means of 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. 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 accompanying table. The reader is encouraged to become familiar with this material before attempting to draw any specific conclusions from the information presented in the discussion that follows.

[154] The methodology was approved by Transport Canada and Agriculture and Agri-Food Canada, and is presented in the Quorum Corporation study "*Report on the development and formulation of a methodology for the calculation of Producer Netback Measures*," May 2002. Interested readers can download the report from the Monitor's website (www.quorumcorp.net).

Considerations in the Calculation of the Export Basis and Producer Netback

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).[2] 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.[3]
Weighted Applicable Freight	For every station in a given geographic area, the producer pays the lesser of either the single-car railway freight rate to Vancouver[4], or that of the corresponding rate to Thunder Bay plus the Freight Adjustment Factor (FAF).[5] 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	The Churchill Freight Advantage Rebate 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.	
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 3A-1. The Monitor is aware that producers' trucking costs vary widely as a result of the type of equipment used, the use of owner-supplied versus carrier-supplied services, and the length of haul involved. Detailed information relating to the structure of these costs is not currently available, and has necessitated use of an assumed value.[6]	The trucking costs are based on the commercial short-haul trucking rates for an average haul of 40 miles as presented in Table 3A-1. The Monitor is aware that producers' trucking costs vary widely as a result of the type of equipment used, the use of owner-supplied versus carrier-supplied services, and the length of haul involved. Detailed information relating to the structure of these costs is not currently available, and has necessitated use of an assumed value.
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 3B-6 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 3B-6 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.[7]	

ELEMENT	CWB GRAINS	NON-CWB COMMODITIES
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.
Canola Growers and Pulse Associations		All elevator deliveries of canola are subject to a $0.50 per tonne "check-off" for provincial canola association dues. 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.[8]
Trucking Premiums	Grain companies report on the trucking premiums they pay to producers at each of the facilities identified in the sampling methodology.[9] 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, illustrated as "trucking premiums", are therefore factored into the GMP export basis, and are presented as a producer benefit. When weighted based on the applicable tonnage, and factored in at a regional level, they are relatively small sums due to the limited number of companies using this mechanism.
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) – The Winnipeg Commodity Exchange (WCE) collects Vancouver cash prices and spot prices at selected country elevator locations weekly.
2) – Forward contracting and deferred delivery provisions make it impossible to accurately weight the canola price data. Testing was done with weekly producer delivery data and with weekly and monthly export data. In consultation with the WCE, weighting based on monthly exports was deemed the most appropriate.
3) – 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.
4) – The single-car railway freight rates employed reflect those found in posted tariffs at the end of each crop year (July 31).
5) – 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.
6) – An examination into the actual trucking costs of producers was recommended in the Quorum Corporation study "*Report on the Identification of Producer Impacts Over and Above those Identified in the Producer Netback Methodology*," May 2002, which can be downloaded from the Monitor's website (www.quorumcorp.net). The issue of trucking costs is discussed further in Section 5.5.
7) – 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.
8) – Levies for Manitoba and Alberta producers are refundable. Previously set at 0.5%, the Saskatchewan levy stood at 0.75% on 1 August 2002, and rose to 1.0% on 1 August 2003. The Alberta levy also rose to 1.0% on 1 August 2003.
9) – 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.

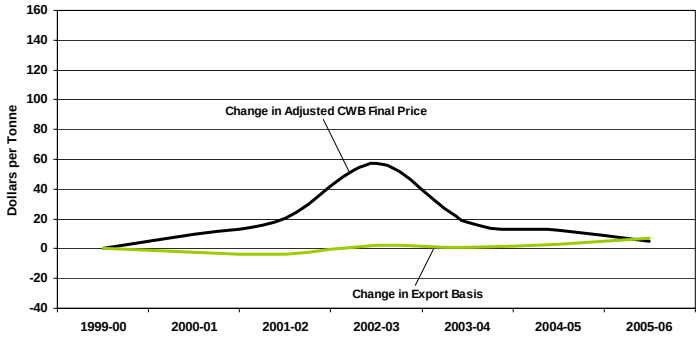
5.2 Export Basis and Producer Netback – CWB Grains (Wheat and Durum)

5.21 1CWRS Wheat

The netback to producers from the delivery of 1CWRS wheat rose steadily in the first four years of the GMP. From an average of $143.25 per tonne in the 1999-2000 crop year, the producer's netback climbed to $198.07 per tonne by the end of the 2002-03 crop year. The vast majority of this $54.82-per-tonne improvement stemmed from a 29.0% increase in the price of 1CWRS wheat itself. In comparison, the export basis increased by only $2.57 per tonne during this period, thereby reducing the benefit from increased prices by just 4.5%.

The gains made during this period began to erode a year later, when a sharp decline in the price of 1CWRS wheat proved largely responsible for a 19.1% reduction in the producers' netback, which fell to $160.28 per tonne. Although this downward pressure eased somewhat over the next two crop years, the price of 1CWRS continued to slide. By the end of the 2005-06 crop year, the average price had fallen another $12.81 per tonne. When coupled along with a $6.30-per-tonne increase in the export basis, the producers' netback was reduced by a further $19.11 per tonne, to $141.17 per tonne.

Figure 77: Change in Netback Components – 1 CWRS Wheat



This marked the first instance where the producer's netback had fallen to a level below the $143.25 per tonne it had been at the outset of the GMP. Notwithstanding the magnitude of recent reductions in the price of 1 CWRS wheat, the average for the 2005-06 crop year remained $5.15 per tonne above that benchmarked seven years earlier. Despite this, a $7.23-per-tonne, or 13.2%, increase in the export basis during this same period more than offset the net improvement in price. It is worth noting that this rise in the producers' export basis was also tempered by the financial benefits of higher trucking premiums and CWB savings. Even so, the value of these latter items has diminished somewhat in the last two crop years, thereby exposing a more significant portion of the increased direct costs that they had been shielding since the beginning of the GMP. The scope of these changes are summarized in the following table.

Contributory Changes to Producer Netback – 1 CWRS Wheat (dollars per tonne)

							2005-06 / 1999-2000		
	1999-00	2001-02	2002-03	2003-04	2004-05	2005-06	$ VAR	% VAR	
CWB Final Price	$192.43	$217.02	$250.20	$211.14	$205.10	$195.14	$2.71	1.4%	▲
Plus: CWB Costs (Net)	5.40	1.14	5.02	4.65	5.01	7.84	2.44	45.2%	▲
Adjusted CWB Final Price	197.83	218.16	255.22	215.79	210.11	202.98	5.15	2.6%	▲
Direct Costs	56.90	56.97	63.81	62.90	62.94	67.69	10.79	19.0%	▲
Less: Trucking Premiums	-2.32	-3.62	-3.96	-4.25	-3.68	-4.56	-2.24	96.6%	▲
CWB Savings	0.00	-2.47	-2.70	-3.14	-1.49	-1.32	-1.32	n/a	▲
Export Basis	54.58	50.88	57.15	55.51	57.77	61.81	7.23	13.2%	▲
Producer Netback	$143.25	$167.28	$198.07	$160.28	$152.34	$141.17	-$2.08	-1.5%	▼

Final Realized Price

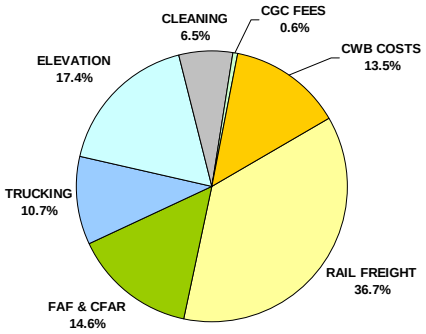
As already mentioned, positive price movements proved to be the chief force underlying improvements in the visible netback to producers of 1CWRS wheat throughout much of the GMP. From an initial value of $192.43 per tonne in the 1999-2000 crop year, shrinking global wheat stocks and the prospect of tighter supplies had proved to be the primary forces underlying the first real increase in world prices since the 1995-96 crop year. Drought conditions in both Canada as well as other producing countries also helped to push prices to a peak of $250.20 in the 2002-03 crop year.

