Monitoring the Canadian Grain Handling and Transportation System

Annual Report
2003-2004 Crop Year

1 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 2004, and focuses on the various events, issues and trends manifest in the movement of Western Canadian grain during the past year. This is the fourth 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 2003-04 crop year is largely gauged against that of the 2002-03 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 five 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 3 as required.

QUORUM CORPORATION

Edmonton, Alberta
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EXECUTIVE SUMMARY

This constitutes the fourth in a series of annual reports prescribed under the Government of Canada's Grain Monitoring Program (GMP), and submitted by Quorum Corporation in its capacity as the Monitor of Canada's Grain Handling and Transportation System (GHTS).

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 2003-04 crop year marked the first comparatively good year in what had been a succession of difficult ones. The widespread drought that had so devastated the western Canadian grain industry finally gave way to improved growing conditions in 2003, and a resultant upturn in grain production gave rise to a corresponding increase in grain industry activity.

With the data compiled under the Grain Monitoring Program (GMP) now stretching back over five crop years, there can be little doubt that Canada's Grain Handling and Transportation System (GHTS) has seen significant change, and faced a number of challenges. These are discussed at length in the report that follows, but are summarized below.

Production and Volumes

The past crop year saw a significant improvement in growing conditions after two years of drought. Grain production increased by over 51% from the previous year to reach 47.7 million tonnes and approached levels closer to that realized three years earlier. Increases in production were noted for all major grains and in each of the four western provinces. With 5.5 million tonnes of carry-forward stocks, the overall grain supply in western Canada rose by 41.3% to 53.1 million tonnes. While this improvement was welcomed by the grain industry at large, the grain supply still fell almost 16% below the 63.2-million-tonne average of the 1999-2000 and 2000-01 crop years.

As a result of this upturn, the GHTS witnessed a significant increase in commercial activity in the 2003-04 crop year. Country elevator deliveries increased by 50%, railway handlings by 62%, and terminal elevator throughput by 61%. The ports of Vancouver and Thunder Bay remained the system's primary export gateways. With resolution of the labour dispute that had closed the port of Vancouver for almost four months a year earlier, its throughput more than doubled to 9.2 million tonnes.

Of the two major railways, CN posted the greatest overall increase in traffic volume, and effectively doubled its previous year's handlings. In comparison, CP's grain handlings increased by a lesser 45%. This resulted in the carrier's share of the total traffic volume falling to 48% from 58% a year earlier.

Infrastructure

The declining number of licensed country elevators in western Canada continues to be one of the most visible facets of the GHTS's evolution. In the last five years their number has fallen by almost 60%, from 1,004 to 404. However, the pace of the decline has slowed significantly in the past two years. In fact, the 12-elevator reduction of the 2003-04 crop year proved to be the smallest recorded under the GMP.

The most striking aspect of this evolution has been the 80% decline in the number of smaller conventional "wooden crib" facilities. This stands in stark contrast to the build-up of high throughput elevators. In the past five years, these facilities have gone from representing just 12% of all elevators to 43%. More importantly, they now account for 75% of the GHTS's storage capacity as opposed to 39% at the beginning of the GMP.

Despite the steep decline in the overall number of elevators, the system's associated storage capacity fell by only 19% during this same period. This comparatively moderate rate of decline signifies that while grain companies were methodically closing their less-efficient facilities, the capacity lost in this process was being replaced through either the expansion of others or the opening of new high-throughput facilities.

In contrast to the country elevator network, the GHTS's railway infrastructure has changed little. In fact, the 2003-04 crop year's abandonment of 101.2 route-miles of prairie branch lines was the first recorded in almost two years. This extended the total reduction made since the beginning of the GMP to just over 3%, and produced a network of 18,823 route-miles.

The 2003-04 crop year saw the first recorded reduction in the terminal elevator network under the GMP. With the de-licensing of the 91,000-tonne Agricore United "M" facility located in Thunder Bay, the network was effectively reduced to a total of 16 elevators with 2.6 million tonnes of storage capacity.

CWB Tendering and Advance Car Awards

The 2003-04 crop year marked the fourth for the Canadian Wheat Board's (CWB) tendering program, however, the program was significantly modified for the 2003-04 crop year. In general terms, after consulting with its 26 agents, the CWB committed itself to moving a fixed 40% of the grain it ships to the four ports in western Canada using a combination of tendering and advance car awards. Under this new arrangement, the CWB had the option of tendering up to a maximum of 20% of its overall volume, rather than the 50% minimum that had prevailed in the 2002-03 crop year.

During the 2003-04 crop year, the CWB issued a total of 251 tenders calling for the shipment of approximately 3.0 million tonnes of grain. This was slightly more than half of the volume sought a year earlier, with almost three-quarters dealing with the movement of wheat, 17% with durum, and 11% with barley. These calls were met by almost 1,900 bids offering to move more than three times the volume sought, some 10.3 million tonnes of grain. The nature of this response was significantly greater than in either of the preceding three crop years, and underscored the aggressive commercial stance taken by grain companies in the 2003-04 crop year. On the whole, the bidding patterns reveal that the trade gave full consideration to all calls for tendered grain, although there was a discernable preference for durum and Thunder Bay-destined movements.

A total of 466 contracts were subsequently signed for the movement of just under 2.5 million tonnes of grain, over 80% of the amount called. This represented 18% of the overall grain volume shipped by the CWB to western Canadian ports in the 2003-04 crop year, and fell only marginally short of its newly established 20% commitment.

In addition, a total of 1.9 million tonnes of grain moved under the CWB's newly adopted advance car awards program, representing 14% of the CWB's total shipments to the four ports in western Canada. When combined with the 18% that moved under its tendering program, the volume moved under both programs constituted 32% of the CWB's total shipments. This fell somewhat short of the 40% to which the CWB had committed itself, and was largely the result of a delay in implementing the advance car awards program until late in the first quarter.

In a number of respects, the grain shipped under the advance car awards program largely paralleled that of the tendering program. In fact, there were indications that the shipments made under both CWB programs moved largely in tandem. In a general sense, the complementary nature of these movements strongly suggested that the grain companies had exploited the flexibility that the advance car awards program was designed to bring to their planning activities.

Despite a reduction in the proportion of grain moving under its tendering program, the financial savings ultimately passed back to producers through the CWB's pool accounts increased significantly. Derived largely from a savings in transportation costs as a result of the bidding inherent in the tendering process itself, these savings also included freight and terminal rebates, as well as any financial penalties assessed against grain companies for non-performance. The CWB estimated that the savings generated from these activities had increased by 51% in the 2003-04 crop year, to $51.1 million from $33.8 million a year earlier.

The Monitor has previously mentioned the concern raised by a number of stakeholders respecting the potential ability of major grain companies to displace their smaller competitors in the marketplace. However, the overall market share secured by the larger grain companies has actually fallen in the past five crop years. This is true

of both tendered, and non-tendered, CWB grain shipments. In terms of tendered grain handlings, the major grain companies saw their share decline marginally from 85% to 82% in the last three crop years, while their share of non-tendered movements fell from 74% to 71%.

Commercial Matters

In addition to the changes made to the CWB's tendering program, there were a number of other developments that impacted GHTS activity in the 2003-04 crop year. These included:

- Ocean freight rates more than doubled in the 2003-04 crop year as a result of the high demand for vessels to service China's growing economy and its increasing trade with other nations. Not only did this have a significant impact on the movement of Canadian grain, it also influenced grain logistics throughout North America. The rising cost of ocean freight changed the economics of marine transport, and altered traditional routing decisions and long-established traffic patterns. One such change resulted in an increase in the number of direct-rail shipments of Canadian grain to Mexico, exports that traditionally involved ocean-borne movements from Vancouver. Its impact was evident in the capacity strains arising from the increased demand for covered hopper cars. Exports that had required the use of a railcar for about 20 days when routed via Vancouver, could easily require its use for 40 or more days when moved directly to Mexico by rail. With such marketplace dynamics expected to continue into the 2004-05 crop year, it seems likely that further strains will be placed on an already scarce resource.

- Railway car supply problems began to impact GHTS operations in the second quarter. Hard-hit by adverse winter operating conditions, CP issued an embargo on grain traffic to the west coast in late January 2004. In consequence, a significant amount of the carrier's traffic was redirected through CN-served elevators, and CP witnessed a reduction in its share of western Canadian grain shipments. Increased movements of grain to eastern Canada, the United States, and Mexico also helped to further constrict the supply of covered hopper cars.

- One of the 2003-04 crop year's more noteworthy changes came from the government of British Columbia's decision to privatize BC Rail, and its acceptance of a CN proposal to assume operation of the railway. The takeover of BC Rail by a Class 1 carrier raised a number of concerns in the minds of shippers as well as other stakeholders that revolved around a perceived reduction in competition for the interline movement of commodities such as lumber from BC Rail points to markets throughout North America; and the movement of grain from the Peace River area where BC Rail and CN had competed vigorously with the rates and services they provided to local grain elevators. In July 2004, Canada's Competition Bureau gave conditional approval to the transaction after having concluded an agreement with CN on measures to address these concerns.

- Producer-car loading increased by 193% to 9,399 railcars. This volume denoted the largest recorded under the GMP, and constituted an estimated 4% of the total tonnage that moved in covered hopper cars. Of particular interest to the GHTS was the fact that the proportion given over to producer-car movements has increased almost four-fold from the 1% it represented five years earlier. This growth has come about largely as a result of the recent expansion in license-exempt producer-car loading facilities, which are estimated to have originated at least two-thirds of these shipments. The farmer's ability to avoid elevation charges of about $12.00 per tonne has proven to be a powerful inducement for those who claim that producer-car loading has provided them with a cost-effective alternative of delivering their grain, and of overcoming the impact of elevator closures in their communities.

The GHTS Supply Chain

In previous reports, the Monitor has used the supply chain model as a framework in examining the workings of the GHTS as a whole. Specifically, the amount of time taken by grain as it moves through the supply chain can be used as an indicator of overall effectiveness. By the end of the 2002-03 crop year, it was taking an average of 79.7 days for grain to move through the system. This represented a distinctly slower pace than at any other point in the preceding three crop years, and was tied closely to a two-year decline in the volumes of grain handled by the country elevator, railway, and terminal elevator systems.

With a significant increase in the volume of grain that moved through the GHTS in the 2003-04 crop year, an improvement in performance was generally anticipated. In fact, not only did performance improve, but the 2003-04 crop year's 62.3-day average now represents the system's best achievement under the GMP. This 17.4-day (or 22%) reduction in the pace at which grain moved through the GHTS stemmed mainly from a substantial decline in the amount of time grain spent in inventory. The majority of this improvement, some 13.5 days, came from a reduction in country elevator storage time, while 2.7 days was gained from a lessening of terminal elevator storage time. Another 1.2 days was derived from a reduction in the railways' average loaded transit time.

Although these improvements can be attributed to various factors, the primary driver was the upsurge in the volume of grain the GHTS was called upon to move. In the face of this increased activity, country elevator inventories turned over faster, and the railways ratcheted up their service to provide the capacity needed to get that grain into the terminal elevators for furtherance overseas. Put simply, this increase in commercial activity demanded more of the GHTS, and challenged it to perform more efficiently.

It should be noted that the overall effectiveness of the GHTS remains largely unchanged. Specifically, grain still moves through the system in much the same way, and in much the same timeframe, as it did when the GMP was introduced. This is reflected in terminal elevator storage times, and railway average loaded transit times, that are within but a few percentage points of their previous bests under the GMP. The only real gain has come from a reduction in country elevator storage times, which fell by almost 10% from its previous best to an average of 34.4 days in the 2003-04 crop year.

The GHTS's continuing evolution into a network of comparatively fewer elevator facilities, with higher storage capacities, and the ability to load railcars in greater numbers than ever before, has allowed the grain companies and the railways to reduce their overall costs. The savings derived from these improvements in financial efficiency are being shared – at least in part – with producers through such competitive mechanisms as trucking premiums. These benefits have in turn ultimately allowed producers to offset escalations in the cost of country elevator handling, rail transportation, and terminal elevator handling.

It is also important to note that the volume of grain handled during the 2003-04 crop year still fell short of that moved in the first year of the GMP, and one widely considered to be more representative of a "normal" GHTS volume. As such, the GHTS's capabilities must necessarily be viewed as having only been partially tested in the 2003-04 crop year.

The Revenue Cap

The Canadian Transportation Agency determined that the revenues CN and CP were entitled to earn from the movement of regulated grain in the 2003-04 crop year were not to exceed a maximum of $322.0 million and $309.6 million respectively, or $631.6 million on a combined basis. The Agency also determined that the statutory grain revenues for CN and CP amounted to $320.8 million and $309.9 million respectively. While CN's revenue fell $1.2 million (or 0.4%) below its revenue cap, CP's revenue was $0.3 million (or 0.1%) more than allowed. This marked the first instance of a prescribed carrier having exceeded its revenue cap, albeit by a very small margin. As a result, the Agency ordered CP to pay $338,008 – comprised of its excess revenue along with a 5% penalty – to the Western Grains Research Foundation.

Collectively, these results indicate that the relative difference between the amount of revenue the railways were entitled to earn, and that which they actually did earn, narrowed significantly in the 2003-04 crop year. In fact, the crop year's 0.1% margin of difference proved to be the smallest recorded, and departed from a trend that had seen it steadily widen from 0.8% in the 2000-01 crop year to 5.6% in the 2002-03 crop year.

Even so, the recent narrowing of this margin suggests that both carriers have become more adept at managing their revenues under the new regime. Traditionally, both carriers set the coming crop year's freight rates just ahead of its commencement. Often, these adjustments were similar, if not identical. And while both carriers ultimately increased their freight rates and changed some of their incentive discounts during the course of the 2003-04 crop year, they did so independently and in markedly different ways. Perhaps most telling is the fact that in addition to the changes made at the beginning of the 2003-04 crop year, both carriers instituted a round of secondary adjustments in March 2004.

To an extent, the Monitor surmises that these latter increases to the published freight rates of both carriers were aimed at reclaiming revenue that may have been unnecessarily surrendered as a result of their earlier pricing decisions. In essence, the March increases were corrective measures intended to maximize each carrier's revenue, while still respecting the limits imposed by the revenue cap. In fact, there is much to suggest that the incentive discounts offered by the railways are their primary means of attracting new business, while general freight rate adjustments are used as an instrument with which to fine-tune statutory revenues.

System Efficiency and Reliability

The need to balance GHTS efficiency and reliability is one that continually challenges all stakeholders, and often involves trade-off decisions. Any "just-in-time" approach to inventory management strives to reduce the time and cost associated with any product moving through the logistics chain to an absolute minimum without detracting from the chain's overall reliability. In the context of the GHTS, stock-to-vessel requirement, and stock-to-shipment, ratios with values of about 1.0 would be considered as the optimal target under such an approach. Yet the values observed for these ratios over the course of the past five crop years have typically been well in excess of 2.0. As such, they indicate that grain was generally available in sufficient quantities at the terminals to meet the prevailing demand.

At the same time, reductions in the amount of time grain spent moving through the GHTS indicate that some efficiency gains have been made. In addition, the upsurge in volume also helped improve car cycles and bolster the system's capacity turnover ratios. To a large extent, these results point to the better utilization of assets in moving grain through the system.

Even so, since grain inventories were largely maintained at levels well in excess of that required to meet prevailing demand, it would appear that the industry has clearly placed the prevention of stock shortages well ahead of its quest for additional gains in efficiency. Given periodic problems with car supply, it is difficult to challenge the practical benefits of such a strategy. Moreover, it is ultimately the stakeholders themselves who must decide how best to balance these dual needs. Still, if the ultimate test of any supply chain is its ability to actually deliver the product wanted at both the time and place specified, then it would appear that the GHTS has proven itself largely capable of reliably doing so.

Export Basis and Producer Netback

Although the GMP uses the producer's netback to gauge the net financial returns to farmers from the sale of their grain, its chief focus is on the logistics costs that are paid from the proceeds of the sale. These costs include all those related to freight (both truck and rail), elevation, storage, and – if applicable – operation of the CWB. In addition, they also take into account any of the financial benefits that a farmer receives from trucking premiums paid to them by the grain companies, or the transportation savings passed back to them through the CWB's pool accounts. Collectively, this mix of costs and benefits constitutes the grain's export basis.

Over the course of the five years now spanned by the GMP, the export basis for wheat has increased by less than 1% (or $0.29 per tonne), while that of durum has decreased by just over 4% (or $2.91 per tonne). This is somewhat remarkable when considering that indices such as the Industrial Products Price Index or the western Canadian crop production component of the Farm Input Price Index increased by a respective 8.3% and 36.5% during this same period.

The minimal nature of the change in the export basis of both wheat and durum is a result of gains in the financial benefits received by producers, in the form of both trucking premiums and CWB transportation savings, offsetting increases in other direct costs. These increased benefits, which amounted to $5.07 per tonne and $4.68 per tonne for wheat and durum respectively, effectively acted as counterweights to the escalation in transportation, elevation, cleaning, and storage costs. In the case of durum, the monetary gain in these benefits actually exceeded the increase in direct costs to produce a net reduction in the export basis itself.

The progressive increase in these producer benefits reflects the degree to which competition between grain companies has been heightened. The desire of the larger grain companies to draw greater volumes of grain into their high-throughput facilities appears to be the foundation for this escalation. There are also indications that producers are becoming more adept at exploiting the rivalry between these grain companies to their own advantage.

Such is not the case, however, for non-CWB commodities. Both canola and large yellow peas receive substantially less in terms of these per-tonne premiums than do CWB grains, and have declined significantly over the course of the past five crop years, becoming largely incidental considerations. This decline is consistent with the grain companies' stated preference to use a single pricing tool, namely the export basis, as the competitive mechanism by which they attract these commodities into their facilities. As such, changes in the export basis of both commodities over the course of the past five years has proven somewhat more substantive: a decrease of 19% (or $10.00 per tonne) in the case of canola; and an increase of 24% (or $12.99 per tonne) for large yellow peas.

Owing to the fact that the export basis typically amounts to about one-quarter of the proceeds derived from a grain sale, its leverage in effecting a change in the netback is far less than that of a change in price. In fact, most of the observed variations in the producer netback over the past five crop years have been derived from upward or downward movements in price.

An examination of the per-tonne financial returns to producers of wheat, durum, canola, and large yellow peas, indicates that each has improved since the 1999-2000 crop year. These net gains ranged from a low of 6% for large yellow peas, to a high of 44% for canola. In the case of CWB grains, the increases amounted to 12% for wheat, and 13% for durum. In almost all instances, the improvement came primarily as a result of an increase in the price of the commodity itself.

Considerations

Finally, it must be said that each of the five crop years now covered by the GMP have provided unique depictions of grain handling in western Canada. In its first two years, railway shipments exceeded 25 million tonnes annually. This was followed by two years of drought that resulted in the volume falling by as much as a half in the 2002-03 crop year. Even with improved growing conditions in the 2003-04 crop year, the volume handled could only be considered "near-normal." Throughout this timeframe the elevator network continued to decline in both number and storage capacity; labour strife brought about the closure of the port of Vancouver for four months; severe winter operating conditions played periodic havoc with west coast grain shipments; and escalating ocean freight rates even altered traditional traffic flows within North America itself.

The impact of these forces, both individually and collectively, on the GHTS makes it difficult to properly relate the data collected thus far under the GMP. More importantly, this lack of a comparatively stable environment has made it virtually impossible to distinguish between internally derived changes to system efficiency and reliability, and those prompted by external forces. Ultimately the record does not yet provide a consistent foundation for such an analysis.

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 – 2003-04 Crop Year

Grain Production and Supply

- *Grain production increased by 51.1% over the previous year to 47.7 million tonnes as a result of a widespread improvement in growing conditions in 2003.*
  - *Increased production noted in all western provinces.*
    - *Alberta posted the largest increase: 96.2% to 15.8 million tonnes.*
  - *All commodities demonstrated increased production.*
    - *Gains in the order of 20-60% were typical*
    - *Wheat production increased by 56.9% to 16.8 million tonnes.*
  - *Still 12.9% below the 54.6-million-tonne average of the 1999-2000 and 2000-01 crop years.*
- *Carry forward stock decreased by 9.6% to 5.5 million tonnes.*
  - *Provincial stocks fell by up to 21%.*
  - *Declines noted for all commodities save wheat and oats.*
- *Total grain supply increased by 41.3% to 53.1 million tonnes.*
  - *Largest grain supply since the 2000-01 crop year.*

Railway Traffic

- *Railway grain volume increased 62.2% to 20.7 million tonnes.*
  - *Reflected improved grain supply, and volume available for movement.*
- *Significant rebound in grain volume to all western Canadian ports.*
  - *Vancouver volume increased 111.4% to 10.9 million tonnes.*
    - *Share of traffic increased to 52.9% from 40.6% a year earlier.*
  - *Prince Rupert volume increased 35.1% to 2.9 million tonnes.*
  - *Thunder Bay volume increased 25.1% to 6.4 million tonnes.*
  - *Churchill volume increased 40.5% to 0.5 million tonnes.*

Country Elevator Infrastructure

- *Elevator rationalization efforts of major grain companies continued to ease.*
  - *Grain delivery points reduced by 1.4% to 288.*
  - *Number of elevators fell by 2.9% to 404.*
- *Elevator storage capacity reduced by 1.0% to 5.7 million tonnes.*
- *Elevators capable of loading in blocks of 25 or more cars fell 2.2% to 263; accounted for 65.1% of total elevators in GHTS.*
  - *Share of GHTS storage capacity rose to 87.4%*

Railway Infrastructure

- *Western Canadian rail network reduced by 0.5% to 18,823 route-miles.*
- *CP and SMR abandoned 101.2 route-miles of grain-dependent branch lines in the provinces of Saskatchewan and Manitoba.*
- *CN acquired BC Rail in July 2004.*
  - *Reduced regional and shortline network by 28.5% to 3,724 route-miles.*
  - *Increased Class 1 network by 10.1% to 15,099 route-miles.*
- *Great Western Railway put up for sale by owner.*
  - *Prompted purchase effort by local Saskatchewan farmers.*
  - *Sale expected to be completed in the 2004-05 crop year.*

Terminal Elevator Infrastructure

- *Licensed GHTS terminal elevators reduced by 5.9% to 16; storage capacity reduced by 3.3% to 2.6 million tonnes.*
  - *Brought on by the de-licensing of the 91,000-tonne Agricore United "M" facility in Thunder Bay.*
- *Terminal elevator unloads increased by 74.3% to 218,447 railcars.*
  - *CP's share fell to 48.2% from 57.8% a year earlier.*

Indicator Series 1 – Industry Overview

Table	Indicator Description	Notes	BASE 1999-00	CURRRENT REPORTING PERIOD (1) 2002-03	2003-04	% VAR	
	Production and Supply [Subseries 1A]						
1A-1	Crop Production (000 tonnes)	(2)	55,141.7	31,539.9	47,655.3	51.1%	▲
1A-2	Carry Forward Stock (000 tonnes)	(2)	7,418.2	6,070.8	5,488.9	-9.6%	▼
	Grain Supply (000 tonnes)	(2)	62,559.9	37,610.7	53,144.2	41.3%	▲
	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	12,736.4	20,658.9	62.2%	▲
1B-3	Railway Grain Volumes (000 tonnes) – Detailed Breakdown						
	Country Elevator Infrastructure [Subseries 1C]						
1C-1	Grain Delivery Points (number)		626	292	288	-1.4%	▼
1C-1	Grain Elevator Storage Capacity (000 tonnes)		7,443.9	5,747.3	5,688.6	-1.0%	▼
1C-1	Grain Elevators (number) – Province						
1C-2	Grain Elevators (number) – Railway Class		917	416	404	-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	269	263	-2.2%	▼
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	31	9	-71.0%	▼
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	115	21	-81.7%	▼
1C-12	Grain Elevator Closures (number) – Railway Line Class						
1C-13	Grain Delivery Points (number) – Accounting for 80% of Deliveries		217	89	95	6.7%	▲
	Railway Infrastructure [Subseries 1D]						
1D-1	Railway Infrastructure (route-miles) – Grain-Dependent Network		4,876.6	4,495.8	4,406.1	-2.0%	▼
1D-1	Railway Infrastructure (route-miles) – Non-Grain-Dependent Network		14,513.5	14,428.1	14,416.6	-0.1%	–
1D-1	Railway Infrastructure (route-miles) – Total Network		19,390.1	18,923.9	18,822.7	-0.5%	–
1D-2	Railway Grain Volumes (000 tonnes) – Grain-Dependent Network		8,683.6	3,670.1	6,359.3	73.3%	▲
1D-2	Railway Grain Volumes (000 tonnes) – Non-Grain-Dependent Network		16,976.0	8,601.2	13,564.2	57.7%	▲
1D-2	Railway Grain Volumes (000 tonnes) – Total Network		25,659.6	12,271.3	19,923.5	62.4%	▲
1D-3	Shortline Railway Infrastructure (route-miles)		3,043.0	3,363.7	3,299.7	-1.9%	▼
1D-3	Shortline Railway Grain Volumes (000 tonnes)		2,090.5	1,111.7	2,001.4	80.0%	▲
1D-5	Railway Grain Volumes (000 tonnes) – Class 1 Carriers		23,569.1	11,159.6	17,922.1	60.6%	▲
1D-5	Railway Grain Volumes (000 tonnes) – Class 2 and 3 Carriers		2,090.5	1,111.7	2,001.4	80.0%	▲
1D-6	Grain Elevators (number) – Grain-Dependent Network		371	141	135	-4.3%	▼
1D-6	Grain Elevators (number) – Non-Grain-Dependent Network		513	261	255	-2.3%	▼
1D-6	Grain Elevator Storage Capacity (000 tonnes) – Grain-Dependent Network		2,475.4	1,569.3	1,543.1	-1.7%	▼
1D-6	Grain Elevator Storage Capacity (000 tonnes) – Non-Grain-Dependent Network		4,847.6	4,123.5	4,093.4	-0.7%	–
	Terminal Elevator Infrastructure [Subseries 1E]						
1E-1	Terminal Elevators (number)		15	17	16	-5.9%	▼
1E-1	Terminal Elevator Storage Capacity (000 tonnes)		2,678.6	2,733.6	2,642.6	-3.3%	▼
1E-2	Terminal Elevator Unloads (number) – Covered Hopper Cars		278,255	125,339	218,447	74.3%	▲

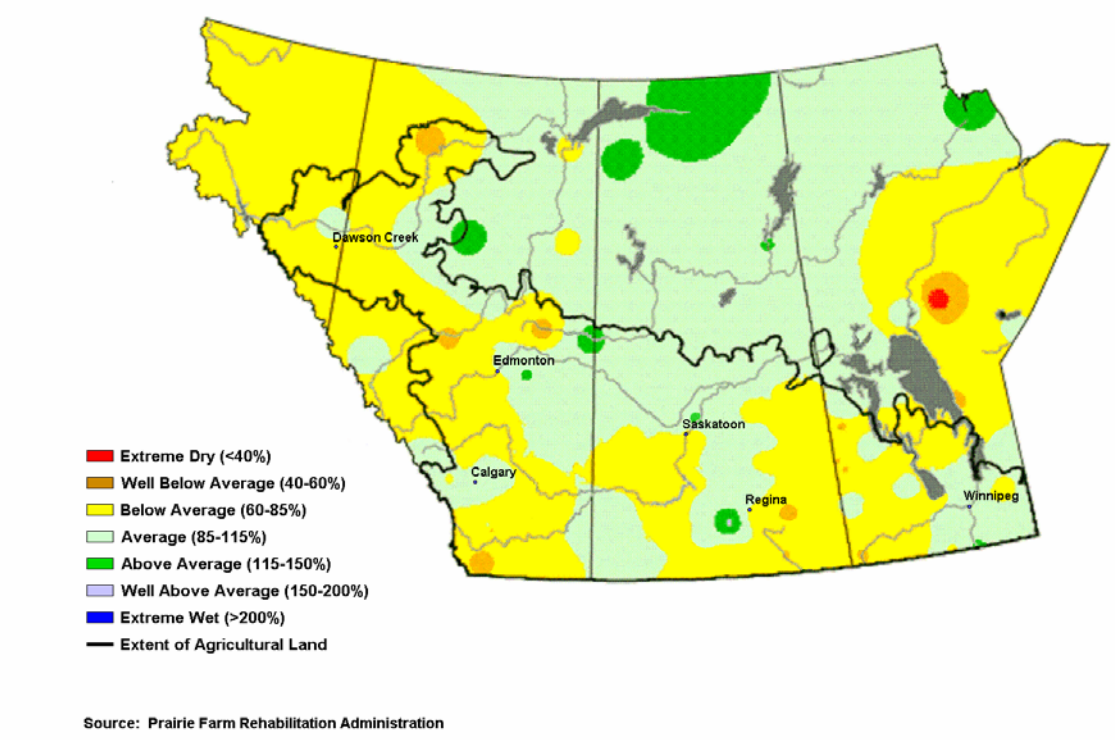
(1) – In order to provide for more direct comparisons, the values for the 1999-2000 through 2003-04 crop years are "as at" or cumulative to 31 July unless otherwise indicated.