Since then, the Final Realized Price for 1CWRS wheat (13.5% protein) has tumbled by 22.0%, falling first to $211.14 per tonne in the 2003-04 crop year, then to $205.10 per tonne a year later, and finally to $195.14 per tonne with the close of the 2005-06 crop year. Much of this price erosion stemmed from the combined forces of higher global wheat production, continued export competition, weaker global demand, and a strengthening Canadian dollar.

Export Basis

Although the export basis has increased since the beginning of the GMP, the last four crop years have produced the most significant changes. In fact, through to the end of the 2001-02 crop year, the export basis for 1CWRS wheat actually declined by 6.8%, to $50.88 per tonne from its benchmark value of $54.58 per tonne. Since then, the export basis has climbed by $10.93 per tonne, or 21.5%. At $61.81 per tonne, the 2005-06 crop year's export basis marks the highest value attained under the GMP.

Figure 78: Wheat Export Basis – Direct Costs



In considering the forces that have shaped this result, 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 the cost of rail freight, trucking, elevation, dockage, CGC weighing and inspection, as well as the associated operating costs incurred by the CWB. The second component encompasses all of the financial benefits accruing to producers through the receipt of any offset to these expenses. These typically include any of the trucking premiums received by producers from the grain companies along with any transportation savings passed on to them by the CWB through its pool accounts.[155] Moreover, it has been the rise in these latter elements that have effectively contained the growth in direct costs, and a potentially larger increase in the export basis itself.

Over the course of the past seven crop years, the direct cost component of the export basis has climbed by 19.0%, from an average of $56.90 per tonne in the 1999-2000 crop year to $67.69 per tonne in the 2005-06 crop year. The largest single element in these costs is the applicable freight, which incorporates not only the per-car charges for an average railway shipment, but the applicable CWB Freight Adjustment Factor (FAF) and Churchill Freight Advantage Rebate (CFAR) as well. In the 1999-2000 crop year, the average weighted applicable freight for 1CWRS wheat in western Canada amounted to $31.87 per tonne, which represented 56.0% of total direct costs. Although the per-tonne average climbed to $34.72 per tonne by the end of the 2005-06 crop year, its proportion of total direct costs declined marginally to 51.3%.

Among the other elements in the direct costs attributable to 1CWRS wheat were:

- Trucking Costs: The commercial costs tied to a 40-mile haul are estimated to have increased by 21.9% over the course of the last seven years, to $7.24 per tonne in the 2005-06 crop year from $5.94 per

[155] These savings, comprised of the accepted bids from the tendering process, freight and terminal rebates, and financial penalties for non-performance, are paid to producers through the CWB's pool accounts.

tonne at the beginning of the GMP. Although fuel surcharges had been applied temporarily in the 2000-01 and 2001-02 crop years, a significant rise in the price of fuel precipitated sharp rate increases in each of the last two crop years. Despite the magnitude of the overall gain, trucking's share of total direct costs has only climbed marginally, to 10.7% from 10.4%.

- Primary Elevation Costs: These costs averaged $9.75 per tonne in the 1999-2000 crop year, and comprised 17.1% of the total direct costs for 1CWRS wheat. Increases in the tariff rates over the next six years effectively raised the cost of elevation by 20.6%, to an average of $11.76 per tonne in the 2005-06 crop year, thereby pushing up its share of total direct costs to a marginally higher 17.4%. The posted tariffs reflect the maximum rates that grain companies may charge producers for services at their facilities. Although grain companies can charge less, cash-ticket data suggests that this is seldom the case.

- Dockage Costs: The cost of terminal cleaning averaged $3.56 per tonne in the 1999-2000 crop year, and comprised 6.3% of total direct costs. Although these costs increased by 24.4% over the course of the last seven crop years, to an average of $4.43 per tonne in the 2005-06 crop year, their contribution to total direct costs remained essentially unchanged at 6.5%. As with primary elevation tariffs, the rates posted represent the maximum that grain companies may charge. Cash-ticket data indicates that this is typically the norm.

- CGC Weighing and Inspection Fees: These costs remained unchanged at an average of $0.38 per tonne throughout the course of the past seven crop years. On a proportional basis, they constitute a mere 0.6% of total direct costs.[156]

- Gross CWB Costs: These costs effectively reflect the per-tonne operating costs of the CWB, which are ultimately paid by producers through the CWB's pool accounts. Given the nature of these costs, they can fluctuate substantially from year to year. In the 1999-2000 crop year, gross CWB costs averaged $5.40 per tonne, and constituted 9.5% of the total direct costs for 1CWRS wheat. In the 2005-06 crop year, these costs had increased to an average of $9.16 per tonne, and represented 13.5% of total direct costs.

Under the GMP, 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.[157] 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. Still, the data suggests that the competition between grain companies has pushed these premiums generally higher.

Despite a reduction in the 2004-05 crop year, trucking premiums paid by grain companies for 1CWRS wheat deliveries in the nine sampling areas have virtually doubled, increasing from an average of $2.32 per tonne in the 1999-2000 crop year to $4.56 per tonne in the 2005-06 crop year. On a proportional basis, these premiums have been offsetting an increasingly larger amount of the producer's direct costs: 4.1% in the 1999-2000 crop year as compared to 6.7% in the 2005-06 crop year.

The transportation savings identified by the CWB stem directly from the implementation of its tendering program in the 2000-01 crop year. In that crop year, these savings initially amounted to an average of $0.61 per tonne, which offset the direct costs tied to 1CWRS wheat by a further 1.1%. By the 2003-04 crop year, these savings had increased more than five-fold, to an average of $3.14 per tonne and 5.0% of total direct

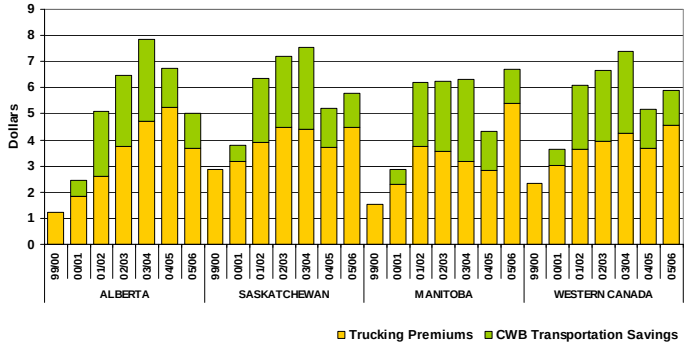
[156] The CGC weighing and inspection costs reported here have been adjusted in order to avoid overlap with the portion of such charges assessed by the grain companies through their primary elevation tariffs, and a possible distortion of the export basis.

[157] There are a number of other methods that grain companies use to compete to get grain to their elevator driveways - what they refer to as their toolbox. In addition to trucking premiums, grade promotions, discounts on farm supplies, favourable credit terms, or even the absorption of trucking cost, are also employed. These benefits, which flow to producers, are not consistently tracked through grain company accounting processes. The producer benefits component of the export basis does not attempt to quantify these benefits. By the grain companies' own admission, an accurate tracking of these benefits on a system-wide basis would not be feasible. Data pertaining to these methods of attracting grain would contain a significant degree of subjectivity and is, therefore, not included in these calculations.

costs. However, data collected over the next two crop years showed a sharp reduction in these savings. By the end of the 2005-06 crop year, the savings had fallen to $1.32 per tonne, thereby reducing its direct-cost offset to 2.0%.

As a result of these forces, the financial benefit to producers in the 2005-06 crop year amounted to an average of $5.88 per tonne, 13.7% more than the $5.17 per tonne recorded a year earlier, but well below the $7.39-per-tonne average noted two years before. What is more, the offset value of these financial benefits was also increased, to 8.7% of total direct costs from 8.2% the year before.