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

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

For many of the stakeholders in Canada's Grain Handling and Transportation System (GHTS), the 2003-04 crop year marked the first comparatively good year in what had been a succession of difficult ones. Following two particularly harsh seasons, the widespread drought that had so devastated the western Canadian grain industry finally gave way to improved growing conditions in 2003. The resultant upturn in grain production gave rise to a corresponding increase in commercial activity. This was evident in virtually every corner of the GHTS, and broadly reflected in the indictors used under the Grain Monitoring Program (GMP).

Figure 1: Percentage of Average Precipitation – 1 April to 31 August 2003



Source: Prairie Farm Rehabilitation Administration

Although the drought that had been experienced in the two previous growing seasons gave way to better growing conditions in 2003, the precipitation received in most areas of western Canada faired little better than below average.[1] Still, the increased precipitation came as a welcome relief to the region's most drought-affected areas: northeastern British Columbia; Alberta; and northwestern Saskatchewan. This was further enhanced by agronomic practices aimed at conserving soil moisture. As a result, western Canadian grain production posted the sharpest year-over-year increase since the beginning of the GMP. Moreover, the effects of this expansion were felt throughout the grain industry, and reflected in generally improved GHTS performance.

Total grain production within western Canadian for the 2003-04 crop year reached 47.7 million tonnes. This marked an increase of 51.1% over the 31.5 million tonnes posted in the preceding crop year, and the lowest recorded under the GMP. Moreover, this increase came after three consecutive years of decline, which marked the first rebound in western Canadian grain production since the beginning of the GMP. And while this was the first time in three years that western Canadian grain production even approached a near-normal level,

[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.

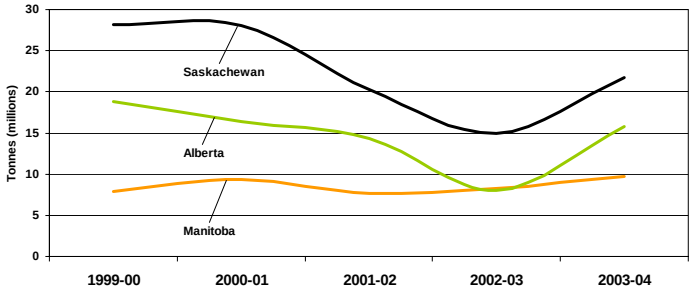
it still fell 12.9% below the 54.6-million-tonne average for the 1999-2000 and 2000-01 crop years. [See Table 1A-1 in Appendix 3.]

Provincial Grain Production

The improved growing conditions for 2003 were widely reflected in elevated grain production levels for each of the four western provinces. Alberta, where the drought had proved most pervasive, saw the most pronounced increase of all the producing provinces. Its overall production virtually doubled, climbing by 96.2% to 15.8 million tonnes from 8.1 million tonnes a year earlier.

Saskatchewan followed Alberta's lead with a year-over-year increase of 45.9% in production, to 21.8 million tonnes from 14.9 million tonnes the year before. Even so, the province's harvest fell well short of the 28.1-million-tonne level attained in the 1999-2000 crop year. As a consequence, Saskatchewan's relative contribution to western Canadian production declined for the third consecutive year. Having made up 51.0% of the overall total in the first year of the GMP, that proportion has slipped to 45.7%. More particularly, this shift had an impact on other facets of the GHTS, including a reduction in loaded transit times.

Figure 2: Major Grain Production – Provincial Distribution



British Columbia's 36.0% rise in production constituted the third largest increase observed, although its harvest amounted to only 0.3 million tonnes. Manitoba, which proved better insulated from the drought of recent years, posted a comparatively moderate gain of 17.2% for the 2003-04 crop year. Overall production there totalled 9.7 million tonnes compared to 8.3 million tonnes a year earlier. In fact, Manitoba's yield for the 2003-04 crop year constituted its best under the GMP. Moreover, its production has proven to be the most stable of the four western provinces, and has never varied by more than 15% from the five-year average of 8.6 million tonnes.

Without exception, production increases were recorded for all of the major grains. Although important differences arose as a result of varied provincial growing conditions, gains in the order of 20-60% were typical. Wheat production increased by 56.9%, to 16.8 million tonnes from 10.7 million tonnes a year earlier, and comprised over one-third of the total harvested tonnage. Likewise, its year-over-year increase of 6.1 million tonnes took a comparable share of the 16.1-million-tonne expansion in western Canadian production. In fact, with barley and durum having posted increases of 5.0 million tonnes and 0.4 million tonnes respectively, CWB grains accounted for almost three-quarters of the overall expansion.[2]

As in past crop years, canola proved to be the leading non-CWB grain. With 6.6 million tonnes in production, canola represented 43.6% of the 15.2 million tonnes of non-CWB grain harvested, and 13.9% of the total western Canadian grain production. Moreover, its 2.5-million-tonne increase accounted for over one-half of the 4.6-million-tonne gain realized by the non-CWB grains as a whole, while a combined increase of 1.5 million tonnes in oats and dry peas accounted for another one-third.

Carry-Forward Stock and Western Canadian Grain Supply

Although the current crop year's grain production had the most direct bearing on the overall supply of grain, the volume held over in inventory from the previous crop year also had an impact. In fact, these designated carry-forward stocks, have typically accounted for about 14% of the grain supply under the GMP.[3] In broad terms,

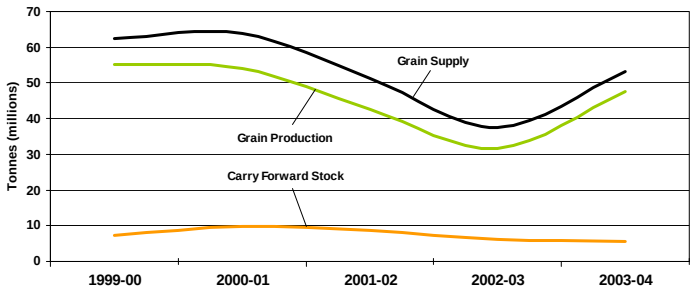
[2] The Canadian Wheat Board Act gives the CWB sole marketing authority for wheat and barley produced by the farmers of western Canada for export and domestic consumption. Those not specifically identified in the Act are designated as non-CWB grains under the Grain Monitoring Program.

[3] 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).

these stocks tend to move in conjunction with changes in grain production, albeit with less pronounced variations. As such, the general deterioration in production has largely been mirrored in a steadily diminishing carry-forward stocks. This 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. More specifically, these went from 9.8 million tonnes at the end of the 1999-2000 crop year, to 5.5 million tonnes at the close of the 2002-03 crop year.[4] Fully three-quarters of the carry-forward stock was comprised of wheat, durum and barley.

In conjunction with the 47.7 million tonnes of grain produced in 2003, the 5.5 million tonnes in stocks carried forward into the 2003-04 crop year effectively raised the overall grain supply to 53.1 million tonnes. This represented a 41.3% increase over the 37.6-million-tonne grain supply of the preceding crop year. [See Table 1A-2 in Appendix 3.]

Figure 3: Western Canadian Grain Supply



As with grain production, carry-forward stocks can vary widely by province and grain, with year-over-year changes reflecting a wide number of determinants. On a comparative basis, the current crop year's carry-forward stocks were 0.6 million tonnes, or 9.6%, below the 6.1 million tonnes brought into the 2002-03 crop year. On a provincial basis, the reduction was widespread and ranged from a decline of just 2.5% for Saskatchewan, to 21.2% in the case of British Columbia. With a 0.4-million-tonne reduction, however, Alberta accounted for almost three-quarters of the overall decline.

On the other hand, not all grains saw a year-over-year reduction in its level of carry-forward stocks. Net increases in the amounts of 6.8% and 50.8% were observed for wheat and oats respectively. However, the combined gain of 0.3 million tonnes for these grains was simply not enough to counter the broader declines in the carry-forward stocks of barley, canola and durum, which totalled 0.9 million tonnes.

1.2 Rail Traffic *[Measurement Subseries 1B]*

Reflecting an improvement in the overall grain supply, the volume of regulated grain moved by rail to western Canadian ports jumped sharply in the 2003-04 crop year. Total railway traffic volume climbed by 62.2%, to 20.7 million tonnes from 12.7 million tonnes the year before.[5] Interestingly, this substantially outpaced the noted 41.3% increase of the grain supply itself. [See Tables 1B-1 through 1B-3 in Appendix 3.]

The scope of the differential between these two rates of increase effectively signals that the railways made real gains in terms of their overall grain handlings. This can best be seen when gauging the railways' grain volume against the overall grain supply. In the 2003-04 crop year, this proportion climbed to 38.9% from 33.9%. To a large extent this increased proportion reflects a real expansion in the export sales programs of both CWB and non-CWB grains. This occurs chiefly because the trade gives preference to its domestic milling needs before export sales. As such, a given change in the grain supply will often translate into even greater variations in the volume of grain made available for export sale and railway movement. This process was equally in evidence as the proportion steady declined from 42.3% to 33.9% while the grain supply itself fell during the first four years of the GMP.

[4] The carry-forward stocks cited here are derived from data provided by Statistics Canada and the Canadian Grain Commission.

[5] 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.

As was the case in the two preceding crop years, quarterly railway grain volumes showed a greater degree of variability than was evident at the beginning of the GMP. Specifically, the 4.6-million-tonne average for the second and third quarters was about 20% below the 5.8-million-tonne average of the first and fourth quarters.

Unlike the 2002-03 crop year, these mid-year decreases in volume do not appear to have been the by-product of a significant reduction in the sales programs for either CWB or non-CWB grains. Nor are they symptomatic of the operational difficulties encountered by the railways during a comparatively harsh winter. Rather, GMP data suggests that the volume reduction during this period may have been derived from a larger direct-rail movement of grain to points outside western Canada, specifically to eastern Canada, the United States of America, and Mexico.[6]

Figure 4: Western Canadian Grain Supply and Railway Volume

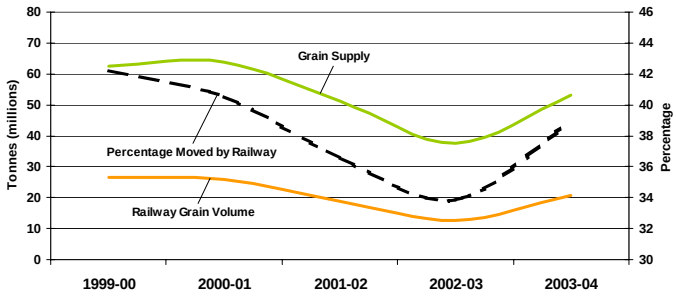
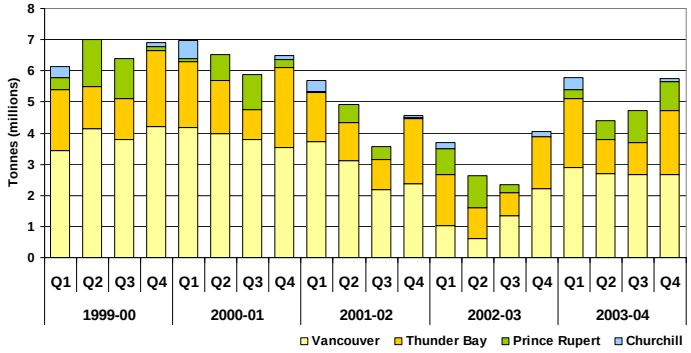


Figure 5: Railway Grain Volumes



Provincial Origins

With the overall change in the grain supply, railway shipments from the principal producing provinces, save Manitoba, increased substantially. More than half of the 7.9-million-tonne net increase in volume was attributable to Alberta, where rail shipments increased by 4.3 million tonnes (or 116.9%) to 7.9 million tonnes. This was followed in turn by Saskatchewan with an increase of 3.4 million tonnes (or 53.4%) to 9.9 million tonnes, and Manitoba with a gain of 0.2 million tonnes (or 8.4%) to 2.9 million tonnes. Shipments from origins in British Columbia essentially remained at zero.[7]

Destination Ports

The ports of Vancouver and Thunder Bay remained the principal railway destinations in the movement of western Canadian grain during the 2003-04 crop year. Vancouver was the largest destination, and saw its volume more than double to 10.9 million tonnes from 5.2 million tonnes a year earlier. Much of this gain came as a result of the resolution of the labour dispute that closed Vancouver's licensed terminal elevators for almost four months in the preceding crop year.[8] As a result, the port's share of the total traffic volume climbed from

[6] A fuller discussion of direct rail shipments to points outside of western Canada is presented in Section 2.33.

[7] Under the GMP, 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 came from BC Rail points, the volume handled by federally regulated carriers proved comparatively small – amounting to less than 100,000 tonnes annually. In 2002 the Canadian National Railway entered into a private haulage agreement that saw traffic originating on CN's line in the Dawson Creek area moved to Vancouver by BC Rail. As a result of this change, CN ceased providing the Monitor with information on these movements early in the 2002-03 crop year. With CN's subsequent acquisition of BC Rail in the closing days of the 2003-04 crop year, these volumes were effectively reinstated in the carriers traffic statistics but proved to be negligible.

[8] 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 until well into the third quarter of the 2002-03 crop year. Caution is, therefore, urged when making any direct quarterly or year-over-year comparisons.

40.6% to 52.9%. Conversely, even though grain destined to Thunder Bay saw an increase of 25.1% to 6.4 million tonnes, its share of the total traffic volume fell to 30.9% from 40.0% a year earlier.

Much the same pattern was in evidence at the secondary ports of Prince Rupert and Churchill. Although the volume directed through Prince Rupert as a result of the Vancouver labour dispute was raised to 2.1 million tonnes in the 2002-03 crop year, the port realized a further gain of 35.1% in the 2003-04 crop year. The 2.9 million tonnes directed to Prince Rupert constituted the largest single movement observed since the 1999-2000 crop year. Even so, its share of the overall volume fell in the face of Vancouver's resurgence, to 13.9% from 16.7% a year earlier. Similarly, even though the volume to Churchill increased by 40.5% to 0.5 million tonnes, the port's share of the overall volume fell to 2.3% from 2.7% the year before.

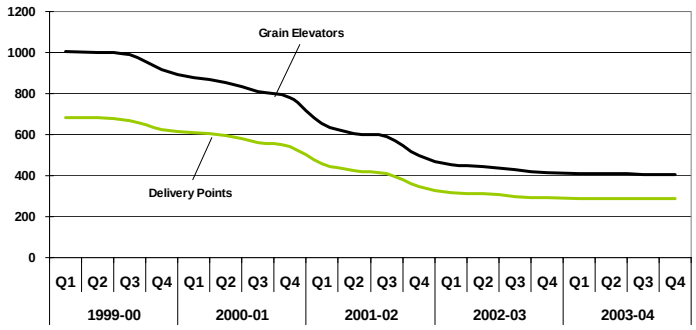
Despite the 2003-04 crop year's apparent setbacks, the shares garnered by the ports of Thunder Bay, Prince Rupert and Churchill have actually increased since the beginning of the GMP. More specifically, their gains have come at the expense of the port of Vancouver, which has seen its share decline to 52.9% from 58.9% in the past five years. Thunder Bay benefited most, increasing its share to 30.9% from 26.8%. Prince Rupert and Churchill followed with gains of 1.3 and 0.6 percentage points respectively.

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

The declining number of licensed country elevators in western Canada has been one of the most visible facets of the GHTS's 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 2003-04 crop year began four years later, that number had fallen by 58.6% to 416.[9] [See Tables 1C-1, and 1C-2 in Appendix 3.]

In fact, the first three years of the GMP were marked by a continuing increase in the number of facilities being removed from the system: 87 in the first crop year; 136 in the second; and 281 in the third. Yet with 84 elevators removed from the network during the course of the 2002-03 crop year, it appeared that the most dramatic reductions had been realized, and that the rate of decline was moderating. What is more, the quarterly net change in elevators during this period strongly suggested that the process was quickly decelerating.

Figure 6: Licensed Grain Elevators and Delivery Points



For the 2003-04 crop year, the number of licensed elevators in western Canada fell by a further 12 (or 2.9%) to 404. Although this denoted the smallest single-year decline under the GMP, it brought the five-year reduction in the GHTS's country elevator network to an even 600 facilities (or 59.8%). Furthermore, it reinforced the Monitor's earlier observation concerning a slow down in the rationalization process.

In addition, the number of grain delivery points has also been declining, and largely in concert with the reduction in licensed elevators. By the end of the 2003-04 crop year, the number of active delivery points had fallen to 288. Although a reduction of just four (or 1.4%) from the 292 in place at the end of the preceding crop year, a full 58.0% of the 685 delivery points in place at the beginning of the GMP have now been closed. As such, some 397 communities have now witnessed the closure of all local elevators.

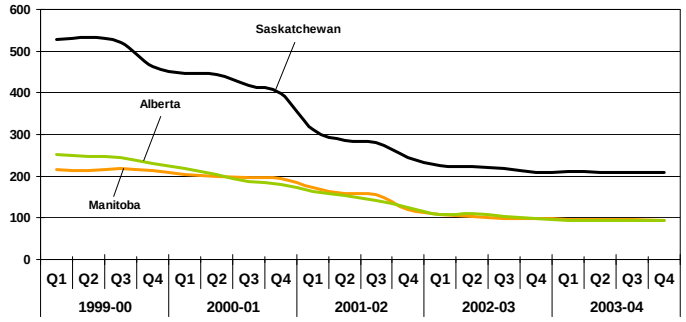
[9] The reduction in licensed elevators cited here reflects the net change arising from elevator openings and closures over a given period. This net reduction should not be construed as elevator closures alone. Elevator openings and closures are discussed elsewhere in this report, and the statistics relating to them are presented in Tables 1C-7 through 1C-12.

Throughout the course of the GMP, the vast majority of country elevator deliveries have been concentrated at an even lesser number of locations. In any given crop year, about one-third of the GHTS's active delivery points accounted for 80% of the producers' grain deliveries. For the 2003-04 crop year, just 95 (or 38.8%) of the GHTS's active grain delivery points accounted for this share of total grain deliveries. This reflects an increase from the 33.5% of active delivery points recorded the previous year, and was in large part due to the increased grain supply, which was more evenly distributed across the prairies. [See Table 1C-13 in Appendix 3.]

Provincial Distribution

With the close of the 2003-04 crop year, Saskatchewan possessed 208, or 51.5%, of the 404 licensed facilities located in western Canada. In fact, since the beginning of the GMP, the province's elevator share has never varied significantly from one-half of the GHTS total. This was followed in succession by Manitoba and Alberta, whose respective 94 and 93 elevators each accounted for just under a quarter of the total. Nine others were located in the provinces of British Columbia and Ontario.[10]

Figure 7: Licensed Grain Elevators – Provincial Distribution



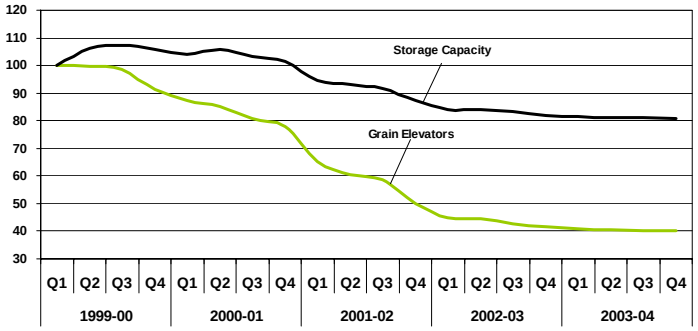
And while the greatest numerical reduction in licensed facilities was also attributable to Saskatchewan, it was Alberta that posted the largest relative decline since the beginning of the 1999-2000 crop year, 63.1% (or 159 elevators). This rate, however, was very closely followed by Saskatchewan with a net reduction of 60.5% (or 319 elevators), and Manitoba with a drop of 56.5% (or 122 elevators).

Despite periodic shifts in momentum, the overall rate of decline for all three provinces has proven to be substantially the same. This calls attention to the fact that the geographic distribution of elevator reductions within western Canada has been rather evenly spread, and that the rationalization process did not unduly target any one province's facilities.

Elevator Storage Capacity

Despite the steep decline in the overall number of elevators, the associated storage capacity fell by a much lesser 19.0% during this same five-year period, to 5.7 million tonnes from 7.0 million tonnes. This lower rate of decline illustrates that, while grain companies were methodically closing their less-efficient facilities, the capacity lost in this process was being replaced through either the expansion or opening of others. Until the latter part of the 1999-2000 crop year, capacity added through investment in new or expanded facilities actually outpaced that removed through closure. This resulted in an initial 7.4% increase in storage capacity, which peaked at 7.5 million tonnes in the third quarter of the 1999-2000 crop year. Since then, the GHTS's total

Figure 8: Relative Change in Grain Elevators and Storage Capacity



[10] There were nine licensed elevators located outside the provinces of Manitoba, Saskatchewan, and Alberta as at 31 July 2004. Specifically, these included one in Ontario, and eight 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.

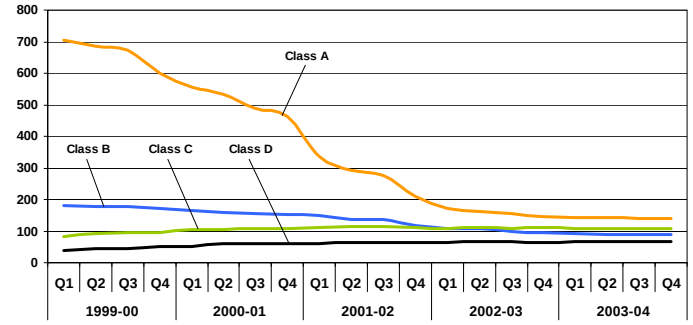
storage capacity has been falling in step with the decline in elevators, and losing on average about 3,500 tonnes per facility closed.

Facility Class

For comparative purposes, the GMP groups elevators into four distinct classes. These classes are based on the loading ability of each facility as defined by their respective number of car spots. Those with less than 25 car spots are deemed to be Class A facilities; those with 25-49, Class B; those with 50-99, Class C; and those with 100 or more, Class D.[11] In addition, given their ability to load railcars in larger numbers, the GMP deems the Class C and D facilities to be high-throughput elevators.

Under this framework, the composition of the GHTS's elevator infrastructure can be seen to have changed significantly over the past five crop years. The most striking aspect of this change has been the 80.0% decline in the number of Class A facilities, which fell to 141 from 705. In addition, the Class B facilities have also been reduced significantly in number, falling by 50.6% to 89 from 180. At the same time, the trade's move towards the use of high-throughput elevators has been equally pronounced: Class C facilities increased by 33.3%, to 108 from 81; and Class D facilities increased by 73.7%, to 66 from 38. These patterns were equally evident in terms of changes made to GHTS storage capacity.

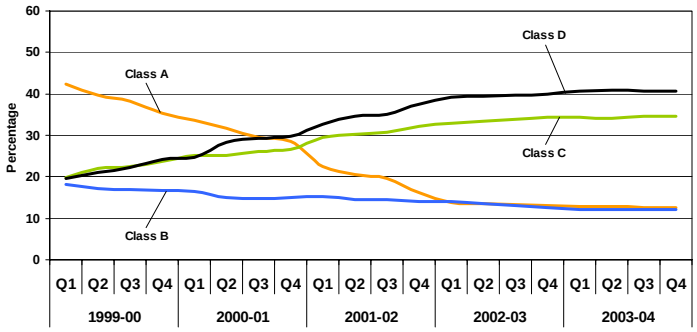
Figure 9: Licensed Grain Elevators – Facility Class



The primary target in the grain companies' elevator rationalization program was clearly the conventional wood-crib facility. Of the 735 elevators closed since the beginning of the GMP, 83.4% (or 613) were the smaller Class A facilities.[12] To a large extent, the economic efficiency of the high-throughput elevator had effectively rendered these facilities obsolete. But they had also been undermined by the system of financial incentives that encouraged the movement of grain in blocks of 25 or more railcars at a time.

These same forces also disfavoured the GHTS's 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, the discounts were not as generous as those accorded shipments from high-throughput elevators. As a result, over the course of the past five crop years, a total of 101 Class B facilities were also closed. Class A and B facilities accounted for 97.1% of all elevator closures. [See Tables 1C-10 through 1C-12 in Appendix 3.]

Figure 10: Share of Storage Capacity – Facility Class



In contrast with their 97.1% share of

[11] 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, the established 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.

[12] Statistics associated with elevator closures and openings are imprecise since they 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 at a later point in time.

elevator closures, Class A and B facilities accounted for only 54.8% of the 135 elevators opened during this period.[13] More importantly, the differential calls attention to the fact that high-throughput facilities accounted for a significantly greater proportion of elevator openings than closures, 45.2% versus 2.9% respectively. [See Tables 1C-7 through 1C-9 in Appendix 3.]

In fact Class C and D elevators were the only facilities to have posted net increases in number. These changes underscore the trade's clear migration towards the use of high-throughput elevators, which can readily be seen when considering their relative share of either the GHTS's total elevators or storage capacity. By the end of the 2003-04 crop year, high-throughput facilities accounted for 43.1% of all elevators, and 75.3% of overall storage capacity. This contrasts sharply against the respective 11.9% and 39.4% shares they held at the beginning of the GMP.

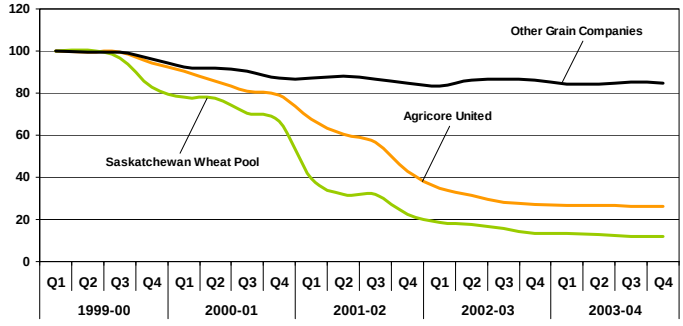
Still, when all facility classes entitled to receive incentive discounts are taken into account, the total number of elevators can be seen to have fallen to 263 from 299 over the past five years, while the associated storage capacity actually increased to 5.0 million tonnes from 4.1 million tonnes.[14] More importantly, by the end of the last crop year, this collection accounted for 65.1% of all facilities, and 87.4% of the overall storage capacity. As was the case with high-throughput elevators, these stakes are significantly greater than the respective 29.8% and 57.7% shares held at the beginning of the GMP. [See Tables 1C-4 through 1C-6 in Appendix 3.]

Grain Companies

Over the course of the past five crop years, elevator rationalization has been a principal objective of Canada's larger grain companies, particularly Saskatchewan Wheat Pool (SWP) and Agricore United (AU). Comparatively, SWP has been the more aggressive of these two firms, reducing its number of licensed elevators by 87.9%, to 37 from 305.[15] No less significant is the fact that just over one-half of this 268-facility reduction occurred in a single crop year, that of 2001-02, when the company culled 135 elevators from its network.

AU reduced its network by 74.0% over this same timeframe, to 100 from 384. As with SWP, almost half of this reduction came 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.[16] When taken together, the elevator reductions posted by SWP and AU account for 92.0% of the GHTS's 600-facility decline under the GMP.

Figure 11: Licensed Grain Elevators – Grain Company



Among the other large grain companies, Cargill and Pioneer Grain posted the next deepest cuts in their elevator networks. However, with reductions of 42.4% and

[13] Many of the 74 elevator openings recorded during this period reflect the acquisition of previously closed facilities, and their subsequent reopening by a different grain company.

[14] The inclusion of Class B facilities, which declined from 180 to 89 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.

[15] The facilities attributed to SWP do not include those operated under the commercial name of AgPro Grain in the provinces of Manitoba and Alberta. This latter operation – encompassing some 11 facilities as at 31 July 2004 – 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 proven a marginally lesser 84.8%.

[16] 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 – 284 versus 268 for SWP.

41.0% respectively, their rationalization efforts were seen to have advanced at roughly half the pace. That exhibited by Parrish and Heimbecker as well as N.M. Paterson and Sons, whose reductions amounted to 19.2% and 6.0% respectively, were even less pronounced.

Not all of these reductions marked a permanent closure of the facility. In some instances, elevators closed by one of the larger grain companies were sold and reincarnated as facilities operated by a smaller, independent grain company. The opening of facilities operated by Delmar Commodities, FGDI, Providence Grain Group, and Westlock Terminals all represent such instances.[17] The number of elevators operated by these smaller grain companies has actually increased by 51.0% in the last five crop years, to 77 from 51.[18]

As such, when the elevators operated by companies other than SWP and AU are grouped together for comparison purposes, it can be seen that their collective number has fallen by 15.2%, to 267 from 315. What is more, in the face of the steeper cuts made by SWP and AU, this grouping now accounts for about two-thirds of both the GHTS's elevators and storage capacity.[19] Despite what amounts to a reversal of position, SWP and AU remain the dominant handlers of grain in western Canada. This implies that the two largest grain companies have significantly built up the operational efficiency of their current networks. [See Table 1C-3 in Appendix 3]

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 14,827.9 route-miles (76.2%), while the smaller Class 2 and 3 carriers operated the remaining 4,640.3 route-miles (23.8%).[20]

As outlined in the Monitor's previous reports, that network changed little during the first four years of the GMP. By the end of the 2002-03 crop year, total network mileage had fallen by a mere 2.8% (or 544.3 route-miles), to 18,908.8 route-miles overall. The largest share of this reduction, 84.3%, came from the abandonment of 458.9 route-miles of light-density, grain-dependent branch lines.

Branch Line Discontinuances

The 2003-04 crop year produced the first reductions in railway infrastructure in almost two years. In the third quarter, a total of 64.0 route-miles were removed from the western Canadian network when the Southern Manitoba Railway (SMR) abandoned about 40% of its system.[21] With the halving of its grain volumes since beginning operations in 1999, the shortline's management cited the closure of several elevators local to its line, along with the incentives used by grain companies to draw grain into their other facilities, as the chief factors in its decision to abandon the line.

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[17] 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 these elevators are now operated by smaller grain companies.

[18] 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 77 elevators cited here include four facilities operated by ADM Agri-Industries Ltd., a subsidiary of the larger US-based Archer Daniels Midland.

[19] By the end of the 2003-04 crop year, grain companies other than SWP and AU accounted for 66.1% of the elevators, and 67.3% 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 33.9% of the elevators, and 32.7% of the associated storage capacity.

[20] 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 BC Rail; and Class 3, shortline entities such as the Central Manitoba Railway or the Great Western Railway.

[21] The section abandoned by the Southern Manitoba Railway on 1 March 2004 extended westward from Mariapolis to Elgin, Manitoba. This section was purchased from CN when the company was established in 1999, and encompassed portions of the former owner's Miami and Hartney subdivisions.

This was followed in the fourth quarter by the Canadian Pacific Railway's abandonment of another 37.2 route-miles of infrastructure in Saskatchewan. In specific terms, this was comprised of two separate grain-dependent branch lines: a 25.7-route-mile segment of the company's Arcola subdivision; and an 11.5-route-mile segment of its Burstall subdivision. Both segments had been identified as abandonment candidates in the company's three-year network plan since 2001.

On a combined basis, these 101.2 route-miles of prairie branch lines represented the abandonment of just 0.5% of the railway infrastructure in place at the beginning of the 2003-04 crop year. This enlarged the scope of the overall reduction made since the beginning of the GMP to just 3.3%, and produced a network comprised of 18,822.7 route-miles of track as at 31 July 2004. The modest nature of this change in railway infrastructure continues to contrast sharply against the GHTS's previously noted 59.8% reduction in licensed elevators. [See Table 1D-1 in Appendix 3.]

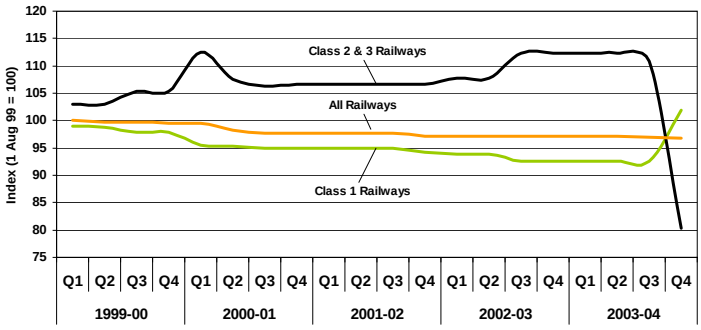
Branch line abandonment notwithstanding, the cornerstone of the evolution in western Canadian railway infrastructure has been the transfer of CN and CP branch line operations to shortline railways. By the beginning of the 2003-04 crop year a total of 3,637.8 route-miles, or 19.3%, of the network had been conveyed to a series of smaller carriers. And while this process resulted in the creation of two such railways during the course of the 2002-03 crop year, there were no new shortline operations established in the last twelve months. In fact, the focus of the 2003-04 crop year seemingly moved away from the transfer of branch lines, and towards the sale of existing railway franchises.

Sale of Existing Railways

The first of these related to the government of British Columbia's decision to privatize BC Rail. Following a bidding process that lasted for more than six months, the province announced early in the second quarter that it had accepted CN's proposal to assume operation of the railway.[22] Unlike the branch line transfers that had resulted in the spin-off of smaller carriers, this transaction resulted in the absorption of a regional carrier with operations extending over a network of 1,419.8 route-miles by a much larger Class 1 carrier.

In fact, CN acquisition of BC Rail resulted in a significant realignment of the railway industry's infrastructure holdings. By the end of the 2003-04 crop year, Class 1 carriers directly managed a total of 15,098.7 route-miles of track, which constituted a comparatively modest gain of 1.8% from the 14,827.9 route-miles they oversaw at the outset of the GMP. Conversely, the portion managed directly by Class 2 and 3 carriers fell by 19.7%, to 3,724.0 route-miles from 4,640.3 route-miles five years earlier.

Figure 12: Relative Change in Route-Miles – Railway Infrastructure



A second sale involved the assets of the Great Western Railway (GWR), which operated a 329.1-route-mile network of grain-dependent branch lines in southwestern Saskatchewan. Notwithstanding a significant gain in producer-car volume, the GWR's handlings had fallen to one-quarter of the area's estimated potential. As was the case with the SMR, the GWR cited the incentives used by grain companies to draw grain into their main line facilities as a key factor in this decline. Faced with mounting financial losses, the railway's corporate parent stated in late 2003 that it was looking to either sell the line or abandon it entirely.[23]

With an asking price of $5.5 million, however, few appeared prepared to make the necessary investment to safeguard the GWR's future. Nevertheless, a group of concerned area farmers mounted an effort to purchase

[22] A fuller discussion of the sale of BC Rail is presented in Section 2.34.

[23] Westcan Rail Ltd., a company based in Abbottsford, British Columbia, was the registered owner of the Great Western Railway.

the railway, and raised the $0.6-million demanded by the owner as a down payment before an appointed deadline in the third quarter. Over the course of the next several months this group successfully raised over $4.0 million in capital through the sale of shares to local individuals, organizations and governments. In addition, the group also secured a 15-year, $1.7 million loan from the province of Saskatchewan's Short Line Railway Financial Assistance Program.[24]

The acquisition of the GWR marked the first instance in western Canada where the railway's principal users also became its owners.[25] This vertical integration of shipper and carrier operations denoted a significant advancement of the model often put forward by producers as a means of preserving railway service to their communities. Moreover, the railway's new owners have indicated that they also intend to work with both CP and the CWB in an effort to improve efficiency, largely through the coordinated movement of 100-car unit trains of producer-loaded grain.

Local Elevators

As discussed earlier, while the railway network has seen limited change over the course of the past five crop years, the elevators served by it has declined significantly. In broad terms, these facilities have decreased by 60.2%, to 390 from 979 at the outset of the GMP.[26] Yet differences exist between the elevator networks tied to the Class 1 and non-Class 1 railways. Those local to Class 1 carriers fell by 61.0%, to 350 from 897. In the case of those associated with non-Class 1 carriers the decline was a somewhat lesser 51.2%, falling to 40 from 82. Conversely, the relative decline in associated storage capacity was only 17.2% in the case of elevators local to Class 1 carriers, and 38.5% in the case of those tied to non-Class 1 carriers. [See Table 1D-6 in Appendix 3.]

These differentials signify that investment has largely been concentrated in facilities local to the networks of the Class 1 carriers, and that it has been along these routes that the vast majority of high-throughput elevators were constructed. Moreover, it also explains why, despite a deeper reduction in the actual number of elevators, the decline in the storage capacity of facilities local to the Class 1 railways was half that experienced by the non-Class 1 carriers.

Figure 13: Relative Change in Local Elevators – Railway Class

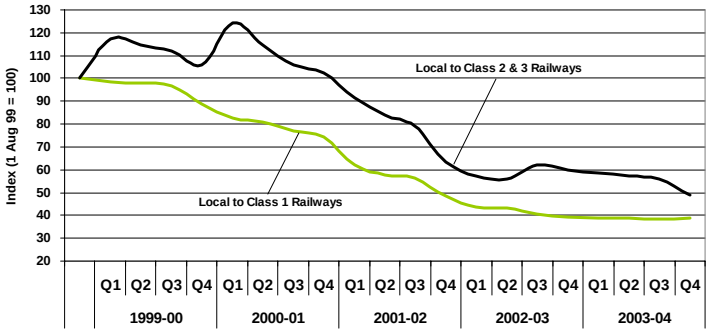
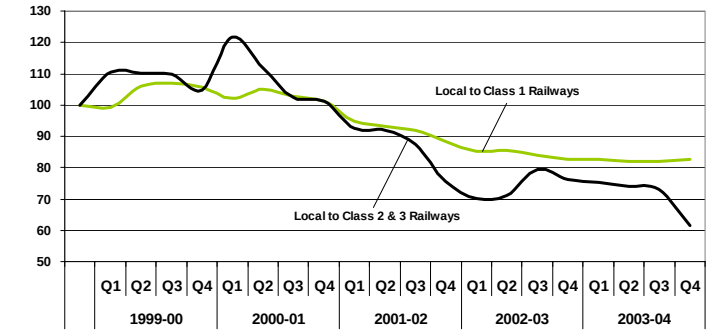


Figure 14: Relative Change in Storage Capacity – Railway Class



[24] The GWR's purchase was finalized in November 2004.

[25] Local producers, organizations and municipalities have taken the lead in establishing shortline railway operations on branch lines slated for abandonment before. The creation of Red Coat Road and Rail in 1999, the Wheatland Railway in 2002, and the Prairie Alliance for the Future in 2003, all represent such instances. The distinction to be made in the case of the GWR, is that the purchaser acquired the physical assets and operations of an existing shortline railway outright.

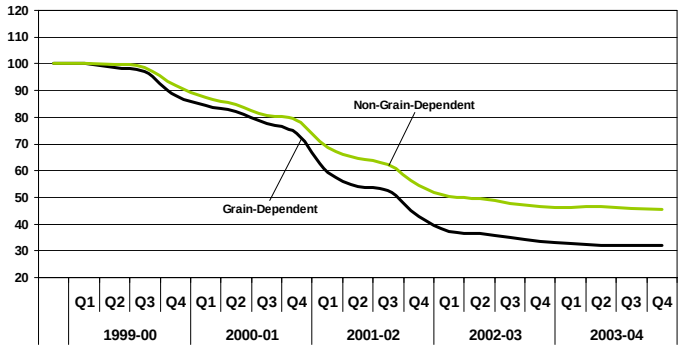
[26] The 60.2% reduction cited here relates only to those facilities directly served by rail. The 59.8% reduction quoted previously relates to the net decline in the entire elevator network, including off-track facilities.

Still, these net declines ignore some of the gains that were made early in 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 then starting to fall. This was due chiefly to the establishment of new shortline operations such as those of Red Coat Road and Rail, and the Great Western Railway. The establishment of other shortline railways in the 2002-03 crop year also produced similar increases. Had the time series been adjusted to exclude such structural additions, it would have shown the decline in both the number and storage capacity of elevators local to shortline carriers in operation at the beginning of the GMP to have been even more pronounced.

Grain-Dependent Network

Differing rates of decline can also be seen for facilities local to the grain-dependent, and non-grain-dependent, railway networks.[27] Elevators situated along the grain-dependent network fell by 67.9% over the course of the past five crop years, to 135 from 420. In the case of those situated along the non-grain-dependent network, the decline was a lesser 54.4%, having fallen to 255 from 559. On the whole, these patterns clearly indicate that elevators tied to the grain-dependent railway network are diminishing at a substantially faster rate. This trend became particularly evident in the 2001-02 crop year when elevator reductions under the GMP reached a record 281.

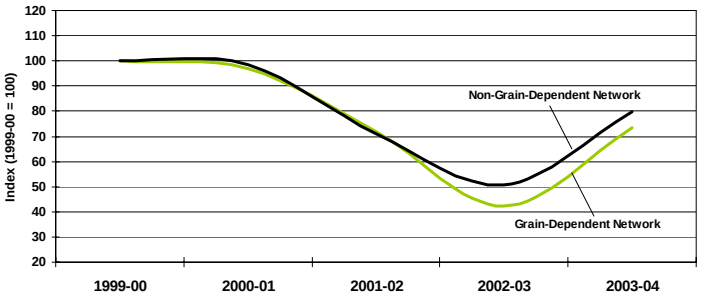
Figure 15: Relative Change in Local Elevators – Railway Line Class



Traffic Volumes

Railway traffic volumes have begun to reflect changes in the makeup of the elevator network. The 2002-03 crop year was the first to show a clear divergence in the relative volumes originated by the grain-dependent, and non-grain-dependent, networks. Although the 2003-04 crop year saw this gap narrowed marginally, it now appears to have taken on a structural characteristic. The tonnage originated by the grain-dependent network amounted to 73.2% of what it had been in the first year of the GMP, while that originated by the non-grain-dependent network amounted to a somewhat greater 79.9%. As a result, the proportion of grain shipments having originated on the non-grain-dependent network has begun to rise, albeit only marginally, to 68.1% from 66.2% in the first year of the GMP.[28] [See Table 1D-2 in Appendix 3.]

Figure 16: Relative Change in Grain Volumes – Railway Line Class



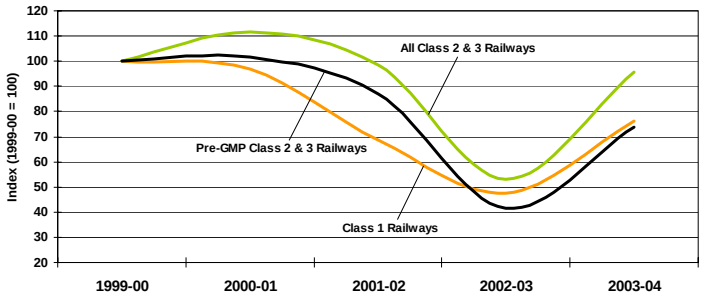
[27] The term "grain-dependent branch line", while largely self-explanatory, denotes a legal designation under the Canada Transportation Act. Since the Act has application to federally regulated railways only, grain-dependent branch lines transferred to provincially regulated carriers lose their federal 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.

[28] 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. Owing in large part to the effects of the drought, this proportion actually climbed to a record 70.1% in the 2002-03 crop year. The 68.1% garnered in the 2003-04 crop year denotes only the second occasion under the GMP where this proportion rose above 66.6%.

At the same time, the volume of grain originated by regional and shortline carriers showed a comparatively sharper year-over-year increase than did that of the major railways. Whereas, the non-major carriers saw their 2003-04 crop year tonnage increase by 80.0%, the volume originated by the major carriers increased by a lesser 60.6%. Here too the differential can be misleading since it suggests that shortline-originated traffic has rebounded more significantly, when in fact it has been augmented by the inclusion of volumes tied to newly established carriers.

In fact, these additional volumes mask the real decline experienced by the shortline railways in operation prior to the GMP's introduction. The tonnage originated by these shortline carriers fell by 26.0% from what it had been in the first year of the GMP. This compares much less favourably with the 4.3% decline noted when considering all shortline railways.[29] Moreover, the adjusted time series reveals that after having initially shown less sensitivity to a downturn in the grain supply, the tonnage originated by shortline carriers has begun to falter behind that of the Class 1 carriers. [See Tables 1D-3 and 1D-5 in Appendix 3.]

Figure 17: Relative Change in Grain Volumes – Railway Class



Notwithstanding the preceding, the volume of traffic originated by the shortline railways has not fallen at as sharp a rate as the decline in associated elevator infrastructure and its associated handling capacity. In fact, the evidence 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 local elevators.[30] This is further evidenced by the fact that producer-car loadings accounted for an estimated 44.9% of the overall grain volume originated by shortline carriers in the 2003-04 crop year.[31] This proportion has effectively tripled from the 14.8% it represented 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]*

At the beginning of the GMP, the licensed terminal elevator network in western Canada encompassed 14 facilities, with an aggregate 2.6 million tonnes of storage capacity. With the close of the 2002-03 crop year, the total terminal elevator count had climbed by 21.4% to 17, with storage capacity having increased by 6.9% to 2.7 million tonnes. With nine of the elevators and 52.3% of the storage capacity, Thunder Bay held the largest share of these assets. Vancouver takes second place with six facilities and 34.9% of the system's storage capacity. Prince Rupert and Churchill both followed with one terminal elevator apiece, and storage capacity shares of 7.7% and 5.1% respectively.

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[29] The distortions cited here apply equally to the statistics generated for Class 1 carriers, but given its significantly larger traffic base, the impact is less significant. Had the volume represented by the shortline railways created in this five year period been retained by the Class 1 carriers, their originated tonnage for the 2003-04 crop year would have declined by 22.0% from what it had been in the first year of the GMP. This would only have been two percentage points less than the 24.0% actually observed.

[30] 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.

[31] Based on data from the Canadian Grain Commission. See Section 2.35 for a more in-depth discussion of producer loading activities.

This expansion was, however, the result of the licensing of three pre-existing facilities rather than any physical addition.[32] A similar change to the makeup of the terminal elevator system came at the beginning of the 2003-04 crop year, when the 91,000-tonne Agricore United "M" facility located in Thunder Bay was de-licensed. At the beginning of the 1999-2000 crop year, this facility had been owned and operated by United Grain Growers Limited. However, in the aftermath of the company's merger with Agricore Cooperative Ltd. in 2001, it became one of the three facilities operated by the emergent Agricore United in Thunder Bay. This facility was subsequently deemed surplus to the company's immediate needs, and mothballed in the first half of the 2002-03 crop year.[33]

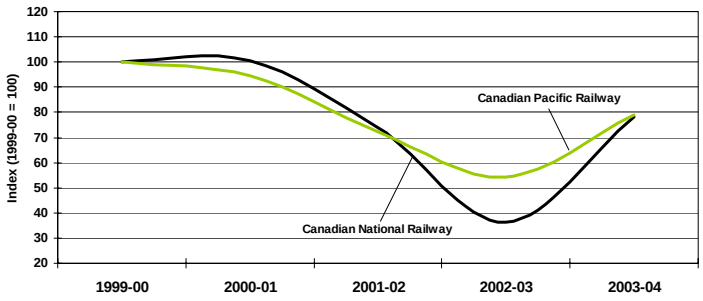
The de-licensing of this facility effectively reduced the terminal network to a total of 16 elevators with a 2.6-million-tonne storage capacity. Although producing modest year-over-year declines for the 2003-04 crop year itself, over the course of the GMP the system has still expanded its number and storage capacity by 14.3% and 3.3% respectively. [See Table 1E-1 in Appendix 3.]

Terminal Elevator Unloads

The number of covered hopper cars unloaded at these terminal facilities during the 2003-04 crop year increased by 74.3%, to 218,447 from 125,339 a year earlier.[34] The number of carloads originated by CN showed the greatest overall increase of the two major carriers operating in western Canada. The company's handlings effectively doubled to 113,218 carloads from 52,867 carloads the year before. Its most substantive gains were registered against movements into Vancouver and Prince Rupert, which increased by 174.4% and 133.2% respectively. Although the increased grain supply was an important factor in this improvement, the resolution of the labour disruption in Vancouver was also instrumental. More tempered increases of 84.6% and 40.3% were recorded for the carrier's handlings into Churchill and Thunder Bay respectively.[35]

In comparison, CP's overall handlings increased by a more conservative 45.2%, to 105,229 carloads from 72,472 carloads the year before. As with CN, the company's handlings into Vancouver experienced the sharpest rise, a gain of 169.1%. Moreover, with unloads of 56,089 carloads (or 52.3%), CP retained its position as the largest handler of grain in the Vancouver corridor. CP was also the dominant carrier in the Thunder Bay corridor, where it a garnered 64.5% share of the 71,873 carloads unloaded. Here too, the carrier's handlings increased, albeit by a comparatively lesser 18.9%.

Figure 18: Relative Change in Terminal Unloads – CN and CP Origins



It is also worth noting that CP saw its volumes to Churchill increase by 44.0%, to 2,775 carloads from 1,927 carloads the year before. Much of this increase appears to have been the result of the port's efforts to attract new business, a large portion of which seemingly was drawn from the carrier's more southerly service area. Conversely, CP's handlings into the port of Prince Rupert were effectively reduced to zero from 10,699 carloads a year earlier as a result of the normalization of west coast service following the previous year's labour dispute.[36]

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

[33] Agricore United has not outlined a plan for either the sale or demolition of this facility.

[34] 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.

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

[36] CP does not provide direct rail service to either Prince Rupert or Churchill. Traffic destined to these ports is interchanged to CN as part of an interline movement.

These shifts produced a noticeable change in the relative proportion of traffic originated by CP in the 2003-04 crop year, 48.2% versus 57.8% a year earlier. Much of this loss appears to have been the result of several factors, not the least of which included increased grain production within CN's traditional catchment area, and a return to CN's exclusive handling of traffic destined to Prince Rupert. Other possibilities include the impact of the company's winter service problems, and the possibility of its having handled a greater share of the traffic directed to eastern Canada, the United States of America, and Mexico instead. [See Table 1E-2 in Appendix 3.]

1.6 Summary Observations

The significantly better growing conditions of 2003 came as a welcome relief to western Canada's grain industry after two years of widespread drought. Total grain production for the 2003-04 crop year reached 47.7 million tonnes, a gain of 51.1% over the 31.5 million tonnes recorded a year earlier. Even so, this volume fell 12.9% below the 54.6-million-tonne average of the 1999-2000 and 2000-01 crop years.

Grain production also increased in each of the four western provinces. Alberta, where the drought had proved most pervasive, saw the most pronounced year-over-year increase, 96.2%. In addition, production increases were recorded for all of the major grains. Although important differences resulted from varied provincial growing conditions, gains in the order of 20-60% were typical. Wheat continued to be the largest single crop, with production increasing by 56.9% to 16.8 million tonnes. With durum and barley production totalling 4.3 million tonnes and 11.4 million tonnes respectively, CWB grain accounted for over two-thirds of the total production. Adding in 5.5 million tonnes of carry-forward stocks, the overall grain supply rose by 41.3% to 53.1 million tonnes.

Reflecting the improved grain supply, the volume moved by rail to western Canadian ports jumped sharply in the 2003-04 crop year, climbing by 62.2%, to 20.7 million tonnes. The ports of Vancouver and Thunder Bay remained the principal railway destinations. As the largest destination, Vancouver saw its volume more than double to 10.9 million. Much of this gain came as a result of the resolution of the labour dispute that closed Vancouver's licensed terminal elevators for almost four months in the preceding crop year. As a result, the port's share of the total traffic volume climbed from 40.6% to 52.9%.

Even so, the share realized by the ports of Thunder Bay, Prince Rupert and Churchill has actually increased since the beginning of the GMP. More specifically, their gain has come at the expense of the port of Vancouver, which has seen its share decline from 58.9% in the past five years. Of the six percentage points ceded by Vancouver, Thunder Bay acquired just over two-thirds, and increased its share to 30.9% from 26.8%. Prince Rupert and Churchill followed with gains of 1.3 and 0.6 percentage points respectively.

The declining number of licensed country elevators in western Canada has been one of the most visible facets of the GHTS's evolution. By the end of the 2003-04 crop year their number had fallen by 59.8%, to 404 from 1,004 five years earlier. Moreover, there has been a significant decline in the pace of this decline, with data now suggesting that the licensed country elevator system may well be approaching an undefined lower limit.

Despite the steep decline in the overall number of elevators, the associated storage capacity fell by 19.0% during this same five-year period, to 5.7 million tonnes from 7.0 million tonnes. This more moderate rate of decline signifies that while grain companies were methodically closing their less-efficient facilities, the capacity lost in this process was being replaced through either the expansion of others or the opening of new high-throughput facilities.

The most striking aspect of this evolution has been the decline in Class A facilities, which have fallen by 80.0% to 141 in the last five years. Class B facilities were also reduced significantly in number, declining by 50.6% to 89. At the same time the trade's move towards the use of high-throughput elevators has been equally pronounced: Class C facilities increased by 33.3% to 108; and Class D facilities increased by 73.7% to 66. By the end of the 2003-04 crop year, high-throughput facilities accounted for 43.1% of all elevators, and 75.3% of the GHTS's storage capacity. These values contrast sharply against the respective 11.9% and 39.4% shares held at the beginning of the GMP.

Over the course of the past five years, elevator rationalization has generally shown itself to be a goal of Canada's two largest grain companies. Taken together, the rationalization activities of Saskatchewan Wheat Pool and Agricore United account for 92.0% of the net decline in GHTS elevators under the GMP. When the elevators operated by other companies are grouped together for comparison purposes, it can be seen that their collective number has fallen by 15.2%. This lower rate of decline has resulted in this latter group now possessing about two-thirds of the GHTS's elevators and associated storage capacity. Despite what amounts to a reversal of position, Saskatchewan Wheat Pool and Agricore United remain the dominant handlers of grain in western Canada. This implies that the two largest grain companies have significantly built up the operational efficiency of their current networks.

In contrast to the country elevator network, the GHTS's railway infrastructure has changed little. In fact, the 2003-04 crop year's abandonment of 101.2 route-miles of prairie branch lines was the first recorded in almost two years. This extended the total reduction made since the beginning of the GMP to just 3.3%, and has resulted in a network of 18,822.7 route-miles.

The most striking facet of the changes recorded during the 2003-04 crop year came from the government of British Columbia's decision to privatize BC Rail. Early in the second quarter, the province announced that it had accepted CN's proposal to assume operation of the railway. Unlike branch line transfers to new shortline carriers, this transaction involved the absorption of a regional carrier by a much larger Class 1 carrier. This constituted a significant realignment of the railway industry's infrastructure. By the end of the 2003-04 crop year, the Class 1 carriers actually managed 1.8% more infrastructure than they did at the beginning of the GMP. Conversely, the number of route-miles managed by the non-Class 1 carriers fell by 19.7%.

While railway infrastructure has itself remained largely unchanged in the past five years, the number of elevators tied to that infrastructure has declined significantly: by 61.0% in the case of elevators local to the lines of Class-1 carriers, and by 51.2% in the case of those serviced by non-Class-1 carriers. Similarly, the number of elevators situated along the grain-dependent network fell by 67.9%, while those situated along the non-grain-dependent network declined by a lesser 54.4%. On the whole, these changes in the makeup of the elevator network are now being reflected in railway traffic volumes, and suggest that the tonnage originated by shortline carriers has also begun to falter behind that of the Class 1 carriers.

The 2003-04 crop year saw the first recorded reduction in the terminal elevator network under the GMP. This occurred when the 91,000-tonne Agricore United "M" facility located in Thunder Bay was de-licensed. This effectively reduced the network to a total of 16 elevators with 2.6 million tonnes of storage capacity. Still, over the course of the GMP, the number and attendant storage capacity of the system have expand by 14.3% and 3.3% respectively.