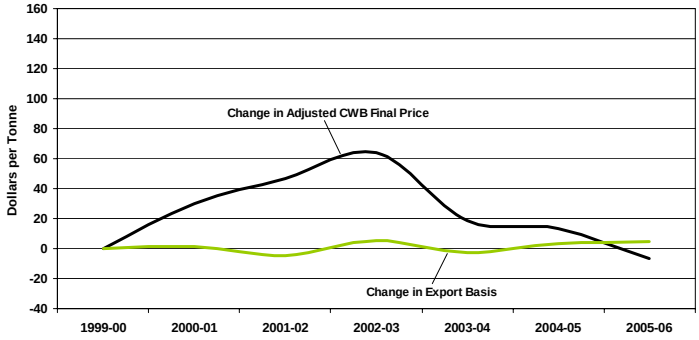
Figure 79: Wheat Export Basis – Producer Benefits (dollars per tonne)



5.22 1CWA Durum

As was the case for 1CWRS wheat, the netback to producers from the delivery of 1CWA durum rose steadily in the first four years of the GMP. From an average of $160.48 per tonne in the 1999-2000 crop year, the producer's netback had climbed to $218.96 per tonne by the end of the 2002-03 crop year, a gain of 36.4% fuelled in large measure by a corresponding increase in the price of 1CWA durum.

Figure 80: Change in Netback Components – 1 CWA Durum



But when prices began to fall, so too did the producers' netback. In the 2003-04 crop year, the producers' netback for 1CWA durum fell to $181.80 per tonne largely in response to slumping world prices. Much the same was true of the next two crop years. By the end of the 2005-06 crop year, falling prices had largely reduced the producers' netback to $148.94 per tonne, the lowest value observed under the GMP. The changes contributing to this $11.54-per-tonne, or 7.2%, reduction are summarized below.

Contributory Changes to Producer Netback – 1CWA Durum (dollars per tonne)

							2005-06 / 1999-2000		
	1999-00	2001-02	2002-03	2003-04	2004-05	2005-06	$ VAR	% VAR	
CWB Final Price	$206.79	$257.12	$266.88	$229.20	$220.37	$199.35	$-7.44	-3.4%	▼
Plus: CWB Costs (Net)	21.32	17.35	25.13	17.32	21.30	22.20	0.88	4.1%	▲
Adjusted CWB Final Price	228.11	274.47	292.01	246.52	241.67	221.55	-6.56	-2.9%	▼
Direct Costs	70.77	69.65	79.48	72.54	76.46	78.69	7.92	11.2%	▲
Less: Trucking Premiums	-3.14	-4.13	-3.73	-4.68	-4.24	-4.76	-1.62	51.6%	▲
CWB Savings	0.00	-2.47	-2.70	-3.14	-1.49	-1.32	-1.32	n/a	▲
Export Basis	67.63	63.05	73.05	64.72	70.73	72.61	4.98	7.4%	▲
Producer Netback	$160.48	$211.42	$218.96	$181.80	$170.94	$148.94	-$11.54	-7.2%	▼

Final Realized Price

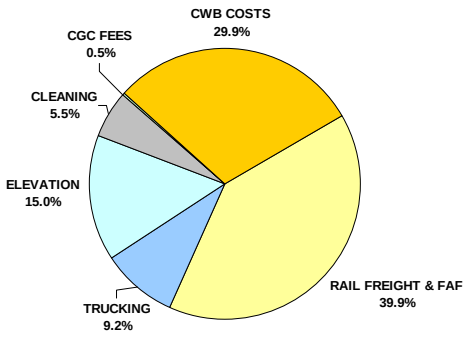
As was the case with 1CWRS wheat, an increase in grain prices proved to be the principal factor underlying the improvement in the netback to producers of 1CWA durum over the first four years of the GMP. During this period, limited supplies of high-grade milling durum in the face of reduced North American production was largely responsible for pushing the Final Realized Price of 1 CWA durum (13.5% protein) steadily upwards, from an initial value of $206.79 per tonne in the 1999-2000 crop year to a height of $266.88 per tonne in the 2002-03 crop year.

For the 2003-04 crop year, however, the Final Realized Price for 1CWA durum tumbled by 14.1% to $229.20 per tonne. A significant factor in this decline was the harvesting of a bumper crop in North Africa, which has traditionally constituted the largest durum-importing region in the world. Plentiful Canadian stocks also helped contribute to a worldwide oversupply of durum. With much of the same forces at play in both the 2004-05 and 2005-06 crop years, prices continued to weaken. With the close of the 2005-06 crop year the Final Realized Price for 1CWA durum had fallen to its lowest level under the GMP, $199.35 per tonne.

Export Basis

As was outlined previously with respect to 1CWRS wheat, the export basis for 1CWA durum has also proven fairly stable. In fact, the 2005-06 crop year's export basis of $72.61 per tonne proved to be only 7.4% above the $67.63-per-tonne value recorded in the first year of the GMP.

Figure 81: Durum Export Basis – Direct Costs



And as was the case 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. In fact, gains in these latter elements have been particularly instrumental in containing the growth in direct costs, and stabilizing the export basis.

Since having climbed to $79.48 per tonne in the 2002-03 crop year, the direct costs tied to 1CWA durum have declined slightly. For the 2005-06 crop year, these amounted to an average of $78.69 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, amounting to 39.9% of the total.[158] For the 2005-06 crop year, the weighted average freight for the movement of 1CWA durum totalled $31.43 per tonne, just 4.5% more than the $30.07 per tonne it had been seven years earlier. Moreover, given the comparatively modest nature of the gain itself, its share of total direct costs had actually fallen from the 42.5% it had been in the first year of the GMP.

Gross CWB costs also increased over the course of the past seven crop years: from $21.32 per tonne in the first year of the GMP to $23.52 per tonne in the 2005-06 crop year. Notwithstanding year-to-year fluctuations, the share of total direct costs attributable to this element has remained largely unchanged, having fallen from 30.1% to 29.9%.

[158] 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 $0.16 in the 2002-03 crop year since many of the shipping points located in southern Manitoba and southeastern Saskatchewan actually had negative values. When treated as a credit, the FAF actually reduced the freight paid by producers.

Among other changes in the direct costs attributable to 1CWA durum were:

- Trucking Costs: The commercial costs tied to a 40-mile haul increased to $7.24 per tonne in the 2005-06 crop year. These are the same values cited earlier with respect to wheat, and are 21.9% greater than the commercial trucking costs first recorded in the 1999-2000 crop year. On a proportional basis they accounted for 9.2% of total direct costs in the 2005-06 crop year as compared to 8.4% seven years earlier.

- Primary Elevation Costs: These costs averaged $9.44 per tonne in the 1999-2000 crop year, and comprised 13.3% of total direct costs. Increases in the tariff rates pushed the cost of elevation up by 24.7% to an average of $11.77 per tonne in the 2005-06 crop year. This increase was a key driver in the observed rise in total direct costs over the past five crop years, and resulted in its share having risen to a total of 15.0%.

- Dockage Costs: The cost of terminal cleaning averaged $3.62 per tonne in the 1999-2000 crop year, and comprised 5.1% of total direct costs. These costs increased by 20.2% to an average of $4.35 per tonne in the 2005-06 crop year, and its share of total direct costs advanced to 5.5%.

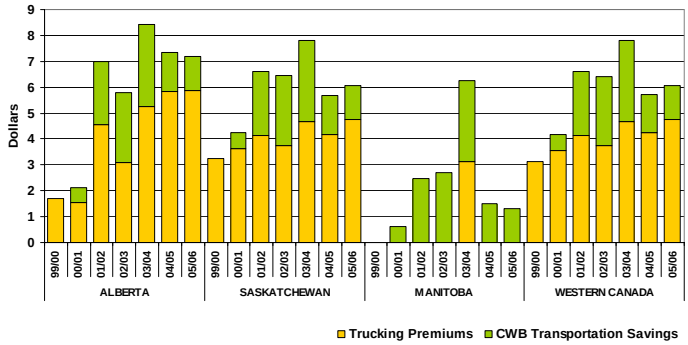
- CGC Weighing and Inspection Fees: These costs remained unchanged at an average of $0.38 per tonne throughout the course of the past six crop years. On a proportional basis, they constitute only 0.5% of total direct costs.