As with other measures of volume, the number of covered hopper cars unloaded at these terminal facilities during the 2003-04 crop year increased by 74.3%, to 218,447 carloads from 125,339 carloads a year earlier. CN showed the greatest overall increase of the two major carriers operating in western Canada, and effectively doubled its handlings to 113,218 carloads. In comparison, CP's overall handlings increased by a somewhat lesser 45.2% to 105,229 carloads. These shifts produced a noticeable decline in the share originated by CP, which fell to 48.2% from 57.8% a year earlier.

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 2003-04 crop year, the CWB has committed itself to moving 40% of its grain shipments under a new program that combines 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 – 2003-04 Crop Year

Tendering

- *The CWB's tendering commitment reduced to 20% for the 2003-04 crop year.*
- *251 tender calls were issued by the CWB during the 2003-04 crop year.*
  - *Called for the movement of 3.0 million tonnes to export positions.*
- *1,898 bids received; offered an aggregate 10.3 million tonnes.*
  - *Indicates significantly heightened competition between grain companies.*
- *466 contracts concluded for the movement of 2.5 million tonnes.*
  - *Vancouver deliveries, 45.3%; Thunder Bay, 35.5%; Prince Rupert, 17.4%; and Churchill, 1.7%.*
  - *No contracts concluded for the movement of malting barley.*
  - *Represented 18.1% of CWB volume moved to ports in western Canada.*
    - *Marginally below established 20% maximum commitment.*
- *Tenders for 15.7% of the tonnage called either partially, or not at all, filled.*
- *Proportion of tendered grain volume moving in multiple car blocks increased to 94.3%.*
  - *Proportion moving in blocks of 50 or more cars increased to 70.7%.*
- *CWB estimated 2003-04 savings from grain company tendering, freight and terminal rebates, and financial penalties for non-performance, at $51.1 million.*
  - *Increased by 51.2% from 2002-03's $33.8 million savings.*

Advance Car Awards

- *1.9 million tonnes of grain moved under the CWB's advance car awards program.*
  - *Represented 13.9% of CWB volume moved to ports in western Canada.*
    - *Marginally less than the 20% targeted by the CWB.*
  - *Reduced program volume arose from a delayed start-up.*
- *32.0% of all CWB movements in western Canada moved under its tendered and advance-car-awards programs.*
  - *Marginally less than 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.*
  - *81.6% sourced from high-throughput elevators.*
  - *Overall car cycle of 15.0 days.*
- *Less use 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

- *CWB restructured its tendering program, and reduced its commitment from 50%.*
  - *Now focused on 40% of the CWB's overall western Canadian grain movement using a combination of tendering and advance car awards.*
    - *Specific provisions for up to one-half of the volume to move under tendering, and the remainder under advance car awards.*
- *Ocean freight rates more than double as a result of the high demand for vessels to service China's growing international trade.*
  - *Had an impact on Canadian grain sales as well as its railway movement within North America.*
- *Railway car supply problems began to impact GHTS operations in the second quarter.*
  - *Hard-hit by adverse winter operating conditions, CP embargoed grain traffic to the west coast in late January 2004.*
    - *CP loses western Canadian market share as grain traffic is redirected through CN-served facilities.*
  - *Increased movements of grain to Eastern Canada, the United States, and Mexico add to car supply problems.*
- *Producer-car loading increased by 192.9% to 9,399 railcars.*
  - *Continued expansion of license-exempt facilities.*
- *Sharp increase in grain volume moved through the port of Churchill.*
  - *Prompted by governmental aid package, the port's new partnership with Louis Dreyfus, as well as better grain availability due to an early harvest.*

Indicator Series 2 – Commercial Relations

Table	Indicator Description	Notes	BASE 1999-00	CURRRENT REPORTING PERIOD (1) 2002-03	2003-04	% VAR	
	Tendering Program [Subseries 2A]						
2A-1	Tenders Called (000 tonnes) – Grain		n/a	5,794.2	2,971.3	-48.7%	▼
2A-2	Tenders Called (000 tonnes) – Grade						
2A-3	Tender Bids (000 tonnes) – Grain		n/a	11,778.1	10,288.5	-12.6%	▼
2A-4	Tender Bids (000 tonnes) – Grade						
2A-5	Total CWB Movements (000 tonnes)	(2)	n/a	8,000.6	13,617.3	70.2%	▲
2A-5	Tendered Movements (%) – Proportion of Total CWB Movements	(2)	n/a	46.1%	18.1%	-60.7%	▼
2A-5	Tendered Movements (000 tonnes) – Grain	(2)	n/a	3,685.2	2,469.9	-33.0%	▼
2A-6	Tendered Movements (000 tonnes) – Grade	(2)					
2A-7	Unfilled Tender Volumes (000 tonnes)		n/a	1,742.5	467.4	-73.2%	▼
2A-8	Tendered Movements (000 tonnes) – Not Awarded to Lowest Bidder		n/a	126.8	72.2	-43.0%	▼
2A-9	Tendered Movements (000 tonnes) – FOB		n/a	0.0	0.0	0.0%	–
2A-9	Tendered Movements (000 tonnes) – In-Store		n/a	3,685.2	2,470.0	-33.0%	▼
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	54.3	58.7	8.1%	▲
2A-18	Railway Car Cycle (days) – Tendered Grain		n/a	19.3	14.7	-23.8%	▼
2A-18	Railway Car Cycle (days) – Non-Tendered Grain		n/a	20.0	16.1	-19.5%	▼
2A-19	Maximum Accepted Tender Bid ($ per tonne) – Wheat		n/a	-$16.99	-$23.04	35.6%	▲
2A-19	Maximum Accepted Tender Bid ($ per tonne) – Durum		n/a	-$17.27	-$24.07	39.4%	▲
2A-20	Market Share (%) – CWB Grains – Major Grain Companies		n/a	72.9%	73.1%	0.3%	▲
2A-20	Market Share (%) – CWB Grains – Non-Major Grain Companies		n/a	27.1%	26.9%	-0.7%	▼
	Advance Car Awards Program [Subseries 2B]						
2B-1	Advance Award Movements (%) – Proportion of Total CWB Movements		n/a	n/a	13.9%	0.0%	–
2B-1	Advance Award Movements (000 tonnes) – Grain		n/a	n/a	1,888.0	0.0%	–
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	n/a	15.0	0.0%	–
2B-7	Distribution of Advance Award Movements – Multiple-Car Blocks	(4)					
2B-8	Average Advance Award Multiple-Car Block Size (carloads) – Port		n/a	n/a	49.9	0.0%	–

(1) – In order to provide for more direct comparisons, the values for the 1999-2000 through 2003-04 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 3 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 3 as required.

2.1 Tendering Program *[Measurement Subseries 2A]*

The 2003-04 crop year marked the fourth for the Canadian Wheat Board's (CWB) tendering program. However, the program was significantly modified for the 2003-04 crop year after consultations between the CWB and its 26 agents. In general terms, the CWB committed to move a fixed 40% of the grain it ships to the four ports in western Canada using a combination of tendering and advance car awards. Under this new arrangement, the CWB had the option of tendering up to a *maximum* of 20% of its overall volume, rather than the 2002-03 crop year's minimum 50% commitment.[37]

Tender Calls

During the 2003-04 crop year, the CWB issued a total of 251 tenders calling for the shipment of approximately 3.0 million tonnes of grain, slightly more than half of the 5.8 million tonnes sought a year earlier. The vast majority of this, some 2.2 million tonnes (72.7%) related to the movement of wheat. Another 0.5 million tonnes (16.5%) involved durum, while the remaining 0.3 million tonnes (10.8%) dealt with barley.

Almost two-thirds of the volume called was intended for export through Canada's west coast ports: 41.7% to Vancouver; and 24.1% to Prince Rupert. Another 30.7% was to be directed to Thunder Bay, while Churchill was assigned the remaining 3.5%. [See Tables 2A-1 and 2A-2 in Appendix 3]

Tender Bids

The CWB's tender calls were met by 1,898 bids offering to move more than three times the volume sought, some 10.3 million tonnes of grain. In terms of observable patterns, 71.3% of the bids advanced dealt with wheat, 23.6% with durum, and 5.1% with barley.

When compared against the mix depicted in the CWB's tender calls, the differences suggest that bidders gave greater preference to the prospect of handling wheat and durum than they did barley. This contrasts somewhat with the previous crop year, in as much as the bidding mix largely paralleled that of the tonnage called. [See Tables 2A-3 and 2A-4 in Appendix 3.]

When the bidding is examined with respect to the port specified in the tender call, the mix shows 43.3% of the bids were given over to Thunder Bay, 39.3% to Vancouver, 16.5% to Prince Rupert, and 0.9% to Churchill. In comparison to the CWB's tender calls, the bidding mix shows a significant upswing in the preference given to Thunder Bay. One potential explanation is that Thunder Bay has the largest number of terminal elevators among the four ports of western Canada. In addition, it also has the most storage capacity and the broadest ownership base. The mix of grains and grades may also have had a bearing on this change. Conversely, tenders issued

Figure 19: Total Tonnage Called, Bid, and Moved Through Tendering

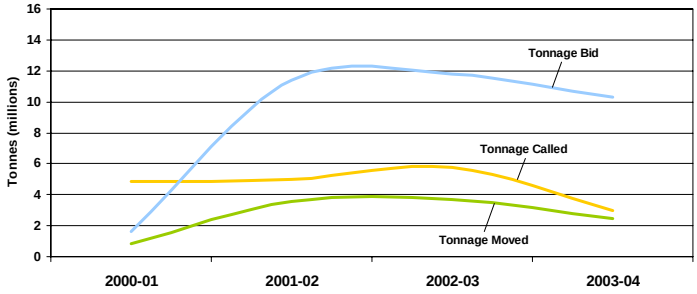
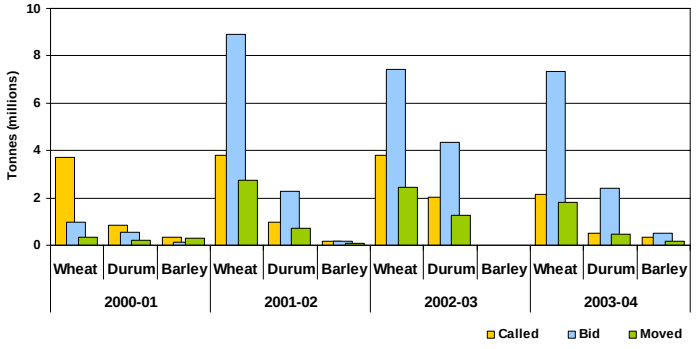


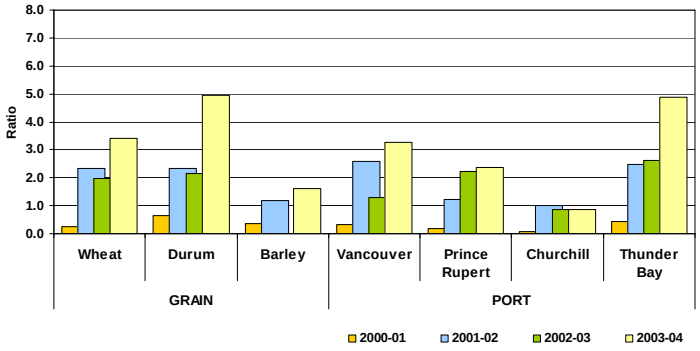
Figure 20: Tonnage Called, Bid, and Moved through Tendering – Grain



[37] These modifications to the CWB's tendering program are outlined more fully in Section 2.31.

for the movement of grain to Churchill continued to attract the lowest bidding response.

Figure 21: Tendered Volume – Ratio of Tonnage Bid to Tonnage Called

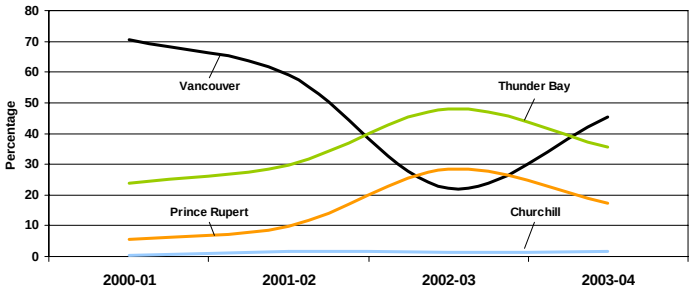


The intensity of the bidding can best be gauged through an examination of the tonnage-bid-to-tonnage-called ratio, where higher values denote a much more fervent response to a tender call than lower ones. In most cases – be it with respect to either a grain or port – the ratios for the 2003-04 crop year showed noticeably higher values than those posted in any of the three previous crop years. The magnitude of these gains underscored the heightened competitiveness of the bidders in their efforts to win these tenders. They also draw attention to the bidders' preferences, including those exhibited for durum and Thunder Bay.

Contracts Awarded

A total of 466 contracts were subsequently signed for the movement of just under 2.5 million tonnes of grain, over 80% of the amount called. This represented 18.1% of the tonnage shipped by the CWB to western Canadian ports during the 2003-04 crop year, and fell only marginally short of its 20% target.[38] [See Tables 2A-5 and 2A-6 in Appendix 3.]

Figure 22: Tendered Grain – Destination Port



Of the 2.5 million tonnes moved, 45.3% was shipped to Vancouver, 17.4% to Prince Rupert, 35.5% to Thunder Bay, and 1.7% to Churchill. These results contrast sharply with those of the 2002-03 crop year, when Thunder Bay was the principal destination.[39] The displacement of Thunder Bay by Vancouver reflects the settlement of the labour dispute that had impeded the movement of grain through Vancouver in the first and second quarters of the 2002-03 crop year.

Even so, Vancouver did not recapture the 59.0% share it held in the 2001-02 crop year. In fact, Vancouver's share of the tendered grain volume has fallen by 25.2 percentage points in the last four years. Moreover, the three remaining ports have all experienced real gains in their shares: Prince Rupert, up by 12.0 percentage points; Thunder Bay, up by 11.7; and Churchill, up by 1.7. This diminishing share for Vancouver has been observed in other volume-related measures under the GMP, although to a somewhat lesser degree. Whether this is the manifestation of a structural change in the workings of the GHTS or merely a temporary phenomenon remains unclear.

[38] 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.

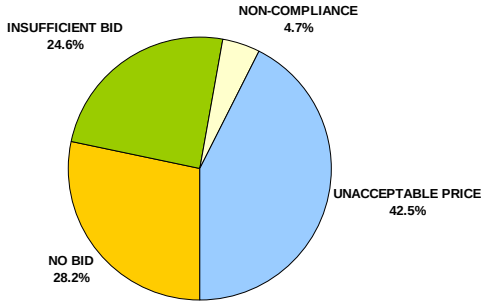
[39] Thunder Bay-destined movements accounted for 47.9% of total tendered volume in the 2002-03 crop year. This was followed by Prince Rupert with 28.4%; Vancouver with 22.3%; and Churchill with 1.5%.

Tendered Volumes Not Filled

To some extent, the intensity of the 2003-04 crop year's bidding was also reflected in the reduced proportion of tender calls that went unfilled. Just under 0.5 million tonnes of the total tonnage called went either partially, or completely, unfilled. This constituted 15.7% of the total, and marked a virtual halving of the 30.1% recorded a year earlier. This was, incidentally, the lowest value recorded since the introduction of the CWB's tendering program.

No award was made in the case of 198,400 tonnes (42.5%) because of an unacceptable bid price. Another 132,000 tonnes (28.2%) went unfilled as a result of no bids having been submitted. For a further 114,900 tonnes (24.6%), an insufficient quantity was bid. A final 22,000 tonnes (4.7%) received no award due to the bidders' failure to comply with the specifications set out in the tender itself. [See Table 2A-7 in Appendix 3.]

Figure 23: Composition of Tendered Volumes Not Filled

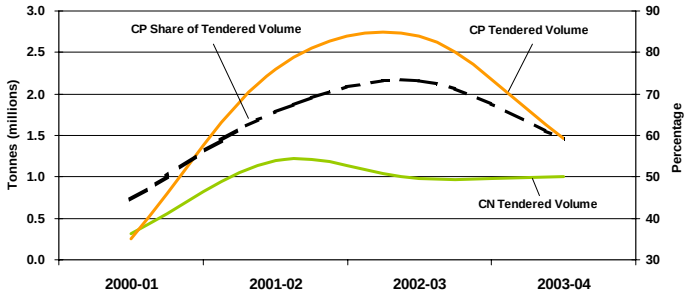


Of the 251 tender calls issued, 17 resulted in contracts being awarded to companies that did not put forward the lowest-priced bid. This involved an aggregate volume of 72,200 tonnes, 43.0% less than that awarded the year before. In these circumstances, the lowest-priced bid often failed to garner an award because it included conditions that could not be accommodated. Such conditions, however, did not automatically result in the bid being refused. In fact, there were circumstances where these conditions did not preclude the awarding of contracts in accordance with the criteria laid out in the agreement between the participants in the CWB's tendering program.[40] [See Table 2A-8 in Appendix 3.]

Malting Barley

There was no award for the movement of malting barley in the 2003-04 crop year, although two tender calls had been issued by the CWB and 24 bids received. Malting barley was the only tendered grain to have been delivered Free on Board (FOB) in the last four crop years. These shipments amounted to 0.3 million tonnes in the 2000-01 crop year, and 0.1 million tonnes in the 2001-02 crop year. All tendered grain deliveries in the 2002-03 and 2003-04 crop years were moved to terminal elevators and delivered on an "in-store" basis. [See Table 2A-9 in Appendix 3.]

Figure 24: Tendered Movements – Originating Carrier



Originating Carrier

Over half – 59.3% – of the volume moved under tender during the 2003-04 crop year originated at points local to the Canadian Pacific Railway (CP). Still, the crop year saw the first decline in the proportion handled by CP since the CWB's tendering program began. CP has been the principal carrier of tendered grain, and had seen its share progressively climb from 44.6% to

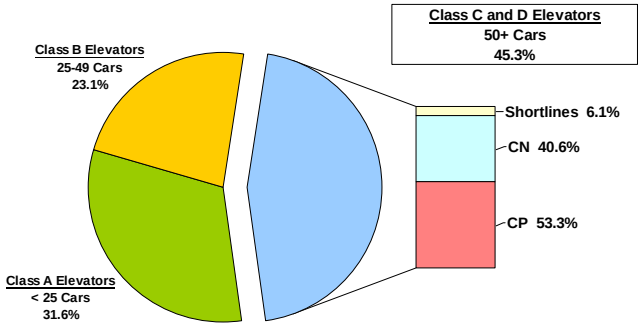
[40] The CWB, the Western Grain Elevator Association, and the Inland Terminal Association of Canada entered into a tri-party agreement that laid out the criteria used by the CWB in awarding tenders: the lowest price (greatest savings to farmers); the consolidation of stocks at three terminals or less; 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.

73.3% in the program's first three years. [See Table 2A-11 in Appendix 3.]

In the face of the drought that had so adversely affected the GHTS in both the 2001-02 and 2002-03 crop years, this gain in CP's market share was not taken to be indicative of a decline in the competitiveness of the Canadian National Railway (CN). Rather, the available data suggested that the carrier's increasing share was simply a reflection of the better availability of grain, in the grades demanded, within CP's service area. To an extent, this was supported by the fact that CP also increased its share of the overall grain movement in the 2002-03 crop year to 57.8%.[41] Still, with CP's overall share having fallen back to 48.2% in the 2003-04 crop year, its greater share of tendered grain shipments underscores a rather substantive competitive gain.

The predominant use of high-throughput elevators in handling tendered grain, coupled with higher applicable incentive discounts from CP-served facilities, provides a reasonable explanation for this observed increase in the carrier's share of the tendered grain movement in the past four years. Even so, its decline from 73.3% in the 2002-03 crop year may well have been indicative of the operational difficulties that beset the carrier in the second and third quarters. In fact, the rebounding of the carrier's share to 67.8% in the fourth quarter suggests that the decline was in fact temporary.

Figure 25: Primary High-Throughput Elevators – Serving Railway

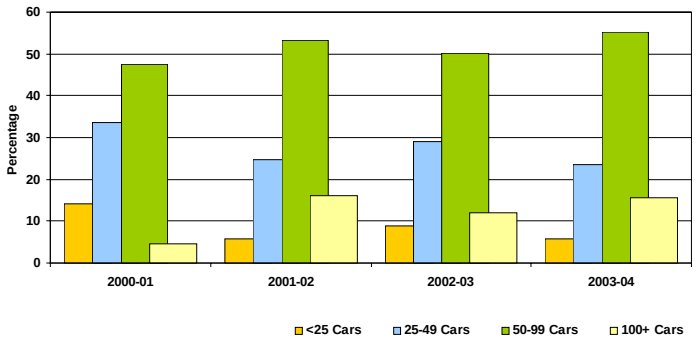


Another factor relates to the actual number of high-throughput elevators served by each of the railways in western Canada. Of the 364 primary elevators situated across the prairies, 165 (or 45.3%) are designated as Class C and D facilities. CP directly serves just over half of these – 53.3%. Comparatively, CN serves a noticeably lesser 40.6% of these facilities, while shortline railways provide service to the remaining 6.1%. 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.

Multiple-Car Blocks

As suggested 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%. Furthermore, at 94.3%, the proportion of tendered grain that moved in multiple-car blocks during the 2003-04 crop year re-attained the highest value observed in the past four years.

Figure 26: Tendered Movements – Multiple-Car Blocks



In addition to having regained the ground lost in the preceding crop year when this proportion fell to 91.2%, there was also a noticeable migration towards shipments in larger car blocks. The segment dealing with movements in blocks of 25-49 cars fell by 5.5 percentage points, while those moving in blocks of 50-99 cars and 100 or more gained 5.0 and 3.6 percentage points respectively.[42] [See Table 2A-12 in Appendix 3.]

[41] The 57.8% cited here as CP's share of the overall grain movement in the 2002-03 crop year is based on the number of railcars unloaded at terminal elevators as presented in Table 1E-2.

[42] There was also a reduction of 3.2 percentage points in the proportion of cars moving in blocks of less than 25 cars.

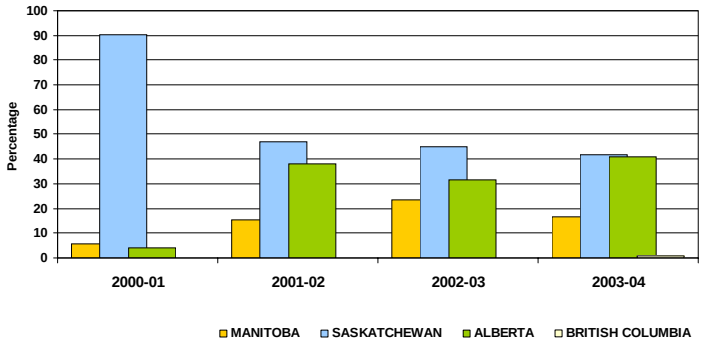
These changes seem to reflect the grain industry's broader trend towards making shipments with the largest number of railcars possible in order to maximize the financial benefits derivable from the railways' incentive discounts. The proportion of tendered grain shipments securing these discounts far outpaces that of non-tendered grain. And while the proportion tied to these latter movements has also been increasing, and reached 75.1% in the 2003-04 crop year, tendered movements held a 19.2 percentage point advantage.[43]

Tendered Origins

As was the case in each of the three previous crop years, the largest portion of the grain shipped under the CWB's tendering program was drawn from Saskatchewan, 41.7%. Even so, the province's share has slowly eroded from the 46.8% it represented three years earlier.[44] This 5.1-percentage-point loss translated into gains for each of the other producing provinces.

Alberta took over half of this, adding 2.9 percentage points to its share, which increased to 40.9% from 38.0%. At the same time, Manitoba saw its share of the tendered grain volume increase to 16.7% from 15.2%. Improved production in 2003, particularly for Alberta, was the primary force shaping these results. Similarly, the 2003-04 crop year also saw 16,800 tonnes of tendered grain drawn from British Columbia. This represented just 0.7% of the overall total.

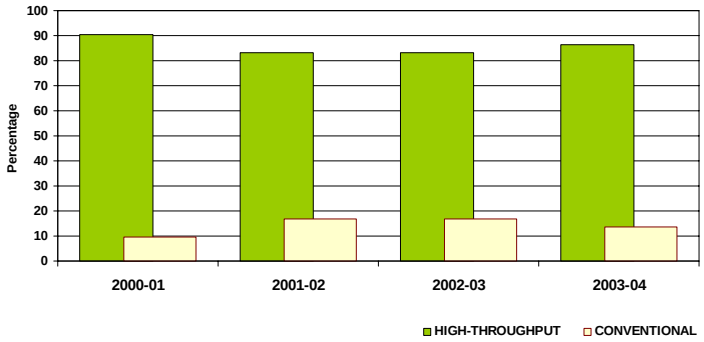
Figure 27: Tendered Grain – Provincial Origin



As mentioned previously, high-throughput elevators have proven to be the principal facilities used in moving tendered grain. In fact, in the initial year of the tendering program, these facilities originated 90.3% of the volume. Still, in the face of two consecutive years of drought, this proportion declined only marginally to 83.0%. The proportion rebounded somewhat in the 2003-04 crop year when it climbed to 86.2%.

For grain originating in Saskatchewan, the proportion handled through these facilities increased to 89.7% from 87.7% a year earlier. In equal measure, Manitoba saw its originations at high-throughput elevators increase to 89.2% from 78.2%. Although Alberta's proportion trailed these two provinces somewhat, it nevertheless climbed to 82.8% from 79.9%. Only British Columbia, with a movement of barley from a BC-Rail-served Class B facility, saw all of its tendered grain traffic originate at conventional elevators. [See Table 2A-14 in Appendix 3.]

Figure 28: Tendered Grain – Elevator Class



Applied Penalties

In the 2003-04 crop year, a total of 4,175 carloads were assessed with financial penalties following their arrival at the four designated ports in western Canada. This marked a 41.4% reduction from the 7,122 carloads that

[43] The 75.1% cited here as the overall proportion moving in blocks of 25 or more railcars at a time is based on estimates presented in Table 3C-5.

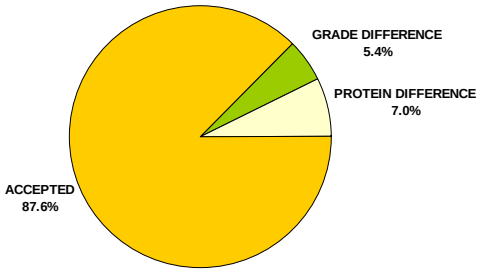
[44] The 2000-01 crop year is not deemed comparative since the shares were heavily skewed in favour of Saskatchewan during the first year of the CWB's tendering program.

were penalized a year earlier. Moreover, it also entailed a 2.1 percentage point reduction in the penalization rate, which fell to 14.9% from 17.0% the year before.

Even so, this proportion continues to be higher than observed in either of the tendering program's first two years, which amounted to 1.6% and 10.2% respectively.[45] While this proportion has risen in the past two crop years, it must be remembered that it is not inconsistent with the 18% mis-shipment rate tied to grain movements at large.[46]

Financial penalties were assessed whenever a railcar's contents failed to meet the grade or protein content specified in the tender contract under which it moved.[47] Shipments that failed to comply with the tender's specified protein content represented the larger portion of total mis-shipments in the 2003-04 crop year, 56.7%. This marked a perceptible reduction from the 65.8% it garnered in the 2001-02 crop year. Conversely, the proportion of carloads penalized for grade mis-shipments increased to 43.3% from 34.2% in the same period. [See Table 2A-13 in Appendix 3.]

Figure 29: Tendered Volumes – Penalized Shipments

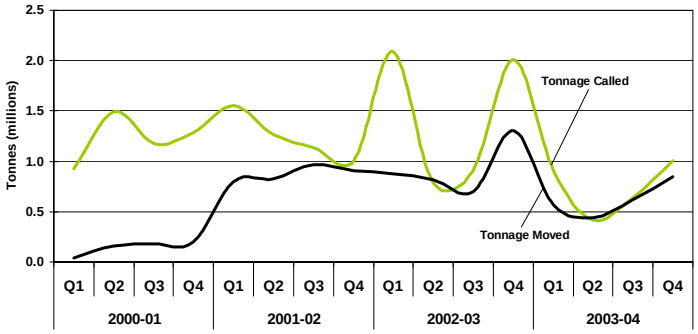


Distribution

The volume of grain called for under the tenders issued by the CWB averaged 247,600 tonnes per month. Still, the actual monthly amounts called varied from a low of 101,200 tonnes in January 2004, to a high of 409,200 tonnes in June 2004. Moreover, the distribution of these values shows a pattern characterized by a decline from a first-quarter highpoint to a mid-year low, before then ascending to secondary highpoint in the fourth quarter. This pattern is reminiscent of the 2002-03 crop year, and resulted in almost two-thirds of the called tonnage being issued in the first and fourth quarters, 30.6% and 33.7% respectively.

The monthly volume of grain actually moved under tender showed a similar, albeit somewhat dampened, distribution pattern. Averaging 205,800 tonnes per month, the monthly amounts varied from a low of 80,000 tonnes to a high of 343,800 tonnes. Unlike the 2002-03 crop year, the monthly distribution of these values for the 2003-04 crop year showed a stronger correlation with the tonnage called. 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 called volume that went unfilled. Much of the increased strength in this correlation appears to have been derived from the latter, which saw the proportion of tender

Figure 30: Quarterly Distribution of Tendered Grain



[45] The penalization rate of 1.6% 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.

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

[47] 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.

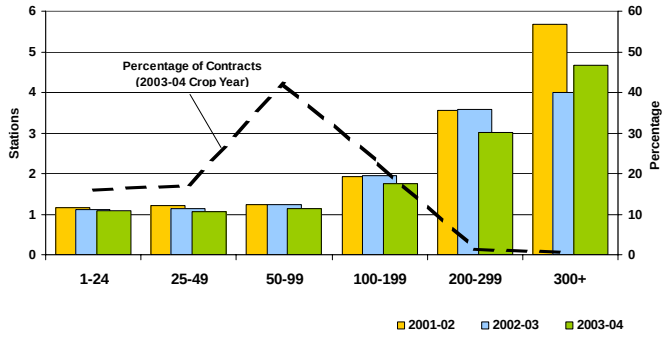
calls going unfilled fall to 15.7% in the 2003-04 crop year from 30.1% a year earlier. [See Table 2A-15 in Appendix 3.]

Delivery Points per Tender Contract

Tendered grain shipments can originate at one or more delivery points (or stations). Of the 466 contracts signed for the movement of tendered grain in the 2003-04 crop year, some 357 (76.6%) involved grain drawn from a single delivery point. This was only marginally lower than the 79.0% observed a year earlier. In fact, the average number of delivery points observed for movements in blocks of less than 25, 25-49, and 50-99, carloads showed only minor variation, averaging about 1.1 stations per contract in all three cases. Moreover, since the 2001-02 crop year, the average for each of these groupings has remained relatively constant, with each having edged downward from an observed high of about 1.2 stations per contract. [See Table 2A-16 in Appendix 3.]

Given the larger amount of grain involved, contracts calling for the shipment of 100 or more carloads typically drew grain from a greater number of delivery points. In the case of shipments comprised of 100 to 199 carloads, grain was drawn from an average of 1.8 delivery points; 3.0 stations for shipments of between 200 and 299 carloads; and 4.7 stations for shipments involving 300 or more carloads. In all cases, the average number of stations per contract has declined from the values first observed in the 2001-02 crop year. In the case of shipments involving 300 or more carloads, this reduction has amounted to one full station per contract.

Figure 31: Tendered Grain – Delivery Points per Contract



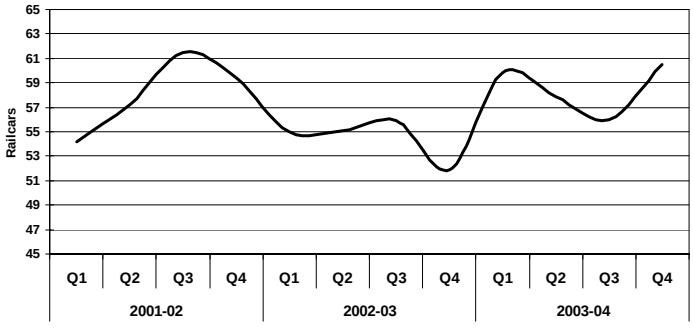
Just over three-quarters of the contracts signed in the 2003-04 crop year involved movements of less than 100 carloads. Although this was somewhat lower proportion than the 85.1% observed a year earlier, it was consistent with the 76.0% they constituted in the 2001-02 crop year. More significantly, the preponderance of these, 42.1%, dealt with shipments in lots of 50-99 carloads. Although this is only modestly higher than the 38.2% garnered in the 2001-02 crop year, it reinforces earlier observations to the effect that grain companies have been concentrating their loading activities and shipping grain in increasingly larger car blocks.

Multiple-Car Block Size

For the 2003-04 crop year, tendered grain shipments moved in multiple-car blocks that averaged 58.7 carloads in size. This marked an 8.1% increase over the 54.3-railcar average of a year earlier, and set a new record against the 58.0-railcar average of the 2001-02 crop year. [See Table 2A-17 in Appendix 3.]

On the whole, this pattern was reflected in each of the primary export corridors. What is more, two of these saw new record highs established: Vancouver, up by 19.3% to an annualized average block size of 62.5 carloads; and Churchill, up by 14.4% to an average of 49.9 carloads.[48] Although

Figure 32: Tendered Grain – Weighted Average Car Block



[48] The values cited here are based on annualized averages, and not the individual quarterly records that may have been attained in either the 2003-04 crop year, or earlier crop years.

Prince Rupert's annualized average increased, by 7.7% to 58.5 carloads, it still fell short of the 60.8-carload record set in the 2001-02 crop year. Only movements in the Thunder Bay corridor saw the average block size fall, albeit only by a modest 1.8% to 54.5 carloads.

At the same time, the quarterly averages showed significant variability. To a large extent, these values displayed a comparatively strong first quarter performance followed by a decline to lower mid-year values, before then strengthening in the latter part of the crop year. This pattern appears to have been a function of fluctuations in the amount of tendered grain moved, but may also have been reflective of operational constraints experienced by the grain companies themselves.

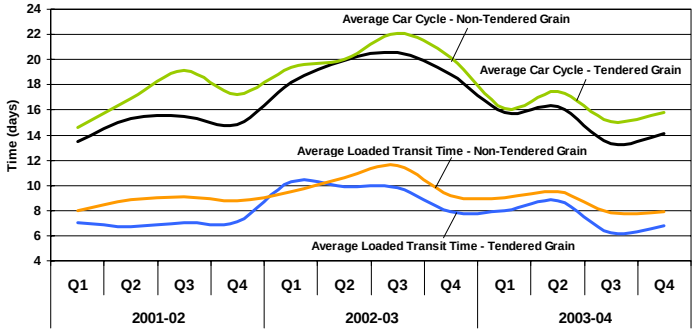
Car Cycles

The average car cycle associated with tendered grain shipments amounted to 14.7 days in the 2003-04 crop year. This represented a 23.8% improvement over the 19.3-day average recorded in the previous crop year. Much of this improvement simply reflected the upturn in industry activity, and the reduced idleness of the hopper car feet at large. [See Table 2A-18 in Appendix 3.]

With 86.2% 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 overall car cycle for tendered grain in the 2003-04 crop year was 8.7% less than that of non-tendered grain, an average of 14.7 days versus 16.1 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.[49] Over the course of the past three crop years the advantage given over to the car cycle of tendered grain shipments has shown itself to be structurally consistent, amounting to an average margin of 1.3 days, or 7.9%, over that of non-tendered movements. Most of this advantage was derived from faster loaded transit times.

Figure 33: Car Cycles – Tendered and Non-Tendered Grain



In the 2003-04 crop year, tendered grain's average loaded transit time amounted to 7.3 days. This represented a 22.3% improvement over the previous crop year's 9.4-day average. When the three-year record is examined against that of non-tendered grain shipments, the loaded transit time advantage can be seen to have amounted to about 12.7%, or 1.1 days on average. The benefit derived from the difference between the average empty transit times for tendered and non-tendered grain proved substantially less, and amounted to a margin of about 0.2 days, or 2.7%.

The proportion of grain that actually moves in trainload lots has also influenced improvements in the car cycle. Although this volume has been increasing over the past five years, a significant proportion still moves in less-than-trainload lots. The multiple-car-block average of 58.7 carloads cited earlier for tendered grain shipments underscores this. As long as tendered grain moves in less-than-trainload lots, whether because the tender contracts won specify such volumes or because they could not be assembled in such a configuration, further improvement is likely to be hampered. Even so, the statistics presented indicate that the major grain companies have been moving steadily towards this objective.

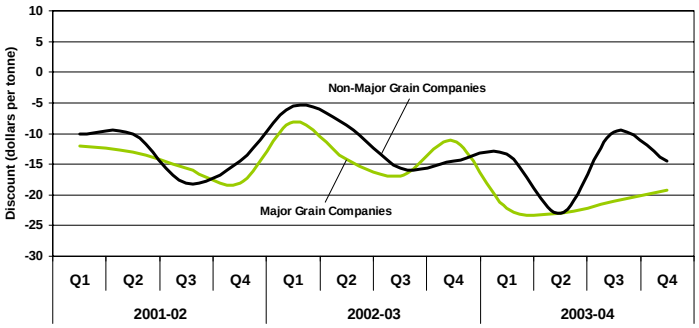
[49] A pilot project conducted by Saskatchewan Wheat Pool and CN in 2002 showed that back-to-back movements of 100-car shuttle trains from high-throughput elevators could achieve an average car cycle of 6.5 days.

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. Since a number of stakeholders have 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.[50]

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 commercial interest to accept the lowest bid put forward.[51] 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. A comparison of the bids advanced for wheat reveals that the maximum discounts offered by the major grain companies have generally exceeded those offered by their smaller competitors.[52] Over the course of the past three crop years, the major grain companies generally bid about one-quarter more than their rivals.

Figure 34: Maximum Discount from Initial Price - Wheat



Furthermore, the time series shows that these discounts have fluctuated significantly. During the first quarter of the 2001-02 crop year, the maximum discount from the CWB's Initial Price was benchmarked at $12.06 per tonne by the major grain companies. By the end of the crop year, the maximum discount had deepened to $18.07 per tonne. During the course of the crop year that followed this value retreated somewhat, pulling back to a lesser $16.99 per tonne. It is worth noting that the maximum discounts advanced by the major grain companies during this period actually fell short – at least on occasion – of those put forward by the non-major grain companies. To a large extent, the fluctuations exhibited in the bids of both simply reflected their responses to changing marketplace conditions. [See Table 2A-19 in Appendix 3.]

This seesaw pattern was equally evident in the 2003-04 crop year, but the range of bids widened greatly. The first quarter's bidding resulted in a maximum discount that reached $22.09 per tonne. This was in turn broken in the second quarter when yet another new record was set at $23.04 per tonne. Thereafter, the bids advanced by both the major and non-major grain companies began to tumble. The maximum discounts offered by the majors fell back to $21.07 per tonne in the third quarter, and to $19.19 per tonne in the fourth. Conversely, those advanced by the non-majors declined sharply to a low of $9.75 per tonne in the third quarter, before rebounding somewhat to $14.53 in the fourth.

Clearly, the 2003-04 crop year saw the major grain companies maintain their role as price leader, but they also appear to have approached tendering with an enhanced aggressiveness. Several stakeholders expressed the view that the major grain companies had moved vigorously to secure a greater percentage of the tendered grain volume, and the evidence would appear to bear this out. Still, the non-majors appear to have matched this – at least initially – before then withdrawing substantially in the second half. To an extent their withdrawal would suggest that such deep discounting could only be sustained for a short period of time, but that they could ill afford to disengage themselves from the process entirely.

[50] 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.

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

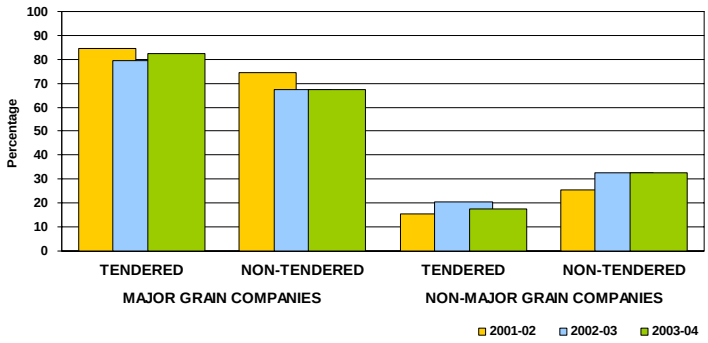
[52] The pattern applies equally to the bids advanced by these companies for the movement of durum.

Market Share

Unquestionably the best indicator of market dominance is the market shares of 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, has actually declined in the past three crop years. In the 2001-02 crop year, the major grain companies controlled 84.6% of the tendered volume. Two years later, that share had dropped, albeit only marginally, to 82.3%. This was also the case respecting non-tendered CWB grains, where the major grain companies' share fell from 74.4% to 71.1% during the same period. [See Table 2A-20 in Appendix 3.]

Given the nature of the tendering program itself, pricing is one of the few real mechanisms that can be employed by any grain company to secure a greater share of the CWB's tendered grain business. The tender bids advanced by all grain companies underscores this. This heightened competition between bidders was easily understood in the face of what had been a 50% commitment on the part of the CWB, and even its potential expansion to a level beyond that. Still, what has surprised many observers was the aggressiveness of the bidding after that proportion was rolled back to a maximum of 20% in the 2003-04 crop year.

Figure 35: Market Share – CWB Grains



Even so, over the course of the past three crop years the non-major grain companies actually gained 2.3 percentage points in the market share for tendered grain from their larger rivals. Similarly, they also picked up 3.3 percentage points for their non-tendered grain business. To be sure, from the vantage point of the majors, these losses are comparatively small. It must also be noted that they are too limited in scale to be indicative of a trend, more so given that significant quarterly fluctuations are observable for both groups. Still, there can be no doubt that the non-majors have not been displaced by virtue of their size or other competitive disadvantage.[53]

Financial Savings

According to the CWB, the advances made in its tendering program have generated significant financial returns that are ultimately being passed back to producers through the CWB's pool accounts. Derived largely from a savings in transportation costs as a result of the bidding inherent in the tendering process itself, these returns also include freight and terminal rebates, as well as financial penalties for non-performance. Despite a reduction in the proportion of grain moving under its tendering program, the savings generated from these activities increased by 51.2%, to $51.1 million from $33.8 million a year earlier. As discussed previously, the heightened competitiveness in the bidding for tenders was a significant factor in this increase.

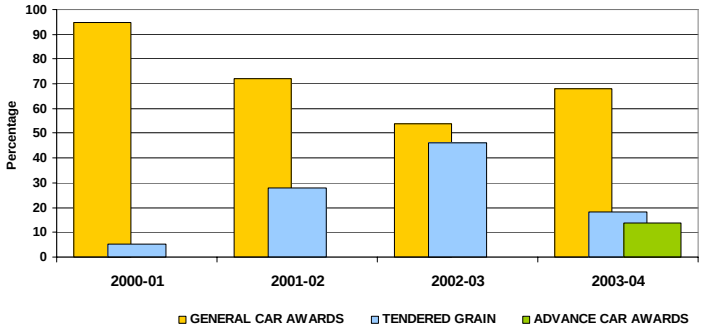
[53] The competitive disadvantage referred to here relates specifically to the lesser number of high-throughput elevators operated by the non-major grain companies. With over 80% of tendered grain shipments moving in multiple-car blocks from high-throughput elevators, the major grain companies are deemed to have more of the strategic assets needed to exploit these efficiencies than do their non-major rivals. In addition, the non-major grain companies also lack the port elevators of their larger rivals, and are in fact reliant on their competitors to actually provide them with the terminal handling services they need.

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

A total of 1.9 million tonnes of grain moved under the CWB's newly-adopted advance car awards program during the 2003-04 crop year. This represented 13.9% of the CWB's total shipments to western Canadian ports. In conjunction with the volume that moved under its tendering program, 32.0% of all CWB shipments moved under these two both programs. This fell somewhat short of the 40% to which the CWB had committed itself.[54]

In large measure this shortfall arose from a delay in implementing the advance car awards program, which did not come into effect until late in the first quarter. As such, only 3.0% of the CWB's first quarter volume, or 0.1 million tonnes, was shipped under the new program. These proportions were notably higher in the remaining three quarters, however, and ranged from a low of 17.1% to a high of 18.2%. When combined with tendered grain volumes, the overall proportion moved under both programs increase steadily from 23.9% in the first quarter, to 31.9% in the second, and to 40.3% in the third. The fourth quarter, however, saw this proportion slip to a lesser 32.7%.

Figure 36: CWB Grain Movements – Western Canada

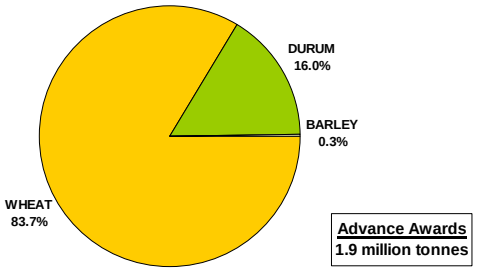


Traffic Composition

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. The vast majority of the 1.9 million tonnes shipped under the program consisted of wheat, some 1.6 million tonnes (83.7%). This was in turn followed by another 0.3 million tonnes (16.0%) of durum, and a residual barley component of 5,000 tonnes (0.3%). As compared to tendered grain, wheat secured an additional 9.5 percentage points in share, while durum and barley lost 3.1 and 6.4 percentage points respectively. [See Table 2B-1 in Appendix 3]

The largest portion of the volume moved under the advance car awards program, almost 0.8 million tonnes (39.8%), was destined for the port of Vancouver. Similarly, this too was followed by Thunder Bay with 0.6 million tonnes and a 30.9% share; Prince Rupert with 0.5 million tonnes and a 28.5% share; and Churchill with 15,200 tonnes and a 0.8% share.[55] [See Table 2B-2 in Appendix 3.]

Figure 37: Advance Car Awards – Grain Composition



In contrast to the tendered grain movement, however, the advance car awards program saw a significantly larger proportion given over to the movement of grain to Prince Rupert, some 11.1 percentage points. Over half of this, some 5.6 percentage points, represented a loss for the port of Vancouver.

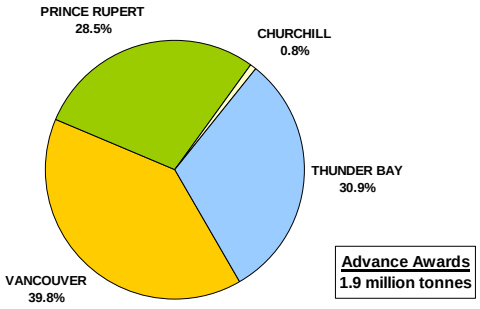
[54] Advance car awards are administered on the same basis as the CWB's general car awards program, but with an additional two-week lead time, and an early indication of the grains and grades required, in order to provide shippers with increased flexibility in managing their logistics programs.

[55] Given that the port of Churchill's shipping season was coming to an end as the CWB's advance car awards program began, the only movements to the port using advance car awards came in the fourth quarter of the 2003-04 crop year.

An additional 4.6 percentage points were derived from a reduction in the volume directed to Thunder Bay. Shipments to Churchill surrendered a further 0.9 percentage points.

This increased partiality for Prince Rupert is manifest in other measures under the GMP regarding tendered as well as non-tendered grain movements. Clearly, the 28.5% share given over to such movements under the advance car awards program denotes the largest of these. In underscoring earlier observations, it suggests that the CWB has been consciously directing a greater proportion of its overall volume through this port, and largely to the detriment of Vancouver. As stated previously, it remains unclear whether this is the manifestation of a wider structural change in the workings of the GHTS.

Figure 38: Advance Cars Awards – Destination Port

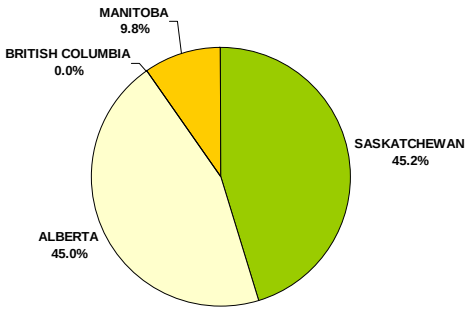


Originating Carrier

Over half – 52.3% – of the volume moved under the advance car awards program during the 2003-04 crop year originated at points local to CP. This share was, however, seven percentage points lower than the 59.3% obtained by the carrier as its share of the tendered grain movement. Were these volumes to have been combined, CP's resultant share would have been a nominally higher 56.3%. [See Table 2B-3 in Appendix 3.]

Regardless, these values are greater than the 48.2% share the carrier garnered with respect to the total movement of grain in western Canada. As with tendered grain, this suggests that CP has in fact secured a materially larger share of this traffic than has CN. And as outlined previously, the predominant use of high-throughput elevators in handling tendered grain, coupled with the higher applicable incentive discounts from CP-served facilities, provides a reasonable explanation for this.

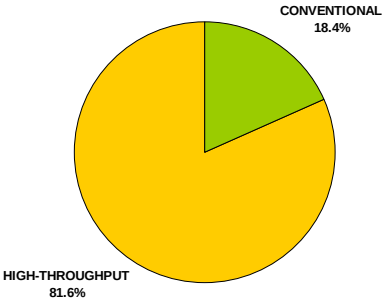
Figure 39: Advance Car Awards – Provincial Origin



Traffic Origins

Like tendered grain, the largest volume moved under the CWB's advance car awards program came from Saskatchewan, 0.9 million tonnes. This volume, however, took a marginally greater share of the total tonnage, 45.2% versus 41.7% for tendered grain. And like tendered grain, shipments from the provinces of Alberta and Manitoba were positioned behind it, originating 0.8 million tonnes and 0.2 million tonnes respectively. Comparatively, an exceptionally small volume, totalling 700 tonnes, was also shipped from British Columbia. [See Table 2B-4 in Appendix 3.]

Figure 40: Advance Car Awards – Elevator Origin



Among these latter provinces, Alberta also obtained a greater share of the tonnage shipped under the advance car awards

program than it did through tendering, 45.0% versus 40.9% respectively. In the case of Manitoba, the share proved much smaller: 9.8% versus 16.7% for tendered grain.[56]

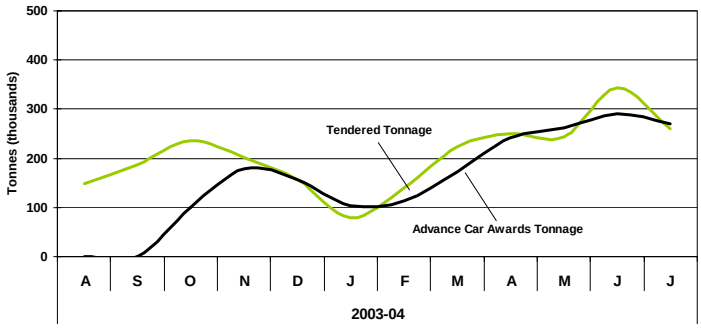
In the first year of the program, 81.6% of the grain volume shipped came from high-throughput elevators. Again, this differed only marginally from the 86.2% given over to these facilities under the tendering program.

When the division between conventional and high-throughput elevators is examined against province of origin, little material difference is noted. With 84.4% of its traffic originating at high-throughput elevators, Saskatchewan utilized these facilities the most. Manitoba and Alberta followed closely with high-throughput shares of 80.5% and 79.2% respectively. On the whole, these provincial values were generally lower than that of their tendered-grain counterparts, but varied by a factor of no more than 10%.

Monthly Distribution

The volume of grain moved under the CWB's advance car awards program averaged 188,800 tonnes per month.[57] The actual amounts varied from a low of 99,300 tonnes in October 2003, to a high of 289,800 tonnes in June 2004. Moreover, their distribution showed a pattern that closely tracked that of tendered grain.

Figure 41: Advance Car Awards – Monthly Distribution

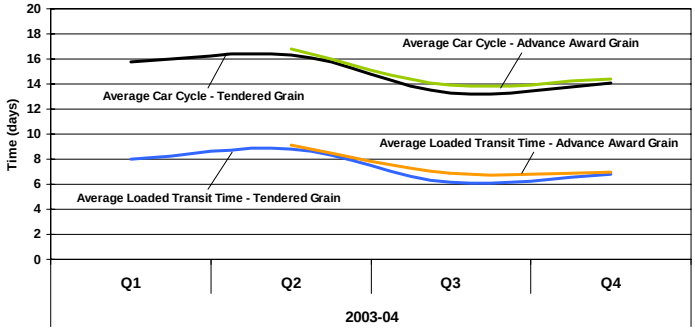


This tightly-woven pattern effectively underscores what has been suggested by other indicators under the GMP: that grain moving under the advance car awards program does so in tandem with the volume shipped under the tendering program. Again, this strongly hints at a structural dynamic linking the two programs, and that future movements will likely continue to be complementary in nature. It further suggests that 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.

Car Cycles

The average car cycle for grain shipped under the CWB's advance car awards program amounted to 15.0 days in the 2003-04 crop year. This was only 2.0% greater than the 14.7-day average observed for tendered grain shipments. In fact, data collected from the first year of the program showed that the quarterly car-cycle values closely tracked those observed under the tendering program, and typically only exceeded them by about half a day. Similarly, the 7.6-day average loaded transit time for grain moved under the advance car awards program was only marginally higher than the 7.3 days given

Figure 42: Advance Car Awards – Car Cycles



[56] The comparative share for British Columbia was also considerably smaller than the 0.7% it represented in the movement of tendered grain, and amounted to a statistically insignificant 0.04%.

[57] Since no grain was moved under the advance car awards program of the CWB in the first two months of the 2003-04 crop year, the average of 188,800 tonnes cited here is based on the crop year's last ten months.

over to tendered grain shipments. The difference in empty transit times proved negligible. [See Table 2B-6 in Appendix 3.]

The car cycle associated with grain shipped under the advance car awards program also came in some 6.8% below that of non-tendered grain shipments. Once again, the similarities in these patterns serve only to reinforce the observation that grain moved under the CWB's advance car awards program did so in tandem with that moved under its tendering program.

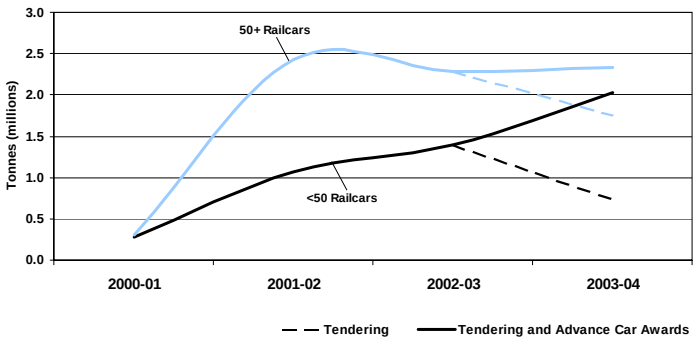
Multiple-Car Blocks

As mentioned previously, the proportion of grain moving in multiple-car blocks has been steadily increasing under the GMP. Moreover, with 94.3% of its movement in blocks of 25 or more cars, tendered grain shipments easily outpaced the usage rates observed in other segments of the regulated grain movement during the 2003-04 crop year. Even more telling was the fact that the proportion tied to shipments in blocks of 50 or more carloads amounted to 70.7%.

The data indicates that these greater proportions are being driven by the major grain companies' concentrated use of high-throughput elevators to move well over 80% of this volume. In fact, given the comparatively smaller facilities used by the non-major grain companies, an increase in their share of the tendered grain volume would likely result in the dilution of the proportion moving in multiple-car blocks. This is evidenced by the fact that 75.1% of all regulated grain volumes move in blocks of 25 or more cars, and that the non-major grain companies controlled 26.9% of this volume.[58]

With the introduction of the advance car awards program, the proportion of total CWB shipments moving under its tendering program was rolled back to a maximum of 20%. At the same time, the allocation mechanisms tied to the advance car awards program helped ensure that the smaller grain companies would be able to exercise a comparatively larger role in the movement of the 40% that would be given over to the combined volumes under these two programs.[59] In fact, the non-major grain companies were able to secure a 28.9% share of the volume moved under the advance car awards program versus a 17.7% share of the tendered grain movement.

Figure 43: Grain Volumes Moved in Multiple Car Blocks



The major grain companies were still able to secure the largest share of the 1.9 million tonnes of grain that moved under the advance car awards program. And the vast majority of this, 81.6%, still came from high-throughput elevators. The expansion in the volume of grain moved by the smaller grain companies meant that about two-thirds of the incremental volume would originate as smaller railcar shipments. In fact, the proportion tied to movements in blocks of less than 50 railcars climbed from 29.3% in the case of tendered grain shipments, to 46.4% when tendered and advance-car-award shipments were combined. Conversely, the proportion moving in blocks of 50 or more fell from a respective 70.7% to 53.6%. [See Table 2B-7 in Appendix 3.]