As with wheat, the trucking premiums paid by grain companies for 1CWA durum deliveries also rose between the 1999-2000 and 2003-04 crop years, climbing by 49.0% from an average of $3.14 per tonne to $4.68 per tonne. Similarly, despite having declined somewhat in the 2004-05 crop year as a result of changes in prevailing market conditions, they rebounded to a record $4.76 per tonne in the 2005-06 crop year. At 6.0%, the compensation provided in the 2005-06 crop year proved only marginally greater than the 4.4% provided in the first year of the GMP. It should be noted, that due in large part to the much lower volumes of durum handled in Manitoba, the premiums paid out to producers there have been insignificant.[159]

The CWB's transportation savings are also applicable on the movement of 1CWA durum, and are in fact identical to those already presented for 1CWRS wheat. In the 2000-01 crop year, these savings amounted to an average of $0.61 per tonne, which helped reduce total direct costs by 0.8%. By the end of the 2003-04 crop year, they had climbed to an average of $3.14 per tonne. And although its ensuing decline to $1.32 per tonne over the next two years marked a 58.0% reduction from this value, it still proved more than twice what it had been in the first year of the CWB's tendering program, and accounted for an offset to total direct costs of 1.7%.

When examined on a combined basis, these producer benefits have moved generally higher, from a total of $3.14 per tonne in the 1999-2000 crop year to a record $7.82 per tonne in the 2003-04 crop year. Even when considering their recent decline to $6.08 per tonne in the 2005-06 crop year, these financial benefits have almost doubled over the last seven crop years. Moreover, as a 7.7% offset to total direct costs, they have helped contain the escalation in the export basis to just 7.4% over this same period.

Figure 82: Durum Export Basis – Producer Benefits (dollars per tonne)



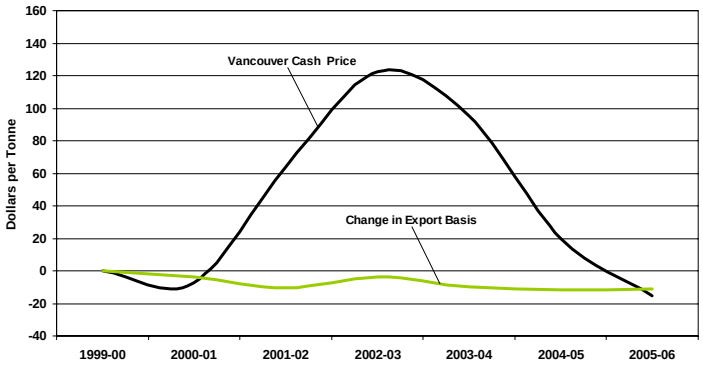
[159] The $3.11-per-tonne average trucking premium reported as having been paid to Manitoba producers in the 2003-04 crop year is derived from deliveries to but one station in southwestern Manitoba. This was the sole instance during the course of the GMP that a sampling station in Manitoba reported having taken delivery of durum.

5.3 Export Basis and Producer Netback – Non-CWB Commodities (Canola and Peas)

5.31 1 Canada Canola

As was the case with the CWB grains discussed previously, the visible netback due to producers from the delivery of 1 Canada canola increased fairly steadily in the first four years of the GMP, rising from $239.10 per tonne in the 1999-2000 crop year to $365.39 per tonne in the 2002-03 crop year. In the three years that followed, however, these gains were all lost. Moreover, by the end of the 2005-06 crop year the producer's netback had fallen to $234.87 per tonne, the lowest value recorded under the GMP.

Figure 83: Change in Netback Components – 1 Canada Canola



This represented a net reduction of $4.23 per tonne, or 1.8%, over the course of the last seven crop years. This deterioration was largely derived from a $15.23-per tonne net reduction in the Vancouver cash price of 1 Canada canola. Indeed, were it not for the beneficial effects of an $11.00-per-tonne reduction in the export basis, the impact from falling prices would have proven more severe. The scope of the changes in these individual components is summarized below.

Contributory Changes to Producer Netback – 1Canada Canola (dollars per tonne)

	1999-00	2001-02	2002-03	2003-04	2004-05	2005-06	2005-06 / 1999-2000 $ VAR	2005-06 / 1999-2000 % VAR	
Vancouver Cash Price	$291.61	$355.67	$414.36	$387.11	$311.19	$276.38	-$15.23	-5.2%	▼
Direct Costs	54.99	42.85	49.08	42.79	41.31	41.94	-13.05	-23.7%	▼
Less: Trucking Premiums	-2.48	-0.84	-0.11	-0.28	-0.34	-0.43	2.05	-82.7%	▼
Export Basis	52.51	42.01	48.97	42.51	40.97	41.51	-11.00	-20.9%	▼
Producer Netback	$239.10	$313.66	$365.39	$344.60	$270.22	$234.87	-$4.23	-1.8%	▼

Vancouver Cash Price

As with CWB grains, upward price movement proved to be the key driver in the observed improvement in the netback for 1 Canada canola. Notwithstanding a modest decline in the 2000-01 crop year, the average annual price of 1 Canada canola rose by 42.1% between the 1999-2000 and the 2002-03 crop years, climbing from $291.61 per tonne to $414.36 per tonne. With the price of 1 Canada canola being particularly sensitive to the wider influences of international supply and demand, this increase was largely a product of tightening global supplies.

An increase in international supplies brought about a softening in the price of 1 Canada canola during the 2003-04 crop year, with the Vancouver cash price having fallen to $387.11 per tonne. Canadian canola production for the 2003-04 crop year, which increased to 6.6 million tonnes from a ten-year low of just 4.1 million tonnes a year earlier, typified this general improvement in supply. Although these same forces were also at work in the 2004-05 and 2005-06 crop years, the downward pressure exerted on prices proved far greater. Record soybean production in South America along with a substantial increase in US output were chiefly responsible for this. Canadian canola production, which increased to 7.7 million tonnes in the 2004-05 crop year, and to a record 9.6 million tonnes in the 2005-06 crop year, added to an already over-supplied global

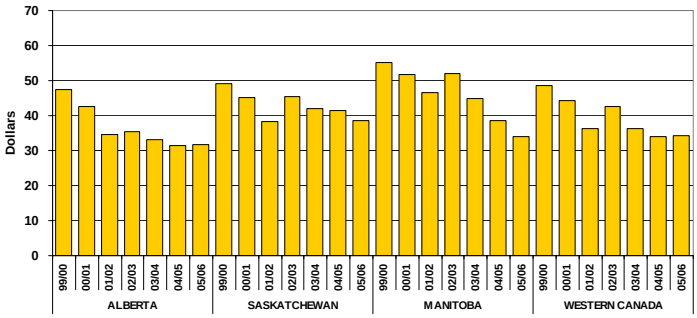
market. As a result, world prices tumbled even further. With the strength of the Canadian dollar also playing a role, the average Vancouver cash price closed out the 2005-06 crop year at $276.38 per tonne, 5.2% below the $291.61-per-tonne average benchmarked in the GMP's base year.

Export Basis

The export basis for 1 Canada canola has decreased by 20.9% over the past seven years, falling from an average of $52.51 per tonne in the 1999-2000 crop year to $41.51 in the 2005-06 crop year. Although the export basis rose by 1.3% in the 2005-06 crop year, this result ran counter to the downward movement noted since the beginning of the GMP.[160]

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 tied to non-CWB commodities 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.

Figure 84: 1 Canada Canola – Price Differential (dollars per tonne)



In contrast to the patterns observed for wheat and durum, the direct costs tied to 1 Canada canola fell by 23.7% between the 1999-2000 and 2005-06 crop years, from an average of $54.99 per tonne to $41.94 per tonne.[161] Much of this reduction stemmed from a 29.6% narrowing of the price differential.[162] By the end of the 2005-06 crop year, the price differential had fallen from an average of $48.55 per tonne to $34.20 per tonne, with its share of direct costs having declined from 88.2% to 81.5%. This narrowing of the price differential effectively signalled that the product was in demand, and that buyers were willing to surrender a greater proportion of the Vancouver price to the producer in order to acquire sufficient supplies.