[58] The 75.1% share cited here respecting the proportion of the overall grain volume shipped in blocks of 25 or more cars is drawn from data presented in table 3C-5 and discussed in Section 3.3.

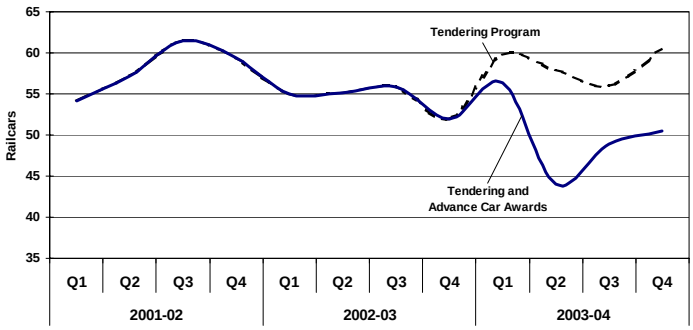
[59] Advance car awards are granted on the same administered basis as the general CWB car awards (50% based on the recent 18 weeks of producer deliveries and 50% based on future deliver intentions).

Multiple-Car Block Size

These same forces also worked to reduce the average car-block size itself. As seen earlier, car blocks averaged 58.7 carloads under the CWB's tendering program in the 2003-04 crop year. When combined with movements under the advance car awards program, this average was reduced by 15.0% to 49.9 carloads. The effects of this dilution can be seen in a comparison of the quarterly averages. [See Table 2B-8 in Appendix 3.]

Despite only one year of data from the advance car awards program, the available statistics indicate that the joint movement of tendered and advance-car-awards grain pulled down the tendering program's higher average by as much as 13.9 carloads in the second quarter. Moreover, the averages under both programs display similar patterns involving a decline from a first-quarter highpoint to a mid-year low before then rebounding. They underscore yet again previous observations made respecting the complementary nature of the grain volumes moved under both programs.

Figure 44: Average Car Block – Tendering and Advance Car Awards



2.3 Commercial Relations – Other Developments

2.31 Changes to the Canadian Wheat Board's Tendering Program

The CWB's tendering program was originally implemented in accordance with a Memorandum of Understanding between the CWB and the federal Minister responsible for the CWB. This document, which defined the federal government's policy respecting the adoption of a tendering program by the CWB, and which took effect on 1 August 2000, also outlined the volumes that were to be tendered in the first three years of the program. This period, which covered the 2000-01 through 2002-03 crop years, effectively committed the CWB to tender a minimum of 25% of the overall volume destined to western Canadian ports in the first and second crop years, and a minimum of 50% in the third crop year.

With that commitment ending with the 2002-03 crop year, the CWB moved to establish a new agreement on tendering with the industry at large. Accordingly, in the spring of 2003, the CWB and its 26 agents entered into discussions about the appropriate level of tendering for the 2003-04 crop year. Ultimately, this resulted in the adoption of a new protocol supported by the majority of industry stakeholders.[60]

Beginning with the 2003-04 crop year, a fixed 40% of the CWB's grain movements to the four ports in western Canada would be accomplished through a program combining tendering with advance car awards. In specific terms, the CWB's tendering program was to extend to a maximum of 20% of its overall volume, while an additional 20% was to be moved under a new advance car awards program. Furthermore, in the event that the CWB decided to ship less than 20% of its grain under the tender program, the shortfall was to be reassigned to the advance car awards program. In this way, the CWB would be held to its wider 40% commitment.

An important feature of the advance car awards program involves a corridor-specific allocation of railcars. As such, grain companies could deploy the awarded railcars at any facility, and in any quantity deemed appropriate, within the specified port's catchment area. To a large extent, this process was intended to provide the grain companies with the kind of flexibility given to the distribution of railcars under the tendering program. In addition, the CWB committed to provide the grain companies with advance indication of the grains and grades that would be required, as well as any applicable restrictions. This was intended to help the grain companies in their planning activities, and to give them greater flexibility in ordering and deploying railcars.

[60] Of the 26 grain companies involved in these consultations, 24 supported the adoption of the new protocol. The two that did not were the largest handlers of grain in western Canada, Agricore United and Saskatchewan Wheat Pool.

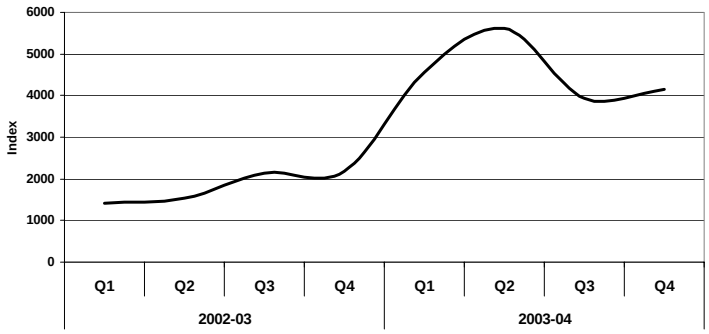
For the 60% of CWB shipments not governed by either the tendering or advance car awards programs, railcars were to be subject to a weekly allocation based on an equal weighting of actual elevator deliveries over a preceding 18-week period, and the future delivery intentions of farmers.[61] Actual elevator deliveries, however, would be adjusted to exclude any tendered grain that may have moved during the period.

Although the new regime was slated to begin with the 2003-04 crop year, its implementation was not completed until the end of the first quarter. Furthermore, few difficulties appear to have been experienced during this transition period. More importantly, the new balance struck between the tendering and advance car awards programs proved more acceptable to the largest constituency of stakeholders. And although the perspectives of the stakeholder community remains largely polarized over these reforms, they were ultimately extended, and will apply to the 2004-05 crop year as well.

2.32 Ocean Freight Rates

Towards the end of 2002, rates for the ocean movement of freight – including grain – began to rise. Although these increases came only after a protracted period of depressed prices, ocean freight rates had virtually doubled by the end of the 2002-03 crop year.

Figure 45: The Baltic Dry Index of Ocean Freight Rates



Towards the end of the first quarter of the 2003-04 crop year these rates began to rise again, although far more sharply. By the end of the second quarter, they had climbed to a level that was five-and-a-half times what had been 18 months before. This ultimately marked a plateau from which ocean freight rates tumbled in the second half. Nevertheless, by the end of the crop year prevailing ocean freight rates proved to be twice what they had been twelve months earlier, and more than four times greater than those in place at the beginning of the 2002-03 crop year. A cursory examination of the Baltic Dry Index – a price index based on a composite of daily rate quotes for 24 shipping routes – showed the magnitude of these recent price changes.[62]

Much of the movement has been occasioned by the prevailing, as well as perceived future, demand for vessels to service China's growing trade in raw materials and finished goods.[63] This had a significant impact on the export programs for CWB as well as non-CWB grains. Nowhere was this more apparent than in the purchasing decisions of international grain importers. In some cases, they 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.

Even in North America, these forces appear to have influenced the mode of transport used to move grain. Canadian grain exports to Mexico have traditionally employed ocean-going vessels in southbound movements from west coast ports. In the first three years of the GMP, this amounted to an average of about 1.5 million tonnes annually. Even so, an increasingly larger volume of grain was also shipped to Mexico by rail. Direct-rail

[61] The future delivery intentions of farmers are based on contract sign-ups with grain companies.

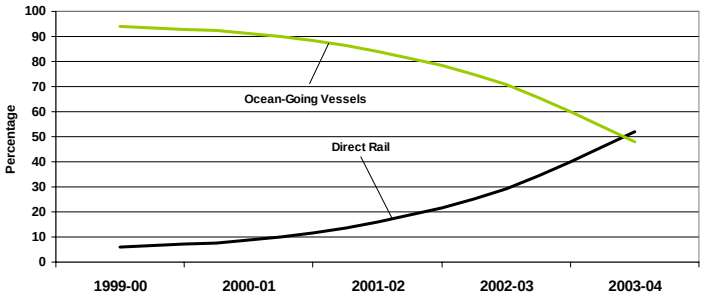
[62] The Baltic Dry Index is produced by The Baltic Exchange Limited, a London-based organization that provides independently gathered real-time freight market information such as daily fixtures, indices for the cost of shipping wet and dry cargos, route rates, as well as a market for the trading of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

[63] A tempering of the outlook for Chinese economic growth was widely considered to be responsible for the reduction of ocean freight rates in the second half.

shipments during this period accounted for slightly less than 15% of the overall volume, and averaged some 0.2 million tonnes per year.[64]

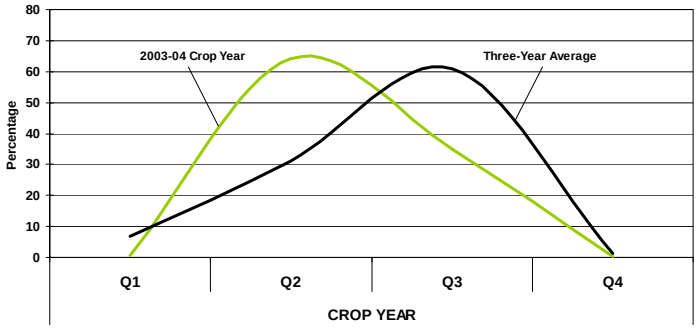
The rise in ocean freight rates, particularly during the first half of the 2003-04 crop year, effectively eroded the economic advantage of using marine transportation to service the Mexican market. By the end of the crop year, the direct-rail movement of Canadian grain to Mexico had reached over 0.9 million tonnes, almost three times that of the previous crop year. More importantly, these movements accounted for just over half of the combined 1.8 million tonnes moved by both modes.

Figure 46: Canadian Grain Exports to Mexico



Similarly, an increase in the spread between the benchmark ocean freight rates from the US to Japan gave temporary favour to the railway delivery of grain to the Pacific Northwest rather than the Gulf of Mexico. Likewise, freight differentials appear to have influenced the timing of the railway movement of grain from western Canada to the east coast ports of Quebec, Montreal, and Trois-Rivieres. These movements typically result in about one-third of the volume being moved in the second quarter, followed by another two-thirds in the third.[65] And although the 1.1 million tonnes handled in the 2003-04 crop year proved to be only 6.1% higher than the average for both the 2000-01 and 2001-02 crop years, almost two-thirds of the volume was moved in the second, rather than the third, quarter.

Figure 47: Distribution of Eastern Canadian Rail Shipments



2.33 Railway Car Supply

Given the expanded grain supply of the 2003-04 crop year, there was a resultant increase in the demand for railway carrying capacity. As was noted in the Monitor's annual report for the 2002-03 crop year, the ability to supply equipment is a function of both the number of railcars available, as well as the average amount of time taken by these cars in moving grain. As such, the upsurge in demand for covered hopper cars could have been met through an addition to the existing fleet, a reduction in the average car cycle, or a combination of the two.

This relationship between a railcar's cycle time and its carrying capacity can be seen when considering the year-over-year changes in first quarter data. For a two-day (or 10.6%) reduction in the first quarter's average car cycle (16.8 days versus 18.8 a year earlier), the GHTS was able to forward an additional 2.0 million tonnes of grain to the four ports in Western Canada (5.6 million tonnes versus 3.6 a year earlier). In simplified terms, this translated into about 1.0 million tonnes of additional carrying capacity per reduced car-cycle day. And as

[64] Direct rail shipments to Mexico increased from 90,100 tonnes in the 1999-2000 crop year to 323,500 tonnes in the 2002-03 crop year.

[65] The observation is based on the second quarter's tonnage share of the rail movement to eastern Canada in each of the following crop years: 28.1% in the 2000-01 crop year; 32.6% in the 2001-02 crop year; and 32.3% in the 2002-03 crop year. The share values tied to the third quarter's tonnage were: 61.0% in the 2000-01 crop year; 56.3% in the 2001-02 crop year; and 65.4% in the 2002-03 crop year.

can be seen from the second quarter's results, this efficiency gain was in turn lost when the average car cycle rose to 17.8 days (an increase of one full day), and originated tonnage fell to 4.2 million tonnes (a drop of 1.4 million tonnes).

Part of this drop in carrying capacity is attributable to normal winter operations.[66] Yet car supply problems, and particularly those experienced by CP shippers, began to appear in the first quarter. In the second quarter, they had become more widespread.[67] Where possible, shippers tried to circumvent CP by redirecting deliveries into facilities served by CN.[68] By late January 2004, however, the situation had worsened and extreme winter weather in the Rockies compelled CP to place an embargo on grain shipments to Vancouver, and to declare *Force Majeure*.[69] Although CP restored mainline operations early in February, the aftershocks continued to be felt well into the third quarter.

Given such circumstances, an increase in the average car cycle for the third quarter seemed highly probable. Yet the data for this period shows that the car cycle actually fell by 9.6% to an average of 16.1 days. Assuming that the number of railcars in the fleet had remained unchanged during this period, the result suggests that there should have been an increase in carrying capacity, and that car supply problems should actually have been eased. Moreover, the incremental gain in quarterly volume – which climbed from 4.2 million tonnes in the second quarter to 4.5 million tonnes in the third – indicates that almost 1.4 million tonnes of additional carrying capacity should have been available.

This improvement in the overall car cycle – and for that of the Vancouver corridor specifically – implies that the constriction in the supply of covered hopper cars during this period was the result of other forces. There is a strong indication that the difficulty in supplying cars for the movement of grain within western Canada arose from the allocation of carrying capacity to movements having destinations outside of this area.[70] In fact, owing to the comparatively longer car cycle involved, such impacts have often been noted whenever there has been a substantial movement of grain to eastern Canada. The 1.1 million tonnes of grain previously cited as having moved to eastern Canada in the 2003-04 crop year would have undoubtedly helped draw down the carrying capacity available within western Canada.

As mentioned previously, the increase in ocean freight rates was observed to have had an impact on both the domestic and international flow of Canadian grain. One of the most unexpected outcomes related to the significant increase in the volume of grain shipped to Mexico by rail. Even though such movements had grown to over 0.3 million tonnes in the 2002-03 crop year, it appears unlikely that the railways would have prepared themselves to handle a volume that ultimately surpassed 0.9 million tonnes by the end of the crop year.

Moreover, with the US government having imposed a 14.15% duty on Canadian wheat imports, it seems likely that the railways would have already prepared for a sharp reduction in their southbound grain handlings. Even

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[66] Winter railway operations typically result in reduced train lengths and trailing tonnages. Without a corresponding increase in the actual number of trains operated, average transit times generally increase. This serves to lengthen the overall car cycle, which can also be undermined by such physical impediments as derailments, congestion within receiving terminals, or the lack of sufficient locomotives and train crews.

[67] Many shippers believe the car shortage problem was rooted in the effects of an early harvest, while others cited the railways for having failed to safeguard a sufficient number of cars, locomotives, and crews to handle the increased grain volume.

[68] The redirection of grain deliveries into CN local elevators during the second quarter is observable in terms of carrier handlings. Despite the price leadership that appeared to have given CP a 54.3% share of terminal handlings in the first quarter, customer dissatisfaction appeared to have reduced this share to 46.6% in the second quarter.

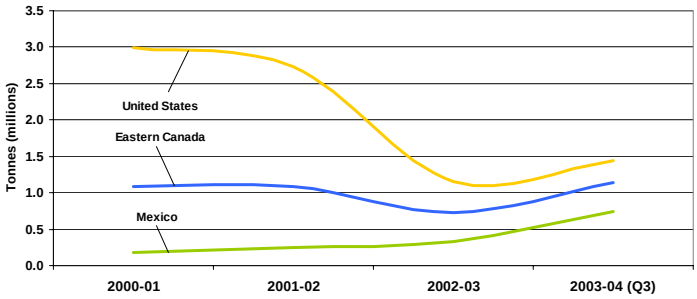
[69] CP declared Force Majeure retroactively to 25 January 2004. Force Majeure is a contractual provision that is intended to excuse a party from liability if some unforeseen event beyond the control of the party prevents it from performing its obligations under the contract – typically a natural disaster or other "Act of God", war, or even the failure of third party suppliers. Force Majeure provisions are intended to excuse a party only if the failure to perform could not have been avoided with the exercise of due care by that party.

[70] With the GMP focused on statutory movements within western Canada, the Monitor neither collects nor possesses any detailed information regarding direct-rail shipments to eastern Canada, the United States of America, or Mexico. As a result, the Monitor is precluded from measuring their associated car cycles, and undertaking any detailed examination of the potential impact they may have had on the GHTS's carrying capacity.

so, a continuing strong American demand for Canadian oats and canola may have already constrained their ability to accommodate a further 0.6 million tonnes of incremental traffic to Mexico.[71]

While the railways undoubtedly welcomed this partial substitution for lost US business, its handling had somewhat more negative consequences for the GHTS as a whole. This stems from the fact that shipments of Canadian wheat to Mexico would entail generally greater distances than those to the US.[72] As a result, Mexican rail movements would be expected to produce significantly longer car cycles, and draw down even more on the supply of covered hopper cars.

Figure 48: Railway Grain Movements Beyond Western Canada



The car supply problems experienced in the 2003-04 crop year would appear to have had less to do with the efficiency of railway operations than they did with the draw-down effects of allocating a greater proportion of carrying capacity to long-haul domestic and international markets. Moreover, being non-regulated, long-haul grain movements to eastern Canada, the US, or Mexico could well be more lucrative for the railways themselves. Building on this assumption, both CN and CP might have had an economic incentive to give somewhat more preference to these longer-haul markets rather than to the regulated segment of their grain businesses.

2.34 CN Assumes the Operations of BC Rail

In February 2003, the government of British Columbia announced that it intended to seek a third party to assume the railway activities of the British Columbia Railway Company (BCRC). As then constituted, the BCRC was a Crown corporation having three principle business units: BC Rail, comprising the company's actual railway activities; BCR Marine, operating the Vancouver Wharves terminal; and BCR Properties, managing its real estate assets (most of which were tied to the operation of BC Rail itself).

Since its inception in 1912, the company had become an important artery for the export movement of various commodities from the province's interior. Moreover, with a network that extended 1,443.0 route-miles from North Vancouver in the south to Fort Nelson in the north, it constituted the third largest railway in Canada. Even so, its traffic base had been declining for nearly a decade – falling from a height of 221,000 carloads in 1995 to just over 150,000 carloads in 2003.[73]

Beginning in the early 1990s, the BCRC sought to diversify its business interests in an effort to lessen the railway's dependence on the movement of coal and forest products. This led to the acquisition of a number of different companies.[74] Given increased competitive pressures and rising costs, however, these purchases proved to be problematic and often a drain on the company's financial resources. In 2002 the BCRC decided to refocus its efforts on the company's core business activity – namely the running of a freight railway – and

[71] Direct rail movements of Canadian export grain to the United States averaged some 2.9 million tonnes annually between the 1999-2000 and 2001-02 crop years. With wheat accounting for about 1.0 million tonnes of this volume, a one-third reduction in the total volume of grain to be shipped by rail to the US could easily have been anticipated. The inclusion of another 0.6 million tonnes of traffic for Mexico would have meant a 30% increase in an expected southbound movement of approximately 1.9 million tonnes.

[72] Grain movements to the US typically involve destinations with distances comparable to that of servicing any of the four ports in western Canada – Minneapolis and Chicago being among the most prevalent.

[73] BC Rail had always been considered commercially dependent on the movement of coal and forest products. Much of the decline in traffic during this period was attributable to the steady erosion in the coal volumes coming from the Quintette and Bullmoose mines of northeastern British Columbia, which were closed in 2000 and 2003 respectively.

[74] Among the larger of these acquisitions were Vancouver Wharves Ltd. in 1993, and Canadian Stevedoring in 1998.

moved to sell off most its non-core holdings.[75] By 2003 these efforts appeared to be producing results, with the company having posted a net income for the first time in several years, $66.4 million.

Against this backdrop, the province indicated that it wanted to restructure the company in order to provide for a revitalized, sustainable, and strengthened rail service. Accordingly, the Minister of Transportation issued a Request for Proposals that invited interested private-sector firms to make a bid for the operations of BC Rail. As the 2003-04 crop year began, the government disclosed that it was considering the bids brought forward by four firms: CN; CP; OmniTRAX in partnership with Burlington Northern Santa Fe; and RailAmerica. In November 2003, the province announced that it had accepted the CN bid in a commercial deal valued at $1.0 billion.

In specific terms, the transaction specified that CN would pay $1.0 billion to acquire the outstanding shares of BC Rail Ltd., along with the right to operate a freight railway over the BC Rail network under a 60-year lease, with an option to renew for another 30 years thereafter. The railway's physical infrastructure – including its right-of-way, roadbed, and track – was to remain owned by the province of British Columbia.

The takeover of BC Rail by a Class 1 carrier raised a number of concerns in the minds of shippers as well as other stakeholders. These revolved around the widely perceived potential for a reduction in competition. With the transaction subject to approval by the Competition Bureau, a comprehensive review was undertaken by the Bureau in an effort to gauge its potential competitive impact.[76] In general terms, it found two main areas of concern. The first of these dealt with the interline movement of commodities such as lumber from BC Rail points to markets throughout North America.[77] The second related to the movement of grain from the Peace River area where BC Rail and CN had competed vigorously with the rates and services they provided to local grain elevators located at Dawson Creek, British Columbia, and Rycroft, Alberta.

(photograph courtesy of Bob Eisthen)

Figure 49: A northbound BC Rail freight train passes through Creekside in British Columbia's southern interior. CN completed its purchase of the regional carrier in July 2004 after receiving the prerequisite regulatory approval from the Competition Bureau. BC Rail's operations are currently being integrated with those of CN.

On this latter point, BC Rail owned or leased over 200 covered hopper cars that were primarily dedicated to the movement of grain from the Peace River area. These effectively provided local shippers with a relatively secure supply of railcars. Moreover, when combined with the carrier's lower freight rates, local BC Rail shippers were given a significant competitive advantage. As such, they were better able to attract producer grain deliveries with generous trucking premiums. It was widely believed that a CN acquisition would undermine that advantage, and diminish the competitiveness of these shippers through adverse changes in both freight rates and the supply of rail cars.

[75] The most visible transaction involved the sale of Casco Terminals and Canadian Stevedoring to P&O Ports, a subsidiary of the Peninsular and Oriental Steam Navigation Company, for $105.1 million. Proceeds from the sale were directed towards paying down the company's outstanding debt. In addition, the company also discontinued a number of money-losing railway operations, including its intermodal and passenger services.

[76] The Competition Bureau is an independent law enforcement agency that promotes and maintains fair competition so that all Canadians can benefit from competitive prices, product choice and quality service. It oversees the application of the Competition Act, the Consumer Packaging and Labelling Act, the Textile Labelling Act and the Precious Metals Marking Act.

[77] Shippers local to BC Rail had been able to reach the various markets found in North America by routing their traffic through CN at Prince George or through Canadian Pacific Railway Company, Burlington Northern and Santa Fe Railway Company or Union Pacific Corporation in Vancouver.

In July 2004, the Competition Bureau gave conditional approval to the transaction after concluding a Consent Agreement with CN. This agreement effectively obligated CN to implement a package of specific safeguards aimed at addressing the competitive issues raised. With respect to the interline movement of commodities such as lumber, the Consent Agreement included the following key provisions: that CN must publish and maintain Open Gateway Tariffs that would give shippers direct access to competing rail carriers in Vancouver for the long haul transportation of their products to markets; that CN's performance with respect to transit times would be measured against the 2003 BC Rail average for traffic interchanged to connecting carriers in Vancouver; and that safeguards would be added to ensure that shippers were not discriminated against for choosing competing carriers for long-haul transportation through an inequitable car supply.

With respect to the movement of grain from the Peace River area, the Consent Agreement included the following elements aimed at preventing CN from significantly increasing rates or curtailing service levels:

- That pricing levels for single-car rates on export grain movements to Vancouver and Prince Rupert be tied to competitive zones;
- That multiple-car-block incentives in the Peace River area be continued to the extent that they are also available at competitive points;
- That the frequency of pre-existing switching services be maintained, and
- That safeguards be added to ensure the non-discriminatory supply of covered hopper cars.

It is important to note that when CN took over BC Rail in July 2004, the network and operations of BC Rail came under the jurisdiction of the Canada Transportation Act and the Canadian Transportation Agency for the first time in its history. In part, this meant that former BC Rail shippers would be given the same protections under the Act as other CN and CP shippers, including rates and conditions of service that are commercially fair and reasonable.

This regulatory change also means that grain movements from BC Rail delivery points are to be taken into consideration in the calculation of the revenue cap. In fact, some 11,200 tonnes of grain traffic moved in the latter half of July 2004 figured into this calculation for the 2003-04 crop year.

2.35 Producer-Car Loading Continues to Grow

The 2003-04 crop year saw producer-car loading climb to 9,399 railcars, almost three times the 3,209 recorded a year earlier. What is more, this constituted the largest number yet observed under the GMP, and one that had not been equalled since the early 1990s. In a sense, the image of a farmer using an auger to load a railcar at an isolated railway siding has become emblematic of producer-car loading. And in addition to being a labour-intensive activity, it was an administratively burdensome task that included acquiring the appropriate permits from the Canadian Grain Commission (CGC) as well as an empty railcar to load. Moreover, the producer also had to bear all of the risks inherent in its movement. This included not only the responsibility of managing a claim for loss or damage in transit (as might arise in the case of a derailment or accident), but the commercial risk inherent in a possible mis-shipment as well.[78]

Still, the producer's ability to avoid elevation charges that amount to about $12.00 per tonne has proven to be a powerful inducement for some. In most cases, those engaged in producer-car loading maintain that it is a cost-effective alternative. In addition, many also claim that this approach enables them to overcome the adverse impact of recent elevator closures in their communities.

And while producer-car loading has been growing, the number of sites allowing for such activity has declined by 30.3% over the last five years, to 492 from 706. The contrast between these trends underscores the evolution that has taken place with respect to producer-car loading in general. Although individual farmers can still be found using an auger to load railcars at a myriad of sidings across the prairies, this practice has largely given way to better coordinated, and more sophisticated, approaches. Typically, these involve farmers within a given geographic area banding together to amass their individual shipments into larger collective ones.

[78] A producer receives payment for the grain shipped based on both the grade and weight (often referred to as the outturn weight) as determined at the terminal elevator by the CGC. A substantial monetary difference can arise if these values vary materially from what the producer believes was shipped.

In some instances, conventional producer-car loading is simply performed on a larger scale. Merlot Grain Ltd. of Girouxville, Alberta, represents one such venture. In operation since 1990, the company essentially organizes the loading of producer cars in larger numbers than would otherwise be possible. For a fee, the firm secures all of the necessary CGC permits, orders in the railcars required, coordinates truck movements from individual farmers, and carries out the actual truck-to-railcar transfer of the grain being shipped.

Another tack involved the addition of trackside facilities to better support larger-scale producer-car loading activities. In the majority of cases, this simply involved the installation of storage bins to facilitate the gathering of grain in advance of actually loading the railcars. In some cases, previously closed elevators were purchased and renovated by producers for this specific purpose.
Towards the other end of the spectrum, producers experimented with the loading of cars in trainload quantities. One of the first such initiatives came in 1997 when 80 producer cars were assembled into a single-train shipment destined for the west coast. In large part, the project brought forward by West Central Road and Rail (WCRR) was aimed at demonstrating that sufficient grain volumes could still be generated on a branch line that had been slated for abandonment by CN; that such railway lines could be made commercially viable; and that local producers need not truck their grain to more distant elevator facilities.

Ultimately, the WCRR built on this achievement, and invested $2.4-million in a state-of-the-art facility located at Eston, Saskatchewan, in 2001.[79] Of greater importance is the fact that its grain-gathering processes are substantially more sophisticated than those of other producer-car loading operations. In general terms it emphasizes on-farm grain storage in order to minimize the need for trackside facilities. Then, using detailed information about these stocks, the WCRR develops a specific marketing program for it with the CWB. When a rail shipment is to be made, the needed grain is simply drawn into the facility from the farm, stored in car-lot sized bins, and then loaded directly into railcars. Provision is also made for the testing of the grain's grade and protein content as well as the weighing of each railcar after it has been loaded. These actions help to minimize the commercial risk inherent in a mis-shipment, and to avoid possible disagreement over its content upon arrival at destination. The WCRR's operating costs are recouped through the assessment of administrative charges that are about half those posted for elevation by a typical grain company.

Figure 50: The licence-exempt producer-car loading facility operated by West Central Road and Rail Ltd. at Eston, Saskatchewan.

This initiative has since become a template for others. In November 2003, Alberta's Battle River Producer Car Group undertook a similar venture, loading producer cars at six sites along CN's Alliance subdivision, before then assembling them into a single 70-car train. Before the 2003-04 crop year ended, the group had arranged for the movement of several other trains.

The Monitor's previous reports have noted that the growth in producer-car loading has been fuelled in large part by the expansion of license-exempt facilities such as that operated by WCRR. With the establishment of such facilities, the CGC entered into consultations with the public on how these facilities should be regulated. Ultimately, the CGC decided to exempt these facilities from the licensing provisions of the Canada Grain Act.[80]

[79] Funding for this facility was derived through a combination of both debt and equity financing, with over $4.0 million having been raised from its 1,800 shareholders.

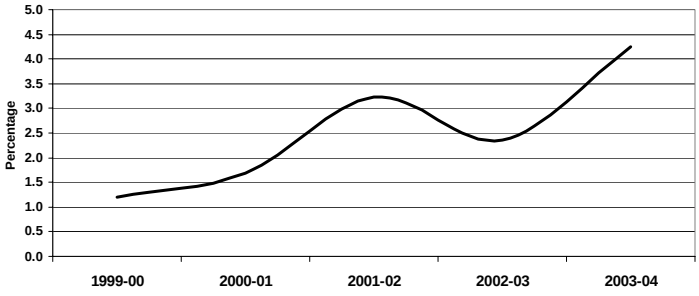
[80] In April 2002 the CGC announced that producer-car loading facilities would be exempt from the licensing provisions of the Canada Grain Act as long as certain conditions were met. These conditions included: that the facility only handle grain intended for loading into producer cars; that the facility post notice of the fact that it is not licensed, and that the CGC will not be involved in disputes between the facility and any other party – including producers – save those that may arise at a port terminal; that the facility shall not purchase or sell grain; and that the facility shall allow the CGC access to its records.

By the end of the 2001-02 crop year, a total of 24 such facilities had received license exemptions. This was followed by two consecutive years of double-digit growth, with a resultant 38 facilities having received exemptions by the end of the 2003-04 crop year.

With 29 facilities, Saskatchewan lays claim to over three-quarters of the total. Alberta and Manitoba follow with six (15.8%) and three (7.9%) facilities apiece. In the wake of elevator closures, most of these facilities could be found along the railways' grain-dependent branch line networks. As such, the smaller shortline railways also found themselves serving many of them.[81] This, however, has given way to a wider distribution. By the end of the 2003-04 crop year, the division between facilities served by shortline and Class I carriers only marginally favoured the former, 20 (52.6%) versus 18 (47.4%) respectively.

The growing importance of these facilities can perhaps best be seen through the total grain volumes forwarded from them. As cited earlier, the 9,399 producer-cars loaded in the last crop year marked the largest number yet seen under the GMP. Moreover, this volume amounted to an estimated 4.2% of the overall tonnage moved in covered hopper cars during the course of 2003-04 crop year, which denoted an almost four-fold increase over the 1.2% it represented five years earlier. More significantly, at least two-thirds of this volume is estimated to have originated at license-exempt facilities.[82]

Figure 51: Market Share of Producer-Car Shipments



Although these volumes appear comparatively small, a number of grain companies have expressed the view that the granting of a license exemption to these facilities is inherently inequitable since they perform many of the same functions as primary elevators. In particular, they object to the fact that these facilities don't need to post the bonds necessary to protect the farmer against its potential financial failure, as traditional grain companies and dealers have long been obligated to do. Similarly, they contend that in lowering the market-entry barriers for license-exempt facilities, the CGC is effectively discriminating against the established grain companies. As a result, they argue that producers delivering grain to a licensed elevator incur a financial penalty for doing so.

Regardless, the demand for producer cars added to the increased pressures being exerted on the covered hopper car fleet. In fact, car supply emerged as a particular problem for many producers during the 2003-04 crop year. This was perhaps most evident in the first quarter when the number of applications for railcars exceeded those allocated by a factor of three-to-one [83]. Still, the situation improved markedly over the next nine months. By the end of the crop year, 93.0% of the 10,109 applications for railcars received by the CGC had been supplied.

Even so, the problems encountered by a group of farmers in northeastern Saskatchewan prompted them to file a formal level-of-service complaint with the Canadian Transportation Agency (CTA) in the first quarter. This complaint centred on CP's alleged failure to supply cars for producer loading at three specific locations along the carrier's White Fox subdivision.[84] CP had de-listed these sites at the end of the 2002-03 crop year due to

[81] It is worth noting that the operations of some shortline carriers are heavily dependent on producer-car loadings, and the business derived from serving these facilities. In fact, eleven of the license-exempt facilities in place at the end of the 2003-04 crop year were served by the Great Western Railway, a shortline operating in southwestern Saskatchewan. This high concentration reflects the effort of the GWR to promote the establishment of producer-car loading sites.

[82] The exact number of railcars shipped from license-exempt facilities is not made public by the CGC, and has been estimated using secondary sources.

[83] As the administrative process to gain permission for a producer car can take time, several producer loaders employ a practice of submitting the application for a producer car shortly after harvest (October/ November) with the expectation that the cars will not be supplied until later in the crop year.

[84] The sites specifically referred to are Choiceland, Garrick, and White Fox.

declining volumes, suggesting instead that producer-car loading could easily be accommodated at Nipawin. Using the mediation services offered by the CTA, CP reportedly committed itself to servicing two of the sites, Choiceland and White Fox, through to the end of the 2003-04 crop year as long as producers respected a 25-car minimum loading commitment.[85]

The growth in producer-car loading over the past five years has been more than a statistical aberration. ,A number of producer groups have been working to rise above the weaknesses of the single-car-shipment model. That model's dependence on single-car shipments fundamentally clashed with the broader industry push for consolidation and efficiency improvement opportunities. Although differing in terms of complexity, efficiency, and capital needs, each of the approaches taken by these groups represents a means by which to overcome this deficiency. While it cannot be said which approaches will meet with greater success, producer-car loading will likely continue to gain in popularity.

2.36 Port of Churchill Experiences a Sharp Increase in Grain Volumes

As was mentioned by the Monitor in its annual report for the 2002-03 crop year, the volume of grain moving through the port of Churchill had been steadily declining for several years, and reached a recent low of 351,900 tonnes in the 2002-03 crop year. In early 2003, the Port of Churchill Advisory Board warned that another such shipping season might well prove ruinous.

With Churchill considered of vital economic interest to the province, the Manitoba government moved to provide the port with an interim package of financial support. Aimed at helping ensure a sustainable economic future for both the port and the Hudson Bay Railway, this support package was complemented by additional funds from the federal government. Further, towards the end of the 2002-03 crop year, the port's owner had also entered into a new marketing agreement for the port with the internationally-known grain company, Louis Dreyfus.

Along with a harvest that enhanced the grain supply within the Churchill catchment area, these efforts appeared to have produced positive results during the 2003 shipping season.[86] Terminal throughput at the port in the 2003-04 crop year increased to 542,700 tonnes – a gain of 54.2% over the 351,900 tonnes handled a year earlier. In addition to increasing its handlings of CWB grains, it also broadened its traffic base to include 144,700 tonnes of peas, canola, and other non-CWB grains.

Figure 52: The terminal elevator operated by the Hudson Bay Port Company at Churchill, Manitoba.

Despite these gains, and the overall improvement recorded for the 2003 shipping season as a whole, the volume of grain shipped through Churchill still fell below the 1.0-million tonne level deemed necessary for the port's long-term success.

[85] The Canadian Transportation Agency provides mediation services to resolve disputes between various parties as an alternative to the more formal adjudicative process. By design, this service is confidential, as is the settlement that may be reached between the parties. The specifics presented here are drawn from published press accounts and should, therefore, be considered unofficial. A formal decision in the complaint filed with the CTA remains pending since the parties must agree beforehand to an indefinite extension of any statutory deadlines in order to allow the mediation process to be completed or, in the event that the case should be returned to the Agency for resolution through traditional means, subsequent adjudication.

[86] The port of Churchill's catchment area encompasses grain delivery points situated primarily in northeastern Saskatchewan, as well as northwestern Manitoba. Churchill-destined grain is loaded into vessels during a shipping season that normally extends from late July to early November, and which straddles two crop years.

2.4 Summary Observations

The 2003-04 crop year marked the fourth for the Canadian Wheat Board's (CWB) tendering program. However, the program was significantly modified for the 2003-04 crop year after consultations between the CWB and its 26 agents. In general terms, the CWB committed itself to moving a fixed 40% of the grain it ships to the four ports in western Canada using a combination of tendering and advance car awards. Under this new arrangement, the CWB had the option of tendering up to a *maximum* of 20% of its overall volume, rather than the 50% minimum that had prevailed in the 2002-03 crop year.

During the 2003-04 crop year, the CWB issued a total of 251 tenders calling for the shipment of approximately 3.0 million tonnes of grain, slightly more than half of the 5.8 million tonnes sought a year earlier. The vast majority of this volume, some 2.2 million tonnes (72.7%) related to the movement of wheat. Another 0.5 million tonnes (16.5%) involved durum, while the remaining 0.3 million tonnes (10.8%) dealt with barley.

These calls were met by 1,898 bids offering to move more than three times the volume sought, some 10.3 million tonnes of grain. The nature of this response was significantly greater than in either of the preceding three crop years, and underscored the aggressive commercial stance taken by grain companies in the 2003-04 crop year. On the whole, the bidding patterns reveal that the trade gave full consideration to all calls for tendered grain, although there was a preference for wheat and durum and Thunder-Bay-destined movements.

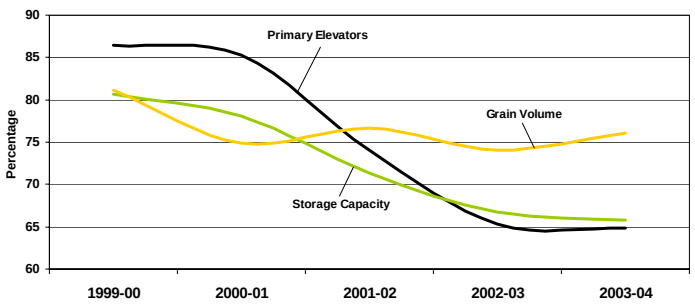
A total of 466 contracts were subsequently signed for the movement of just under 2.5 million tonnes of grain, over 80% of the amount called. This represented 18.1% of the overall grain volume shipped by the CWB to western Canadian ports in the 2003-04 crop year, and fell only marginally short of its newly established 20% commitment.

In addition, a total of 1.9 million tonnes of grain moved under the CWB's newly-adopted advance car awards program. This represented 13.9% of the CWB's total shipments to the four ports in western Canada. When combined with the 18.1% that moved under its tendering program, the volume moved under both programs constituted 32.0% of the CWB's total shipments. This fell somewhat short of the 40% to which the CWB had committed itself, and arose largely because of a delay in implementing the advance car awards program until late in the first quarter.

In a number of respects, the grain shipped under the advance car awards program largely paralleled that of the tendering program. In fact, there was evidence indicating that the shipments made under both CWB programs moved largely in tandem. As such, it is likely that future movements will continue to be complementary. In a general sense, this provided a strong indication of grain companies having exploited the flexibility that the advance car awards program was designed to bring to their planning activities.

According to the CWB, despite a reduction in the proportion of grain moving under its tendering program, the financial savings ultimately passed back to producers through the CWB's pool accounts increased significantly. Derived largely from a savings in transportation costs as a result of the bidding inherent in the tendering process itself, these savings also included freight and terminal rebates, as well as any financial penalties assessed against grain companies for non-performance. The CWB estimates the savings generated from these activities for the 2003-04 crop year increased by 51.2%, to $51.1 million from $33.8 million a year earlier.

Figure 53: Relative Shares of the Four Largest Grain Companies



The Monitor has previously mentioned the concern raised by a number of stakeholders respecting the potential ability of major grain companies to displace their smaller competitors in the marketplace. One of the indicators used in the GMP to gauge this involves measuring the market shares of the major, and non-major, grain companies. Interestingly, the overall market share secured by the larger grain

companies has actually fallen in the past five crop years. The same is true of both tendered, and non-tendered, CWB grains. In terms of tendered grain handlings, the major grain companies saw their share decline – albeit only marginally – from 84.6% to 82.3% in the last three crop years. This was also the case regarding non-tendered CWB grains, where the major grain companies' share fell from 74.4% to 71.1% in the same timeframe.

At the same time, the major grain companies' dominance over the primary elevator network – be it in terms of actual number or storage capacity – has also diminished. As of 31 July 2004, the major grain companies held sway over 64.8% of the elevators, and 65.8% of the storage capacity. This marked a significant reduction from the 86.5% and 80.7% shares they respectively held four years earlier.

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.

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 – 2003-04 Crop Year

Trucking

- *The Composite Freight Rate Index for short-haul trucking remained at 100.0 throughout the year.*
  - *Rising fuel prices suggest that truckers will pass these costs onto their customers in some form over the next year.*

Country Elevators

- *Throughput for the 2003-04 crop year increased 49.7% to 28.5 million tonnes.*
- *The average elevator capacity-turnover ratio increased by 55.6% to 5.6 turns.*
  - *Performance was bolstered by a 1.4-million-tonne reduction in elevator storage capacity over the past five crop years.*
- *Average weekly stock levels increased 7.6% to 2.7 million tonnes.*
  - *Overall 27.2% reduction in average inventories over the past five crop years underscored sensitivity to declining storage capacity.*
- *Average number of days-in-store fell by 28.1% to 34.4 days.*
  - *Lowest average since the beginning of the GMP.*
- *Average weekly stock-to-shipment ratio fell by 29.4% to 5.0.*
  - *Reflected increased movement of both CWB and non-CWB commodities.*
  - *Lowest average since the beginning of the GMP.*
- *Posted tariff rates for elevator handling activities increased modestly:*
  - *Receiving, elevation and loading – increased by 2.2%.*
  - *Cleaning – increased by 4.6%.*
  - *Storage – increased by 2.1%.*

Rail Operations

- *Average car cycle decreased by 18.0% to 16.7 days.*
  - *Reflected increased grain volumes and a change in the traffic mix.*
  - *Average loaded transit time decreased 12.1% to 8.9 days.*
- *Proportion of grain traffic moving in multiple-car blocks increased to 75.1%.*
  - *Proportion moving in blocks of 50 or more railcars reaches 69.1%.*
  - *Reflects changes in incentive discounts:*
    - *Reduced discounts for movements of 25-49 railcars.*
    - *Increased discounts for movements of 100 or more railcars.*
  - *Railway incentive payments estimated at $67.9 million – up 86.7%.*
    - *Average discount increased 14.5% to $4.54 per tonne.*
    - *Reflected increased volume and use of larger car blocks.*
- *CN and CP move independently in setting posted freight rates.*
  - *August 2003: CN maintained existing rates; CP applied 1.0% reduction.*
    - *Opens pricing gap that leads to improved CP market share.*
  - *March 2004: CN and CP escalate rates by about 1.5% and 2.0% respectively.*
    - *Narrows pricing gap, but leaves CP as most price-competitive carrier.*
- *Canadian Transportation Agency established Revenue Cap of $631.6 million.*
  - *Determined statutory grain revenues for CN and CP totalled $630.7 million.*
    - *Total grain revenues $0.9 million less than allowed.*
    - *CP pays penalty on $0.3 million in excess revenues.*
  - *Average revenue per tonne increased 4.9% to $25.72.*

Terminal Elevators and Port Performance

- *Terminal throughput increased by 60.6% to 19.0 million tonnes.*
- *The average elevator capacity-turnover ratio increased by 40.0% to 7.0 turns.*
- *Average weekly stock level increased 5.2% to 1.1 million tonnes.*
- *726 vessels loaded at western Canadian ports during the 2003-04 crop year.*
  - *Average time in port fell by 7.0% to 4.0 days.*
    - *Lowest average since the beginning of the GMP.*
- *Posted tariff rates for terminal elevator handling activities increased.*
  - *Receiving, elevation and loading – increased by 5.1%.*
  - *Storage charges – increased by 3.9%.*

Indicator Series 3 – System Efficiency

Table	Indicator Description	Notes	BASE 1999-00	CURRENT REPORTING PERIOD (1) 2002-03	2003-04	% VAR	
	Trucking [Subseries 3A]						
3A-1	Composite Freight Rate Index – Short-haul Trucking		100.0	100.0	100.0	0.0%	–
	Primary Country Elevators [Subseries 3B]						
3B-1	Grain Volume Throughput (000 tonnes)		32,493.9	19,052.1	28,526.9	49.7%	▲
3B-2	Average Elevator Capacity Turnover Ratio		4.8	3.6	5.6	55.6%	▲
3B-3	Average Weekly Elevator Stock Level (000 tonnes)		3,699.3	2,502.0	2,691.9	7.6%	▲
3B-4	Average Days-in-Store (days)		41.7	47.9	34.4	-28.1%	▼
3B-5	Average Weekly Stock-to-Shipment Ratio – Grain		6.2	7.1	5.0	-29.4%	▼
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	12,271.3	19,923.5	62.4%	▲
3C-3	Hopper Car Grain Volumes (000 tonnes) – Detailed Breakdown						
3C-4	Railway Car Cycle (days) – Empty Transit Time		10.7	10.2	7.8	-23.8%	▼
3C-4	Railway Car Cycle (days) – Loaded Transit Time		9.2	10.1	8.9	-12.1%	▼
3C-4	Railway Car Cycle (days) – Total Transit Time		19.9	20.4	16.7	-18.0%	▼
3C-5	Hopper Car Grain Volumes (000 tonnes) – Non-Incentive		12,735.5	3,093.3	4,957.3	60.3%	▲
3C-5	Hopper Car Grain Volumes (000 tonnes) – Incentive		12,924.2	9,178.0	14,966.3	63.1%	▲
3C-6	Hopper Car Grain Volumes ($millions) – Incentive Discount Value		$31.1	$36.4	$67.9	86.7%	▲
3C-7	Traffic Density (tonnes per route-mile) – Grain-Dependent Network		442.3	204.1	356.7	74.7%	▲
3C-7	Traffic Density (tonnes per route-mile) – Non-Grain-Dependent Network		292.4	149.0	235.1	57.7%	▲
3C-7	Railway Traffic Density (tonnes per route-mile) – Total Network		330.3	162.1	263.8	62.7%	▲
3C-8	Composite Freight Rates – Rail	(2)					
3C-9	Multiple-Car Shipment Incentives – Rail	(2)					
3C-10	Effective Freight Rates – CTA Statutory Revenue ($ per tonne)		n/a	$24.52	$25.72	4.9%	▲
	Terminal Elevator and Port Performance [Subseries 3D]						
3D-1	Annual Port Throughput (000 tonnes) – Grain		23,555.5	11,806.9	18,962.0	60.6%	▲
3D-2	Average Terminal Elevator Capacity Turnover Ratio		9.1	5.0	7.0	40.0%	▲
3D-3	Average Weekly Terminal Elevator Stock Level (000 tonnes)		1,216.2	1,016.5	1,069.2	5.2%	▲
3D-4	Average Days-in-Store – Operating Season (days)		18.6	21.7	19.0	-12.5%	▼
3D-5	Average Weekly Stock-to-Shipment Ratio – Grain	(2)					
3D-6	Average Weekly Stock-to-Shipment Ratio – Grade	(2)					
3D-7	Average Vessel Time in Port (days)		4.3	4.3	4.0	-7.0%	▼
3D-8	Distribution of Vessel Time in Port	(2)					
3D-9	Distribution of Berths per Vessel	(2)					
3D-10	Annual Demurrage Costs ($millions)		$7.6	$0.8	$4.7	514.7%	▲
3D-10	Annual Dispatch Earnings ($millions)		$14.5	$4.4	$20.0	358.3%	▲
3D-11	Average Handling Charges – Terminal Elevators	(2)					

(1) – In order to provide for more direct comparisons, the values for the 1999-2000 through 2003-04 crop years are "as at" or cumulative to 31 July unless otherwise indicated.

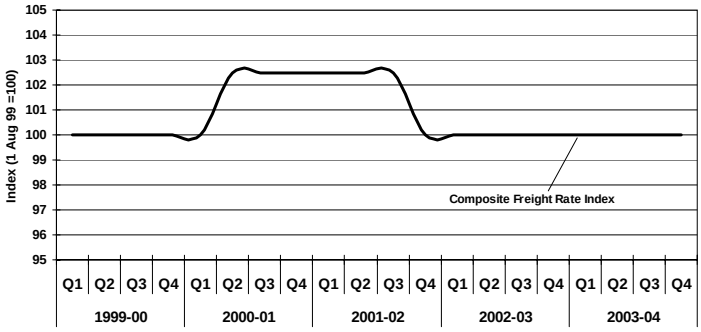
(2) – Changes in the data cited cannot be depicted within the summary framework presented here. The reader is encouraged to consult the detailed data tables found in Appendix 3 as required.

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.

Figure 54: Composite Freight Rate Index – Short-Haul Trucking



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 has remained effectively unchanged throughout the course of the past five crop years.

To some extent, this limited change was partially tied to the reduced grain supply, which contributed to an oversupply of trucking capacity. In addition, the competition existing between the grain companies themselves also proved to be a factor in containing these rates. Still, fuel prices and other input costs have risen substantially over the course of the past twelve months.[87] In fact, with these companies estimated to have already absorbed a 10% increase in direct costs, it seems increasingly unlikely that the application of fuel surcharges – if not the outright escalation of commercial freight rates – can be avoided for much longer. [See Table 3A-1 in Appendix 3.]

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

The 2003-04 crop year provided the GMP with its first real opportunity to gauge the impact of changes in the GHTS on the operational efficiency of the primary country elevator system under near-normal conditions. This stems largely from the system's 49.7% increase in throughput volume, which climbed to 28.5 million tonnes from 19.1 million tonnes a year earlier.[88] Moreover, this volume fell only 14.3% short of the largest throughput recorded under the GMP, 33.3 million tonnes in the 2000-01 crop year.

Year-over-year increases in primary elevator shipments were recorded for all four of the producing provinces. With a 72.6% increase in throughput, Alberta – which had been the most adversely impacted by two years of drought – posted the largest comparative gain. This was in turn followed by British Columbia, Saskatchewan, and Manitoba with increases of 64.0%, 49.8%, and 26.9% respectively. At the same time, it is also worth noting that the throughputs for both Manitoba and British Columbia were the highest recorded under the GMP,

[87] Fuel prices are tied to the international price of oil. The cost of West Texas Intermediate crude climbed by 43.5% in the 2003-04 crop year, to US$ 43.80 per barrel from US$ 30.53.

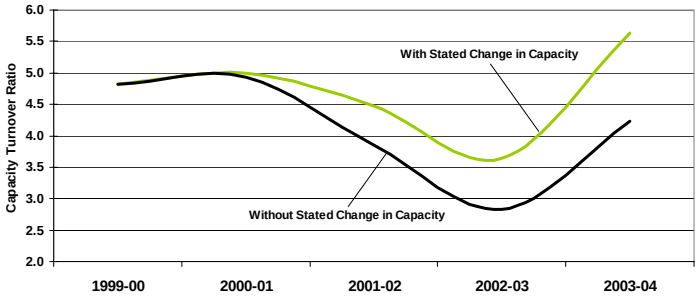
[88] In gauging the throughput of the country elevator system, the GMP focuses on both the truck and railway shipments made from primary elevators. The volume of grain passing through process elevators is excluded from this calculation.

while those for Saskatchewan and Alberta fell substantially short of their previous records. [See Table 3B-1 in Appendix 3.]

Capacity Turnover

The effect of changes in both throughput and storage capacity are reflected in the primary elevator system's capacity-turnover ratio. Even though throughput for the 2003-04 crop year fell short of the 33.3 million tonnes reached three years earlier, the ratio climbed to 5.6 turns, the highest value recorded under the GMP. What is more, with ratios of 6.9 and 6.8 respectively, the primary elevator systems of Manitoba and Alberta reached even higher turnover levels. [See Table 3B-2 in Appendix 3.]

Figure 55: Change in Capacity – Impact on Capacity Turnover Ratio



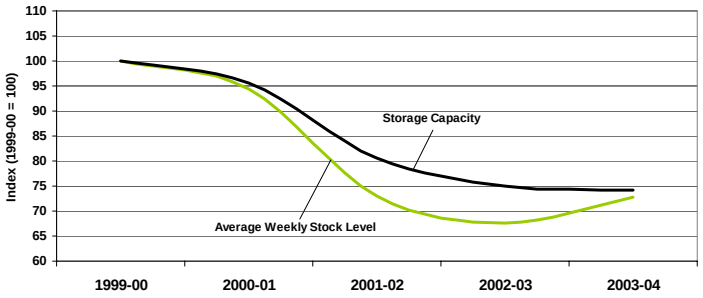
Although the gain recorded over the 2002-03 crop year was largely volume related, real improvement in the capacity-turnover ratio since the beginning of the GMP stemmed chiefly from a 1.4-million-tonne reduction (or 21.1%) in storage capacity. In a broad sense, this reduction reflects the effects of 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 system's capacity-turnover ratio would have undoubtedly fallen well below the values recorded. Had this been the case, the 2003-04 crop year's ratio would have been 4.2 instead of 5.6. This 1.4-turn differential draws attention to the fact that the primary elevator system has improved its handling efficiency by an estimated 33.1% over the course of the last five 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.

Figure 56: Relative Change in Primary Elevator Storage Capacity and Average Stock Levels



In concert with the 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 a low of 2.5 million tonnes, almost one-third less than the 3.7 million tonnes it had been four years earlier. And although the average for the 2003-04 crop year increased by 7.6% to 2.7 million tonnes, it still stood some 27.2% below the GMP's first year benchmark. [See Table 3B-3 in Appendix 3.]

The 27.2% decline in primary elevator inventories marginally exceeded the 25.9% reduction in year-end storage capacity. This implies that slightly less grain was being maintained in inventory per unit of storage capacity in the 2003-04 crop year than in the first year of the GMP. And while the differential between these rates of decline has narrowed from the 7.7-percentage-point spread observed in the 2001-02 crop year, it calls attention to the fact that stock levels are sensitive to structural changes in the primary

elevator system. In addition, there is sufficient evidence to indicate that the real reduction in stock levels observed during the 2001-02 and 2002-03 crop years was largely a function of the deteriorating grain supply, rather than any coordinated effort to reduce grain inventories. What's more, the quarterly capacity utilization rate rebounded to an average of 53.2% in the 2003-04 crop year, from 47.9% a year earlier.[89]

Just as the average stock level has moved generally lower, so has the average amount of time spent by grain in inventory. Over the course of the past five crop years, the average number of days-in-store fell by 17.5%, to 34.4 days from 41.7 days. And although this reduction was not as deep as that for inventories, the 2003-04 crop year's 34.4-day average marked the lowest achieved under the GMP. It should be noted, however, 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 having climbed to a record 47.9 days. [See Table 3B-4 in Appendix 3.]