Although the global over-supply described earlier might have been expected to produce a widening of the price differential, a consistent and strong demand from exporters and domestic crushers – largely to meet the demand for increased bio-diesel production – produced a seemingly contradictory response. Although canola's average weekly stock level increased by 46.9% in the 2005-06 crop year, to an average of 371,200 tonnes from 252,700 tonnes a year earlier, shipments were sustained by the heightened demand. As a result, grain companies and crushing plants narrowed the export basis in order to entice producers into delivering canola to their facilities.

The second largest component in canola's direct costs is that associated with trucking the commodity from the farm gate to an elevator or processor. As in the determination of the producers' netback for CWB grains, these costs are estimated to have climbed by 10.7% in the 2005-06 crop year, amounting to an average of $7.24 per tonne as compared to $5.94 per tonne at the beginning of the GMP. Owing to the narrowing of the price differential over the past six years, trucking costs in the 2005-06 crop year accounted for a significantly greater proportion of the total direct costs, 17.3% versus 10.8% in the 1999-2000 crop year. The remaining direct

[160] The export basis for 1 Canada canola also spiked in the 2002-03 crop year, rising to $48.97 per tonne before then falling back to $42.51 per tonne a year later.

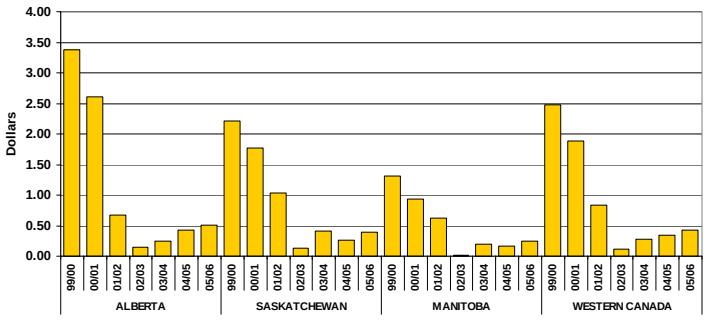
[161] The 2002-03 crop year provided the only notable exception to this trend when direct costs rose by 14.5%, to an average of $49.08 per tonne from the previous year's $42.85-per-tonne average.

[162] In the case of 1 Canada canola, the price differential represents the spread between the Vancouver cash price and the relevant spot price in each of the nine geographic sampling areas.

costs, which accounted for just 1.2% of the overall total, were derived from a provincial check-off that is applied as a means of funding the Canola Growers' Association.

Unlike CWB grains, trucking premiums are not as aggressively used to attract deliveries of non-CWB commodities. In fact, notwithstanding the nominal increases of recent crop years, trucking premiums have been all but eliminated. The premiums paid by grain companies for 1 Canada canola deliveries in each of the nine sampling areas fell by 82.7% between the 1999-2000 and 2005-06 crop years, decreasing from an average of $2.48 per tonne to only $0.43 per tonne. Similarly, their real value in offsetting direct costs has also fallen, declining from 4.5% of direct costs in the first year of the GMP, to just 1.0% in the 2005-06 crop year.

Figure 85: 1 Canada Canola – Producer Benefits (dollars per tonne)

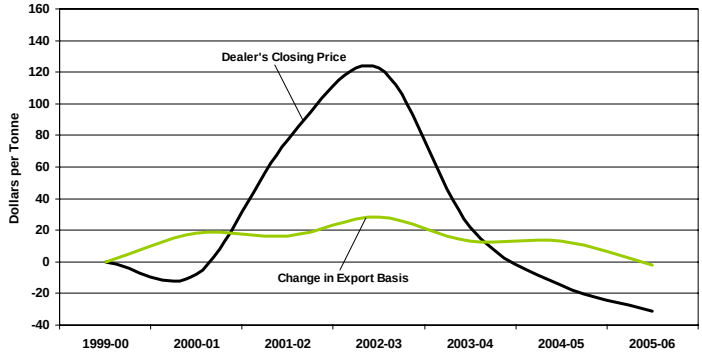


It is also worth noting that the reduction in trucking premiums has coincided with the narrowing of the price differential. This is consistent with comments received from grain companies to the effect that they prefer to use the spread between the spot price and the futures price as the primary signalling mechanism to attract deliveries. As such, it appears likely that trucking premiums will continue to assume a very limited role in determining the export basis for canola.

5.32 Large Yellow Peas

The visible netback due to producers from the delivery of large yellow peas decreased by a further 1.2% in the 2005-06 crop year, to $118.75 per tonne from $120.19 per tonne a year earlier. Moreover, this denoted the lowest value yet achieved under the GMP, falling some $29.03 per tonne below the $147.78 per tonne it had been benchmarked at in the 1999-2000 crop year.

Figure 86: Change in Netback Components – Large Yellow Peas



As with other commodities, much of this decline is attributable to a sharp reduction in the price of large yellow peas over the course of the past three crop years. In fact, by the end of the 2005-06 crop year the price of large yellow peas had fallen $30.85 per tonne, or 15.2%, below that benchmarked in the first year of the GMP. A reduction of $1.82 per tonne in the export basis helped to mitigate the full impact of this decline in price. The changes giving rise to these results are summarized in the following table.

Contributory Changes to Producer Netback – Large Yellow Peas (dollars per tonne)

	1999-00	2001-02	2002-03	2003-04	2004-05	2005-06	2005-06 / 1999-2000 $ VAR	2005-06 / 1999-2000 % VAR	
Dealer's Closing Price	$202.54	$279.85	$325.14	$224.77	$188.17	$171.69	-$30.85	-15.2%	▼
Direct Costs	54.94	71.61	83.33	67.86	68.12	53.07	-1.87	-3.4%	▼
Less: Trucking Premiums	-0.18	-0.64	-0.14	-0.11	-0.14	-0.13	0.05	-27.8%	▼
Export Basis	54.76	70.97	83.19	67.75	67.98	52.94	-1.82	-3.3%	▼
Producer Netback	$147.78	$208.88	$241.95	$157.02	$120.19	$118.75	-$29.03	-19.6%	▼

Dealer's Closing Price

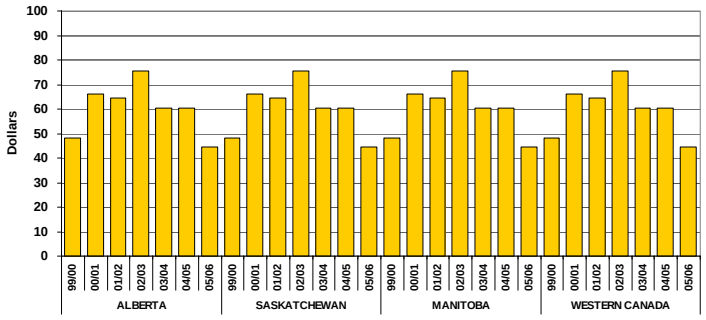
In keeping with the patterns observed for other commodity prices, the 2005-06 crop year saw the third consecutive reduction in the price of large yellow peas after a four-year run up. In equal measure, price has proven to be the key determinant in the netback for this commodity over the past seven years. And although the price of large yellow peas is sensitive to the wider influences of the international marketplace, Canadian supplies continue to exercise significant sway in the marketplace.[163]

Notwithstanding a modest decline in the 2000-01 crop year, the average annual price of large yellow peas increased by 60.5% between the 1999-2000 and the 2002-03 crop years, rising from $202.54 per tonne to $325.14 per tonne. This largely reflected the effects of a reduction in the international supply. For the 2003-04 crop year, western Canadian dry pea production rose to 2.1 million tonnes, a gain of 55% from the 1.4 million tonnes of the preceding crop year. This increase in supply effectively reversed the upward pressure that had been exerted on price. As a result, the average price of large yellow peas declined by 30.9% to $224.77 per tonne in the 2003-04 crop year. Much the same occurred in the 2004-05 crop year when production climbed to a record 3.3 million tonnes and the price fell another 16.3% to $188.17 per tonne. Although production fell to 3.1 million tonnes in the 2005-06 crop year, prices continued to fall, slipping another 8.8% to a record low of $171.69 per tonne.

Export Basis

As with canola, the export basis of large yellow peas posted a net decrease over the course of the GMP. But this decline has largely been a recent phenomenon. In fact, the export basis for large yellow peas actually reached a height of $83.19 per tonne in the 2002-03 crop year, an increase of 51.9% over the $54.76 per tonne it had been four years earlier. Since then, the export basis for large yellow peas has fallen by 36.4%, to $52.94 per tonne by the end of the 2005-06 crop year.

Figure 87: Large Yellow Peas – Price Differential (dollars per tonne)



As was mentioned previously with respect to canola, owing to the relative size of the direct cost component in the export basis, changes in the former are virtually indistinguishable from those of the export basis itself. Likewise, over 80% of these direct costs cannot be examined directly. Instead, a price differential between the dealer's closing price

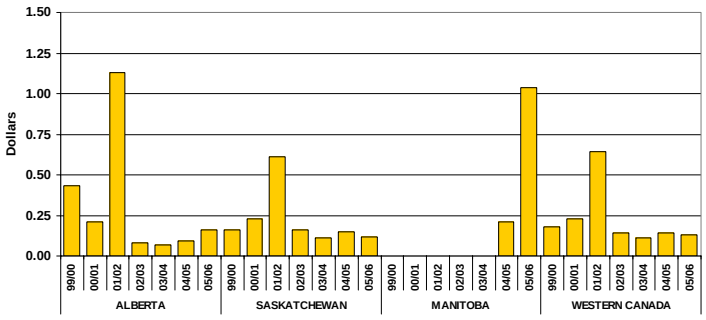
[163] Prior to 2002, Canada accounted for over 25% of the world's dry pea production, and 55% of world export volume. See Agriculture and Agri-Food Canada, *Bi-weekly Bulletin, September 28, 2001*. This leadership role, however, has been surrendered periodically as a result of changes in annual production.

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.

Over the first four years of the GMP, the price differential increased by 56.6%, climbing to $75.52 per tonne from $48.23 per tonne in the 1999-2000 crop year. This was followed by a 20.2% reduction in the 2003-04 and 2004-05 crop years, to $60.30 per tonne. For the 2005-06 crop year, the differential declined by a further 26.1% to stand at $44.56 per tonne. This decline resulted in the price differential accounting for 84.0% of total direct costs, the lowest share accorded to the component under the GMP.[164]

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 risen by 10.7% to about $7.24 per tonne in the 2005-06 crop year. On a comparative basis, this element accounted for 13.6% of total direct costs versus 10.8% at the outset of the GMP. The remaining 2.4% was derived from a levy assessed by the provincial Pulse Growers Association at the time of delivery.

Figure 88: Large Yellow Peas – Producer Benefits (dollars per tonne)



Trucking premiums are even less commonly used to encourage the delivery of large yellow peas than they are for canola, and have also been in general decline under the GMP. From an average of $0.18 per tonne for the 1999-2000 crop year, these premiums amounted to only $0.13 per tonne in the 2005-06 crop year. In total, these premiums represented an offset to direct costs of just over 0.2% in the last crop year. Here too the value of this producer benefit as an offset to total direct costs is little changed from the 0.3% it constituted seven years earlier.

5.4 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. In some instances, the grain companies provided larger samples.

Figure 89: Cash Ticket Variances

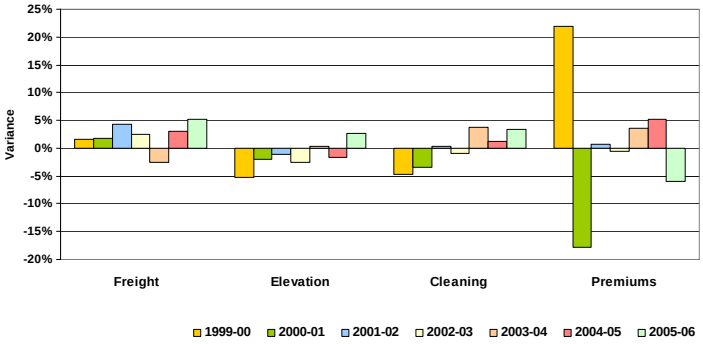


Figure 89 illustrates the variance observed in a comparison of the individual deductions and premiums identified on the cash tickets, and averages developed in the calculation of the export basis for wheat. For the 2005-06 crop year, the variances observed with respect to freight, elevation, cleaning, and competitive premiums were minimal. Moreover, although the variability in the data relating to competitive premiums has increased marginally from that recorded a year earlier, it remains significantly less than that observed at the beginning of the GMP, and still falls within acceptable limits.

[164] The previous record low was set in the 1999-2000 crop year when the price differential amounted to 87.8% of total direct costs.

The GMP utilizes posted tariff rates to reflect freight, elevation and cleaning charges. The freight deductions seen in the sample of cash tickets for the 2005-06 crop year were marginally higher than those reflected by the weighted averages used for applicable freight in the analysis. This variation, however, was still within acceptable limits.[165]

For the 2005-06 crop year, the charges for elevation on cash tickets were little different from the averages drawn from the applicable tariffs. Similarly, those for cleaning were very close to the averages drawn from the applicable tariffs. Tariff rates effectively represent the maximum that grain companies may charge for these services. Although the evidence would suggest that most charges are at tariff rates, some companies indicated that their deductions were either above or below the average tariff level. In addition, the weighted average value of the sample data may produce results that differ from the nominal tariff average. In any case, the variance is within the bounds of statistical error.

Greater variability was observed with respect to the premiums reported as having been paid on these cash tickets. This was particularly true of the 1999-2000 and 2000-01 crop years, when the cash tickets revealed trucking premiums to have varied by factors of 22% above, and 18% below, those reported on an aggregated basis by the grain companies.[166] The variances observed in both the 2001-02 and 2002-03 crop years proved significantly better, differing only by a factor of about one percent. Since then, the variance has steadily widened: to 3.5% in the 2003-04 crop year; to 5.2% in the 2004-05 crop year; and to 6.0% in the 2005-06 crop year. Even so, the variance was within the bounds of acceptable statistical error.

In light of these results, the Monitor is satisfied that the methodology used to determine both the export basis and the producer's netback, along with the aggregated data received from the grain companies, provides for a fair representation of the financial returns experienced by western Canadian producers since the beginning of the GMP.

5.5 The Netback Calculator

As was reported in the Monitor's annual report for the 2002-03 crop year, an initiative was undertaken to improve the quality of the information used in estimating the export basis and to give producers internet access to portions of the database used for the producer netback analysis. The result of this initiative, the Producer Netback Calculator (PNC), was implemented in March 2004, and can be found at www.netback.ca.

The concept for the PNC originates with some of western Canada's producer groups who suggested methods for employing the Monitoring program's producer netback statistics as a management tool in making better grain-delivery decisions. They advanced the idea that the Monitor create a mechanism through which producers could gain access to local, and current, tariff and cost data in order to allow them to identify the most effective delivery alternatives for their products. At the same time, the Monitor was searching for a more effective means with which to understand the decisions and behaviour of producers in the delivery of grain. The concept of the PNC came out of those discussions and, after thoroughly reviewing the concept, the federal government agreed to support and fund an internet-based system.

After considerable input from a broad spectrum of the industry, the detailed design and development of the system began in August of 2003. Completed in early 2004, the system was officially released in mid March, and has been actively promoted to producers since April of that year. The PNC is an easy-to-use system that provides producers with immediate access to the information that they need to make better delivery

[165] 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.

[166] 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.

decisions.[167] Although the reaction from producers who subscribe and have become regular users of the system has been very positive, for the purposes of the GMP, not all of the PNC's goals have yet been met.

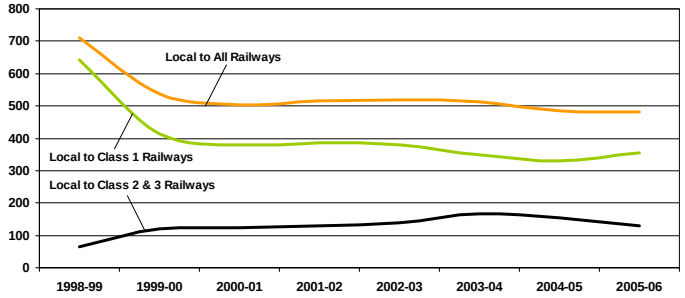
Given the need for statistical validity, the PNC requires a greater number of consistent users. In addition, these users need to be distributed fairly evenly across all nine of the sampling areas used by the GMP. Should these criteria be met, the Monitor fully expects that its future annual reports will incorporate the data collected through the PNC. With this objective in mind, the monitoring team will continue to promote usage of the PNC throughout the coming months at various industry conventions and trade shows, as well as through its regular meetings with the stakeholder community.

5.6 Producer Loading Sites and Shipments *[Measurement Subseries 5B]*

The aggregate number of producer loading sites has declined 31.9% since the beginning of the 1999-2000 crop year, falling from an estimated 709 to 483 by the end of the 2005-06 crop year. Much of this overall decline stems from the net reduction in the number of sites local to the larger Class 1 carriers, which fell by 45.0% during the same period, from 644 to 354. Conversely, sites local to the smaller Class 2 and 3 carriers number have virtually doubled, increasing from 65 to 129. [See Table 5B-1 in Appendix 4.]

Regionally, Manitoba and Alberta posted the largest attrition rates, with the number of producer loading sites declining by an overall 56.3% and 43.7% respectively. The rate of decline in Saskatchewan was substantially less; the number of sites having fallen by only 9.0% during the same seven-year period. Hidden by these statistics is the fact that while the overall number of producer loading sites has declined sharply, the reduction rate has abated substantially. Since falling to 505 in the 2000-01 crop year, the number of producer loading sites has decreased by only 4.4%, with much of this having occurred in the last two crop years.

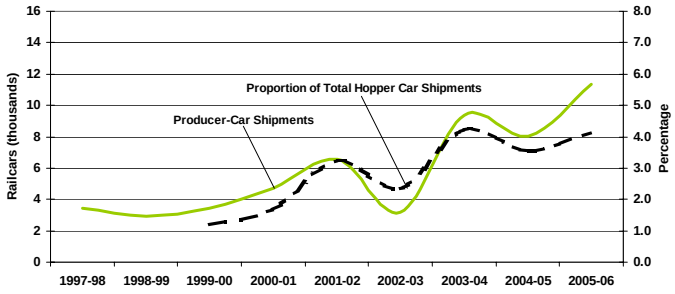
Figure 90: Producer-Car Loading Sites



Producer Car Shipments

Notwithstanding the overall reduction in the number of producer loading sites witnessed, producer-car shipments have been on the rise. In the first five years of the GMP, these shipments virtually tripled, increasing from 3,441 carloads to 9,399 carloads by the end of the 2003-04 crop year. Notwithstanding the decline in grain quality that prompted a reduction in such shipments during the 2004-05 crop year, producer-car loading have continued to increase. Total shipments in the 2005-06 crop year surged by 40.7%, climbing to a record 11,345 carloads under the GMP.

Figure 91: Producer-Car Shipments



While the gains made thus far still place producer-car shipments below the levels witnessed in the early 1990's, when they averaged about 12,500

[167] For a more comprehensive review of the Producer Netback Calculator, see Appendix 2.

annually, the trend is clearly upwards. More importantly, its share of all covered hopper car movements has also been increasing. From an estimated 1.2% in the 1999-2000 crop year, producer-car shipments climbed to a record 4.2% in the 2003-04 crop year. Although reduced shipments in the 2004-05 crop year were largely responsible for this share having fallen back to 3.6%, the resurgence noted for the last crop year resulted in this share rebounding to a second-ranked 4.1%, or 6.5% of CWB grains alone. [See Table 5B-2 in Appendix 4.]

This increase in producer-car shipments has come as a result of many factors, not the least of which includes the closure of local elevators, better collaboration between producer groups and the CWB, as well as the advent of license-exempt facilities. With the close of the 2005-06 crop year, a total of 40 such facilities had received exemptions. This constituted an 8.1% gain over the 37 that were in place at the end of the previous crop year, with 30 being located in Saskatchewan, seven in Alberta, and three in Manitoba.

5.7 Summary Observations

An examination of the per-tonne financial returns to producers of wheat, durum, canola, and large yellow peas, indicates that all have declined since the 1999-2000 crop year. With the exception of large yellow peas, where the producers' netback fell by 19.6%, these declines have ranged from as little as 1.5% in the case of 1CWRS wheat, to as much as 7.2% for 1 CWA durum. In almost all instances, the deterioration came primarily as a result of a decrease in the price of the commodity itself.

Within the wider framework of a time series, the producer's netback can be seen to have actually fallen by as much as 50.9% from highpoints recorded three years earlier. Such reversals clearly underscored the measure's sensitivity to changes in specific variables, most notably commodity prices. In fact, most of the observed variations in the producer netback over the past seven crop years have been derived from upward or downward movements in price.

The influence of changes in the export basis has proven to be substantially less. In large part, this lesser sway stems from a sizable difference in the scale of the components themselves. With the export basis typically amounting to about one-quarter of the proceeds derived from a grain sale, its leverage in effecting a change in the netback is simply far less. By way of example, the export basis would have to fall by about 4% to have the same beneficial impact on the netback as that of a 1% increase in price.

Still, the export basis for all commodities has changed over the course of the GMP, albeit with demonstrably less volatility than exhibited by price. With respect to the CWB grains, the scope of that net change was an increase of 13.2% (or $7.23 per tonne) in the case of wheat, and 7.4% (or $4.98 per tonne) for durum. As for the non-CWB commodities, the changes proved more beneficial: decreases of 20.9% (or $11.00 per tonne) in the case of canola; and 3.3% (or $1.82 per tonne) for large yellow peas.

To large extent, the minimal nature of the change in the export basis of both wheat and durum are the by-products of an increase in the financial benefits received by producers, whether in the form of trucking premiums or CWB transportation savings. These increased benefits, which amounted to $3.56 per tonne and $2.94 per tonne for wheat and durum respectively, acted as counterweights to the escalation in such direct costs as transportation, elevation, cleaning, and storage.

The increase in producer benefits reflects the degree to which the competition between grain companies has been heightened. The desire of the larger grain companies to draw increasingly greater volumes of grain into their high-throughput facilities appears to be the foundation for this. Although producers have become more adept at exploiting that rivalry to their own advantage, often playing each against the other in order to secure the best possible trucking premium when delivering grain, overarching market forces also play a role.

This, however, is not the case for non-CWB commodities. Both canola and large yellow peas receive significantly less in terms of these per-tonne premiums than CWB grains do. More importantly, the trucking premiums paid for both commodities have declined significantly over the course of the past seven crop years. In the case of canola, trucking premiums have all but been eliminated, having fallen from $2.48 per tonne in the 1999-2000 crop year to just $0.43 in the 2005-06 crop year. This decline is consistent with the grain companies' stated preference to use a single pricing tool, namely the basis, as the competitive mechanism by which they attract these commodities into their facilities.

Also worth noting is the degree to which the export basis can vary between the nine geographic areas used to assess producer impact under the GMP, both in absolute as well as relative terms. These variations encompass a myriad of individual differences in the applicable cost of freight, the FAF, elevation, and producer benefits. As a result, the export basis within any one area can vary significantly from the western Canadian average.

Members of the Quorum Corporation Advisory Board (as of 30 November 2006)

Mark A. Hemmes
Chairman of the Advisory Board
President, Quorum Corporation
Edmonton, Alberta

J. Marcel Beaulieu
Director – Research and Analysis, Quorum Corporation
Sherwood Park, Alberta

Richard B. Boyd
Senior Vice President, Canadian National Railway Company (retired)
Edmonton, Alberta

A. Bruce McFadden
Director – Research and Analysis, Quorum Corporation
Edmonton, Alberta

Shelley J. Thompson
President, SJT Solutions
Southey, Saskatchewan

Members of the Quorum Corporation Grain Monitoring Team

Mark Hemmes	President
Marcel Beaulieu	Director – Research and Analysis
Bruce McFadden	Director – Research and Analysis
Vincent Roy	Senior Technical Officer

Corporate Offices

Quorum Corporation
Suite 701, 9707–110 Street
Edmonton, Alberta
T5K 2L9

Telephone: 780 / 447-2111
Fax: 780 / 447-2630

Website: www.quorumcorp.net
Email: info@quorumcorp.net

Additional copies of this report are available for downloading directly from the company's website.

Appendix 1: Program Background

On June 19, 2001, the Government of Canada announced that Quorum Corporation had been selected to serve as the Monitor of Canada's Grain Handling and Transportation System (GHTS). Under its mandate, Quorum Corporation provides the government with quarterly and annual reports aimed at measuring the system's performance, as well as assessing the effects arising from the government's two principal reforms, namely:

- The introduction, and gradual expansion of tendered grain movements by the Canadian Wheat Board; and

- The replacement of the maximum rate scale for rail shipments with a cap on the annual revenues that railways can earn from the movement of regulated grain.

In a larger sense, these reforms are 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 series of indicators, the government's Grain Monitoring Program (GMP) aims to measure the performance of both the system as a whole, and its constituent parts, as this evolution unfolds. With this in mind, the GMP is designed to reveal whether the movement of grain from the farm gate to lake- and sea-going vessels (i.e., the supply chain) is being done more efficiently and reliably than before.

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

- *Series 1 – Industry Overview*
  Measurements relating to annual grain production, traffic flows and changes in the GHTS infrastructure (country and terminal elevators as well as railway lines).

- *Series 2 – Commercial Relations*
  Measurements focusing on the tendering activities of the Canadian Wheat Board as it moves towards a more commercial orientation as well as changes in operating policies and practices related to grain logistics

- *Series 3 – System Efficiency*
  Measurements aimed at gauging the operational efficiency with which grain moves through the logistics chain.

- *Series 4 – Service Reliability*
  Measurements focusing on whether the GHTS provides for the timely delivery of grain to port in response to prevailing market demands.

- *Series 5 – Producer Impact*
  Measurements designed to capture the value to producers from changes in the GHTS, and are focused largely on the calculation of "producer netback."

Appendix 2: Producer Netback Calculator

A prime issue with many stakeholders is the impact that the shrinking GHTS network has had on the length of truck haul from farm gate to elevator. 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 is unknown. Following discussions with stakeholders and the government, a methodology that would allow the Monitor to gather the data necessary to enhance the quality and reliability of this component of the export basis has been developed.[168] The Producer Netback Calculator (PNC) was designed to provide a cost-effective and non-intrusive means of gathering this data.

At the same time, and in response to producers' requests, the Monitor will provide access to 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 has been designed to assist farmers in determining the delivery options that may provide the best returns for their wheat, durum and feed barley. When these costs are subtracted from the most recent CWB Pool Return Outlook (PRO), the resulting calculation of producer netback provides the best possible estimate of the real returns to be had for their grain.

To gain access to the PNC, producers are provided with their own personal log-in identification and password. Once they have logged into the system, all communication will be secured through 128 bit encryption technology, identical to that used by major banks to allow customers access to their accounts over the internet. This ensures that all information is communicated and held with the strictest confidentiality, while allowing the Monitor to classify data according to the demographics of the specific producer. Producers can be assured that no data specific to any individual will be published, or shared, by Quorum Corporation.

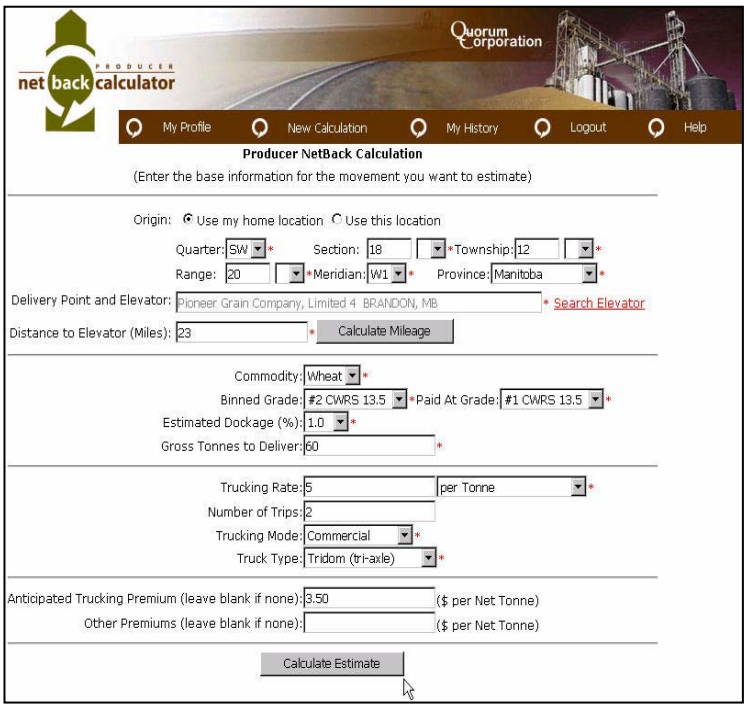


Figure A1: An image of the input screen for Quorum Corporation's Netback Calculator.

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 PRO. 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.).

[168] The GMP currently incorporates trucking costs based on the commercial short-haul trucking rates for an average haul of 40 miles, as presented in Table 3A-1.

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.

The Grain Monitoring Program will gain valuable data on grain logistics by retaining a record of the individual transactions that pertain to actual deliveries. In specific terms, this data will assist in analyzing the average length of haul to elevators, modal utilization, and other farm gate to elevator delivery issues. This information will be incorporated into the calculation of producer netback in future reports of the Monitor.

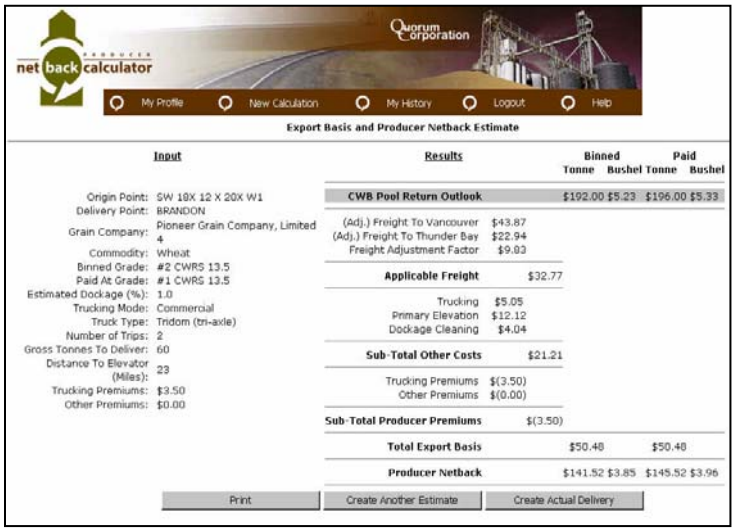


Figure A2: An image of the output screen for Quorum Corporation's Netback Calculator.

Appendix 3: 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.

Agricore United
Agricultural Producers Association of Saskatchewan
Agriculture and Agri-Food Canada
Alberta Agriculture, Food and Rural Development
Alberta Infrastructure and Transportation
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
Gardiner Dam Terminal
Government of British Columbia
Grain Growers of Canada
Great Sandhills Terminal
Great Western Railway Ltd.
Inland Terminal Association of Canada
James Richardson International Ltd. (Pioneer Grain)
Keystone Agricultural Producers
Louis Dreyfus Canada Ltd.
Manitoba Agriculture, Food and Rural Initiatives
Manitoba Infrastructure and Transportation
Mid-Sask Terminal Ltd.
Mission Terminal Inc.
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.
RailAmerica Inc.
Red Coat Road and Rail Ltd.
Saskatchewan Agriculture and Food
Saskatchewan Highways and Transportation
Saskatchewan Association of Rural Municipalities
Saskatchewan Wheat Pool
Savage Alberta Railway
South West Terminal
Statistics Canada
Terminal 22 Inc
Transport Canada
Vancouver Wharves Ltd.
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
Winnipeg Commodity Exchange