Figure 57: Relative Change in Average Weekly Stock Levels and Average Days-in-Store

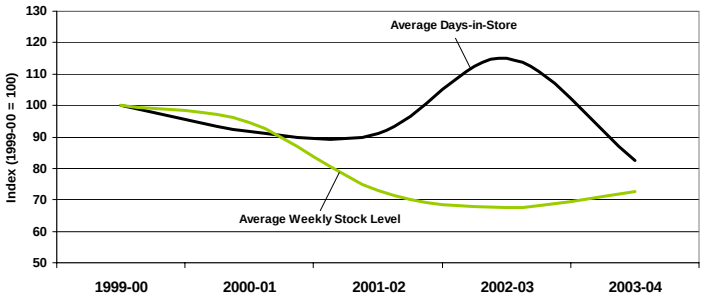
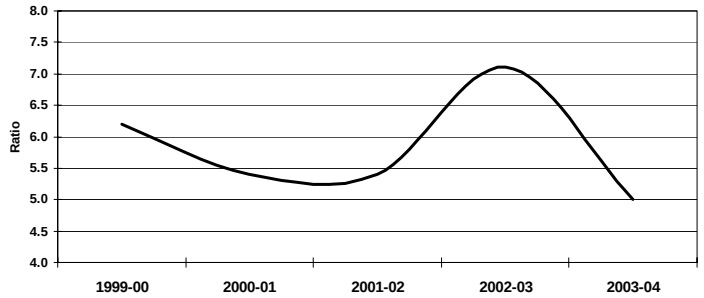


Figure 58: Primary Elevators – Stock-to-Shipment Ratio



The average number of days-in-store for all provinces posted substantial year-over-year decreases in the 2003-04 crop year. Much the same was true for most individual grains, with the non-CWB grains having posted the broader declines. Worth mentioning is the fact that these results were spurred by generally better-than-average results for the fourth quarter, when the average number of days-in-store dropped to 22.7 days, the lowest level experienced during the course of the GMP.[90] The principal changes in these values are summarized as follows:

Province	Days-in-Store	Change	Grain	Days-in-Store	Change
British Columbia	31.1 days	Down 45.0%	Non-CWB Grains		
Alberta,	29.1 days	Down 35.8%	Peas	18.3 days	Down 68.5%
Saskatchewan	40.7 days	Down 29.3%	Canola	22.5 days	Down 43.9%
Manitoba	29.2 days	Down 13.9%	Oats	23.3 days	Down 39.9%
			Flaxseed	19.5 days	Down 25.4%
			CWB Grains		
			Barley	24.6 days	Down 43.3%
			Wheat	40.9 days	Down 24.0%
			Durum	52.1 days	Up 3.5%

[89] Over the course of the past five crop years, the quarterly capacity utilization rate has moved routinely around an average of 51.0%, from a low of 39.9% to a high of 59.4%. The 53.2% cited here for the 2003-04 crop year, however, denotes a comparatively greater use of available capacity than at any other point under the GMP save that of 1999-2000 crop year.

[90] According to the CWB, country elevator space averaged 46.3% during the fourth quarter, reflecting reduced farmer deliveries relative to outward shipments. The average weekly stock level during this period fell to just 2.0 million tonnes.

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 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.[91]

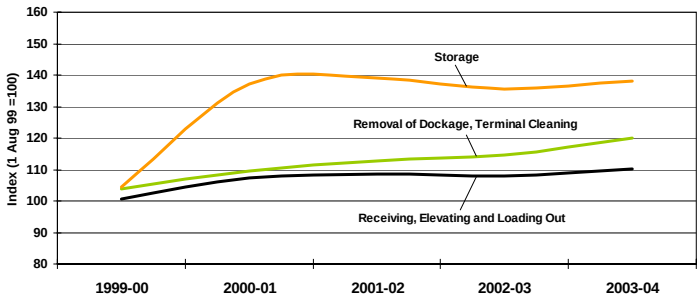
A review of the average weekly stock-to-shipment ratios recorded under the GMP reveals that it has seldom fallen below a value of 5.0, be it on a quarterly or annual basis. Such a multiple implies that the grain inventories maintained within the primary elevator system have generally far exceeded the volume required. This was particularly evident in the 2002-03 crop year when reduced grain sales prompted a significant drop in primary-elevator throughput, which resulted in the average stock-to-shipment ratio climbing to 7.1, the highest annualized value recorded under the GMP.[92] With the 2003-04 crop year's upturn in volume, the ratio fell back by 29.4% to 5.0. Moreover, this annualized value constitutes the lowest observed under the GMP, outdoing the previously established low of 5.4 by a further 7.4%. [See Table 3B-5 in Appendix 3.]

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.[93]

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.

Figure 59: Relative Change in Elevator Handling Charges



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 the receiving, elevating and loading out of grain. Through to the end of the 2002-03 crop year, these rates had risen by a total of 7.9%. During the course of the 2003-04 crop year they increased a further 2.2%, bringing the cumulative increase for the last five years to 10.3%.[94]

The rates in place for the removal of dockage are the only ones to have posted increases in each of the last five crop years.[95] For the 2003-04 crop year, these rates were raised by about 4.6%. This resulted in the composite price index having climbed 19.9% under the GMP.

[91] 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.

[92] The GMP's highest stock-to-shipment ratios were actually recorded in the second and third quarters of the 2002-03 crop year, when they reached 8.3 and 8.8 respectively.

[93] 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.

[94] By way of comparison, the Industrial Product Price Index increased by 8.3% during this period.

[95] 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.

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 had pulled back moderately by the end of the 2002-03 crop year, a 2.1% increase in the 2003-04 crop year resulted in storage charges that were effectively 38.2% higher than at the beginning of the GMP. [See Table 3B-6 in Appendix 3.]

3.3 Rail Operations *[Measurement Subseries 3C]*

The volume of grain moved in covered hopper cars during the 2003-04 crop year posted a year-over-year increase of 62.4%, to 19.9 million tonnes from 12.3 million tonnes the year before.[96] Furthermore, all ports experienced a major increase in the amount of grain handled. With a 114.9% increase, the most significant gain was registered against movements to Vancouver, which climbed to 10.2 million tonnes from 4.7 million tonnes a year earlier.[97] This was in turn followed by Thunder Bay with a 25.5% increase to 6.4 million tonnes; Prince Rupert with a 35.9% increase to 2.9 million tonnes; and Churchill with a 41.1% increase to 0.5 million tonnes.

As a result of the overall improvement in the grain supply, railway shipments from every province in western Canada posted a substantive increase. More than half of the 7.7-million-tonne net increase in volume came from Alberta, where rail shipments increased by 4.1 million tonnes (or 115.4%) to 7.6 million tonnes. This was in turn followed by increases of 3.3 million tonnes (or 53.8%) for shipments from Saskatchewan, and 0.3 million tonnes (or 10.4%) for those from Manitoba. Shipments from origins in British Columbia remained effectively at zero.[98] [See Tables 3C-1, 3C-2, and 3C-3 in Appendix 3.]

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 and in western Canada, and then returning the empty railcar back to the prairies for reloading. In the 2003-04 crop year, the overall car cycle decreased by 18.0%, to an average of 16.7 days from 20.4 days a year earlier.[99] [See Table 3C-4 in Appendix 3.]

Improvements in both the loaded and empty transit segments of the car cycle were also registered. The overall loaded transit time – which bears directly on the speed with which grain moves through the GHTS – decreased by 12.1%, to an average of 8.9 days from 10.1 days the year before. This was accompanied by a 23.8%

[96] The overall volume of grain cited here as having moved by rail to Western Canadian export positions in the 2003-04 crop year contrasts with the 20.7 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 wider tonnage volume.

[97] It should be noted that Vancouver's gain was greatly enhanced as a result of the comparison having also been made against reduced traffic volumes as a result of the labour strife that closed the port's licensed terminal elevators for four months in the 2002-03 crop year.

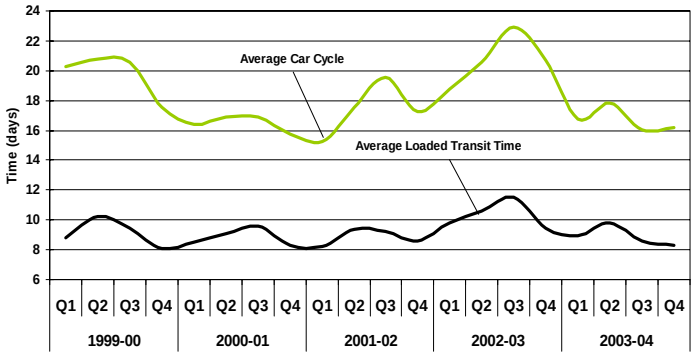
[98] Statistics relating to the railway movement of grain in western Canada centre on the volume handled by federally regulated carriers. Given that much of the grain originating in British Columbia is handled by BC Rail, the volume handled in line-haul movements by federally regulated carriers has proven to be comparatively small – amounting to well below 100,000 tonnes annually. In 2002 the Canadian National Railway entered into a private haulage agreement with BC Rail that saw traffic originating on CN's line in the Dawson Creek area moved to Vancouver by BC Rail instead. The Canadian Transportation Agency deemed that BC Rail's movement of this traffic effectively removed it from being considered a regulated grain for the purpose of calculating the revenue cap. In a reflection of this status change, CN ceased reporting any information concerning these movements in the 2002-03 crop year. Although this was subsequently negated through CN's acquisition of BC Rail on 20 July 2004, the volume of grain moved in the closing days of the 2003-04 crop year was negligible.

[99] Western Canada's average car cycle of 16.7 days is derived from 119,420 movements: 49,498 in the Vancouver corridor; 45,201 in the Thunder Bay corridor; and 24,721 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.

decrease in the car cycle's empty transit time, which fell to an annualized average of 7.8 days from its 10.2-day average in the 2002-03 crop year.

As discussed in the Monitor's previous reports, much of the observed elongation in these times since the close of the 2000-01 crop year stemmed from a drought-induced reduction in the fleet's productivity. Alternatively, the 2003-04 crop year's upsurge in grain traffic had an overarching positive impact on the railways' average car cycle, with improvements noted in all corridors. Despite the effects of a harsh winter on railway operations, the average car cycle fell just 0.3 days short of the 16.4-day record set under the GMP three years before.

Figure 60: Average Railway Car Cycle

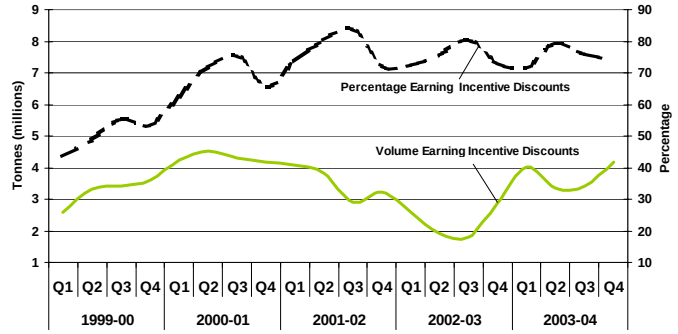


With a 38.2% reduction in its average car cycle, movements in the Prince Rupert corridor posted the most pronounced year-over-year improvement. As compared to the 22.5-day average of the previous year, individual movements in the 2003-04 crop year took an average of 13.9 days to complete, and earned the distinction of being the lowest realized thus far under the GMP. In addition, the port's 35.9% increase in volume effectively increased the corridor's relative weighting, thereby contributing even further to a betterment of the overall average. This was followed by movements in the Vancouver corridor, where the car cycle fell to an annualized average of 17.8 days, a decrease of 22.5% from the 23.0-day average of the year before. In the Thunder Bay corridor, the more muted reduction of 6.7% brought the annualized average down to 17.0 days from 18.2 days.

It is important to recognize, however, that the observed improvement in the car cycle also reflects changes in the mix of traffic. It would appear that recent changes in the mix have been instrumental in reducing the average car cycle within western Canada. In particular, Manitoba and Saskatchewan appear to have provided much of the grain shipped to eastern Canada, the United States, and Mexico. This is supported by the fact that their shares of the grain directed to the four ports in western Canada actually fell in comparison to that of Alberta in the 2003-04 crop year.

This was perhaps most evident in the Vancouver corridor, where the proportion of grain shipped from Saskatchewan in the 2003-04 crop year declined to 40.3% from 48.3% a year earlier. This was also the case for grain shipped from Manitoba, which fell to 4.2% of the total from 9.1% in the 2002-03 crop year. In contrast, Alberta's share of these shipments rose to 55.5% from 40.5% the year before. Moreover, in its fourth-quarter the province's share reached 62.8%. Owing to the comparatively shorter distances involved in movements from Alberta, this increased weighting undoubtedly helped reduce the average car cycle in the Vancouver corridor, and may well have helped counter the observable effects of this past winter's service disruptions.

Figure 61: Railway Volume Earning Incentive Discounts



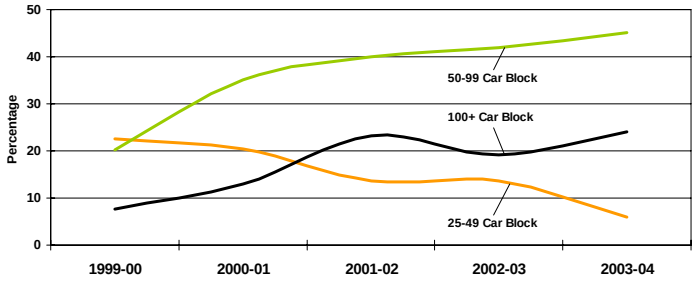
Multiple-Car Blocks

During the 2003-04 crop year, the railways handled 15.0 million tonnes of grain under the incentive programs designed to encourage shipments in larger multiple-car blocks. This was second only to the 17.3 million tonnes moved under these programs in the 2000-01 crop year. Yet these volumes are not directly comparable since CN eliminated 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 increased to an estimated 75.1% from 74.8% the year before. Moreover, since the beginning of the GMP this proportion has risen steadily upwards from 50.4%.[100] However, fluctuations in observed quarterly values suggest that a ceiling in the range of 75% to 85% may be forming. [See Table 3C-5 in Appendix 3.]

Use of the largest block sizes under these incentive programs, namely those of 50-99 railcars as well as 100 or more railcars, has proven most popular with the grain companies. This stems simply from the fact that they provide the deepest monetary discounts, and allow the grain companies to realize the greatest financial returns. Over the course of the past five crop years, the share of total volume moving in these two blocks has climbed to 69.1% from 27.8%. Movements in blocks of 50-99 cars constitute the largest single segment, with its share having increased to an estimated 45.1% from 20.2% in the 1999-2000 crop year. This was followed by movements in blocks of 100 or more railcars, which grew to an estimated 24.0% of the total from 7.6% in the same period.

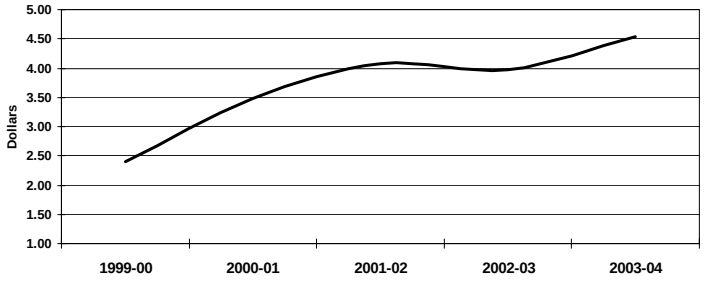
Figure 62: Composition of Multiple-Car Block Incentive Movements



Much of this migration towards movements in larger car block sizes appears to have been fuelled by increases in the discounts offered by the railways, particularly for shipments in blocks of 100 or more cars. At the same time, there can be little doubt that the reduction in the discounts applicable on shipments in blocks of 25-49 railcars has also been a factor. Whereas 22.6% of all shipments in the 1999-2000 crop year earned these lesser discounts, only 6.0% did so by the end of the 2003-04 crop year.

The total value of the discounts earned by grain shippers – estimated as a gross savings in railway freight charges – has more than doubled in the last five years, to $67.9 million from $31.1 million. The majority of the gain, $21.0 million, was derived from an overall increase in the volume of grain shipped under these programs in the 2003-04 crop year. Even so, adjustments to the per-tonne discounts offered by the railways resulted in another $15.8 million having been saved.

Figure 63: 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 2002-03 crop years, the average discount earned under these programs climbed to an estimated $3.97 per tonne from $2.41 per tonne.[101] The 2003-04 crop year saw this increased by another 14.5%, to $4.54 per tonne. [See Table 3C-6 in Appendix 3.]

[100] 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.

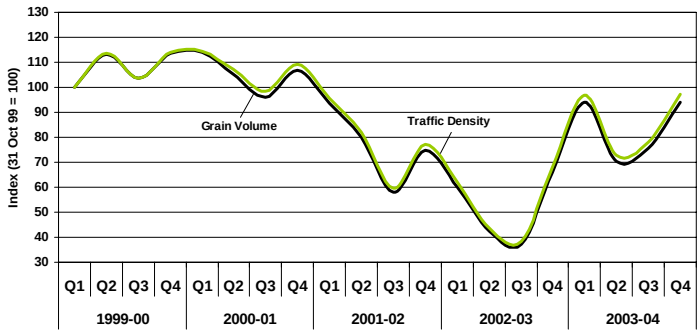
[101] The estimated discount per tonne deals exclusively with incentive movements to the four ports located in western Canada.

Traffic Density

A broad indicator of railway efficiency is traffic density. With a quarterly average of 263.8 originated tonnes per route-mile, overall density in the 2003-04 crop year was 62.7% greater than the 162.1 tonnes per route-mile observed a year earlier. This, however, was still 20.1% below the 330.3 tonnes per route-mile recorded in the first year of the GMP.[102]

The limited transformation of the railway network over the past five years has largely sensitized this indicator to changes in traffic volume alone.[103] 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 trends outlined in Section 1.4.

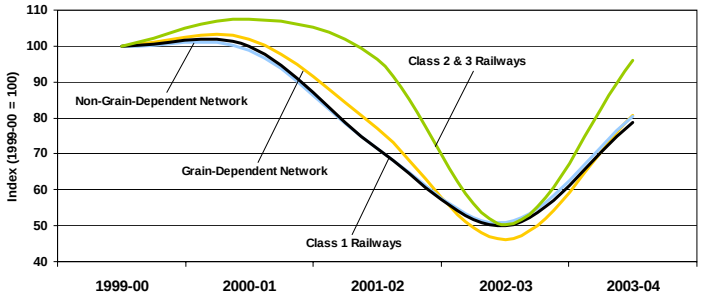
Figure 64: Relative Change in Traffic Density and Grain Volumes



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 in fact is largely a reflection of the changes that saw the infrastructure of several new shortline railways taken into account, and that of BC Rail removed, since the beginning of the GMP.[104]

This distortion can largely be avoided if the base network is less prone to continual redefinition. Such is the case when the densities of the grain-dependent, and non-grain-dependent, networks are compared. The year-over-year changes in density appear to have moved in tandem, with indexed net declines of 19.4% and 19.6% respectively by the end of the 2003-04 crop year.[105] But in fact, the grain-dependent network's 11.1% reduction in infrastructure tempered the impact of a 26.8% reduction in originated tonnage. Had the rate of infrastructure reduction for the grain-dependent network matched the much lesser 0.7% of the non-grain-dependent

Figure 65: Relative Change in Railway Traffic Density



[102] 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.

[103] Changes in the railway infrastructure resulted in a 3.1% improvement in traffic density under the GMP.

[104] The infrastructure of BC Rail was removed from this grouping as a result of CN's acquisition of this Class 2 railway in the fourth quarter of the 2003-04 crop year.

[105] For presentation purposes, the 19.4% and 19.6% reductions in the densities of the grain-dependent, and non-grain-dependent, networks cited here are based on a comparison of year-end average values, and are depicted visually in Figure 64. These differ somewhat from the respective 12.6% and 13.4% declines specified in Table 3C-7, which are instead indexed against values for the first quarter of the 1999-2000 crop year. This does not materially alter the conclusions drawn here.

network, then the resultant density decline would have been a comparatively steeper 26.3%. This merely reiterates the fact that there has been greater erosion in the traffic base of the grain-dependent branch line network. [See Table 3C-7 in Appendix 3.]

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. 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.[106]

To achieve this, the railways chose a two-pronged approach that involved adjusting their published single-car freight rates as well as the incentive discounts applicable on the movement of grain in multiple-car blocks. With the close of the 2002-03 crop year, railway pricing decisions had pushed nominal freight rates up by about 3.8% from their 1999-2000 crop year levels.[107] Incentive discounts had also been increased for the larger multiple-car blocks at the beginning of the 2000-01 crop year, but had remained unchanged through to the end of the 2002-03 crop year.[108] [See Tables 3C-8 and 3C-9 in Appendix 3.]

Although the revenue cap accorded both CN and CP greater freedom in setting freight rates, their pricing decisions have generally been similar. At the beginning of the 2003-04 crop year, however, both carriers implemented decidedly different rate structures. With minor exception, CN maintained the rate structure that had prevailed throughout the preceding crop year.[109] In contrast, CP effectively chose to roll back its rates by approximately 1.0%.

In addition, both carriers made the first significant changes to their respective incentive programs since the beginning of the 2000-01 crop year. Firstly, CN eliminated its incentives for grain moving in blocks of 25-49 railcars, while CP cut its corresponding incentive from $1.00 per tonne to $0.50. Neither carrier chose to alter their existing $4.00-per-tonne discount for movements in blocks of 50-99 railcars. But whereas CN also elected to maintain the discount it offered for movements in blocks of 100 or more cars at $6.00 per tonne, CP increased its discount to $7.00 per tonne.

Both carriers also changed the discounts that applied to their shuttle services. Building on its 100-car discounts, CN moved to add a separate efficiency payment of $8,700 per train, which effectively raised its Shuttle discount from $6.50 per tonne to $7.00. CP, however, substantially restructured its incentives to create a scale of discounts based on the number of shuttle trains a shipper committed itself to over time. Compared with that offered by CN, the scope of CP's discounts greatly enhanced the potential savings that could be realized by shippers.[110]

These actions served to make CP the more price-competitive Class 1 carrier in western Canada. With 54.3% of the total unloads at the four ports in western Canada in the first quarter, it initially appeared that CP had

[106] 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.

[107] The 3.8% increase cited represents a weighted average increase in published tariff rates for both CN and CP.

[108] Since 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.

[109] CN increased some rates, but these were selectively applied, and largely pertained to origins in northern Saskatchewan and the Peace River area.

[110] The discounts offered by CP could exceed $9.00 per tonne.

gained some competitive ground against CN.[111] However, the second quarter saw CP's share fall to 46.6%, and to 40.2% in the third. There can be little doubt that some of this decline reflects the degree to which shippers disaffected by CP's winter operating problems were moved to switch to CN .[112] Yet it could also have reflected the impact of other market forces, or even a shift in the balance between regulated and non-regulated grain movements as discussed earlier.

As opposed to previous crop years under the GMP, both carriers brought forward a wave of secondary rate increases midway through the third quarter. In the case of CN, the carrier increased its rates by about 1.5%. CP on the other hand, increased its rates by a marginally greater 2.0%. By the end of the 2003-04 crop year, the posted rates for CN had risen by about 1.5% from those in place a year earlier, while those of CP had increased by about 1.0%. This had the effect of narrowing the gap that had been opened between the carriers in August 2003, but which still generally favoured CP. The carrier's market share also rebounded, increasing to 49.7% in the fourth quarter, and to 48.2% for the crop year as a whole.

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.[113]

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.[114] For the 2003-04 crop year, these adjustments resulted in CN and CP being accorded individual revenue caps of $322.0 million and $309.6 million respectively, or $631.6 million on a combined basis.[115] [See Table 3C-10 in Appendix 3.]

At the same time, the Agency determined that the statutory grain revenues for CN and CP amounted to $320.8 million and $309.9 million respectively. Although on a combined basis, this meant that the industry's grain revenues came $0.9 million (or 0.1%) below the $631.6 million allowed, the individual carrier results were mixed. Specifically, while CN's revenue fell $1.2 million (or 0.4%) below its revenue cap, CP's revenue was $0.3 million (or 0.1%) more than allowed. Moreover, this marked the first instance of a prescribed carrier having exceeded its revenue cap, albeit by a very small margin. As a result, the Agency ordered CP to pay $338,008 – comprised of its excess revenue along with a 5% penalty – to the Western Grains Research Foundation.

Collectively, these results indicate that the relative difference between the amount of revenue the railways were entitled to earn, and that which they actually did earn, narrowed significantly in the 2003-04 crop year. In fact, the crop year's 0.1% margin of difference proved to be the smallest recorded, and departed clearly from a trend

[111] During the first two years of the GMP, CP's share of the total unloads at the four ports in western Canada averaged 47.3%. In the 2002-03 crop year, that share jumped to 57.8% a reflection of the fact that the drought had had a harsher impact in CN's service area. With a more equitable distribution of grain production in the 2003-04 crop year, it was assumed that CP's share would have reverted back to something approaching what it had been initially under the GMP. The fact that CP secured a 54.3% share in the first quarter strongly suggested that the carrier's pricing actions had helped enhance its market position.

[112] During this period, shippers that had the option of using either CN or CP, reported shifting grain volumes over to CN-served elevators in order to mitigate the impact of CP service problems on their own operations.

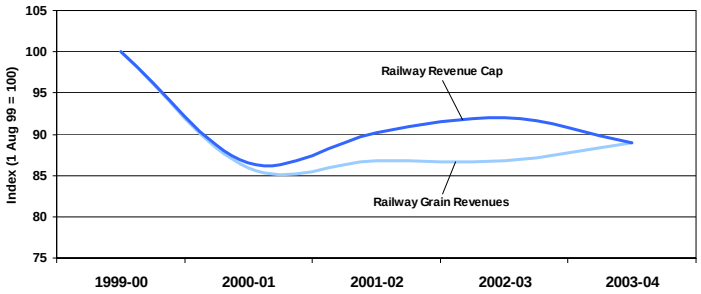
[113] The values cited here in determining the revenue cap were drawn from railway traffic statistics for the 1998 calendar year.

[114] 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 2003-04 crop year, the Agency determined the value of the volume-related composite price index to be 1.0195. See Canadian Transportation Agency Decision Number 215-R-2003 dated 24 April 2003.

[115] See Canadian Transportation Agency Decision Number 710-R-2004 dated 30 December 2004.

that saw it increase 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 widening of this margin was attributable to the expanded use by grain companies of the incentive discounts applicable on grain shipped in blocks of 25 or more railcars during this period. 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.[116] Among these are the reductions that are allowed as a result of the railways' amortized contribution towards the development of non-railway-owned grain facilities (often referred to as industrial development funds). The relatively fixed, rather than variable, nature of such amounts in a commercial environment characterized by two consecutive years of declining grain volumes likely also contributed to the widening of the gap during this period.[117]

Figure 66: Railway Revenue Cap - Compliance



The limited expansion in the proportion of movements that earned incentive discounts in the 2003-04 crop year, which increased to 75.1%, along with a lessening of the influence given to fixed reductions as a result of increased grain volumes, did much to reduce the gap between allowable, and actual, railway revenues. Even so, the thinness of the 2003-04 crop year's margin suggests that both carriers have become more adept at managing their revenues under the new regime. Of the two carriers, CP has consistently secured the narrowest absolute variance: 0.7% in the first year; 3.0% in the second; 2.8% in the third; and 0.1% in the fourth. For CN the variances corresponded to 0.8%, 4.6%, 9.0%, and 0.4% respectively. Their improved proficiency might well have been reflected in their approach to pricing in the 2003-04 crop year.

Traditionally, both carriers set the coming crop year's freight rates just ahead of its commencement. Often, these adjustments were similar, if not identical. And while both carriers ultimately increased their freight rates and changed some of their incentive discounts during the course of the 2003-04 crop year, they did so independently and in markedly different ways. Perhaps most telling is the fact that in addition to the changes made at the beginning of the 2003-04 crop year, both carriers instituted a round of secondary adjustments in March 2004.

To an extent, the Monitor surmises that these latter increases to the published freight rates of both carriers were aimed at reclaiming revenue that may have been unnecessarily surrendered as a result of their earlier pricing decisions.[118] In essence, the March increases were corrective measures intended to maximize each carrier's revenue, while still respecting the limits imposed by the revenue cap. In fact, there is much to suggest that the incentive discounts offered by the railways are their primary means of attracting new business, while general freight rate adjustments are now used as an instrument with which to fine-tune statutory revenues.

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[116] 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.

[117] 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.

[118] The Monitor is of the opinion that CN and CP both possess the information systems needed to continuously examine their own grain movements, and effectively gauge what their respective statutory grain revenues and revenue caps would be at any given moment in time.

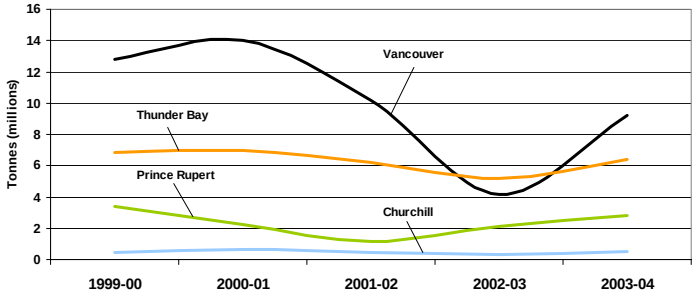
None of this should be construed as indicating that railway competition has been diminished. Although the limitations of the data available to the Monitor make it difficult to distinguish between the effects of specific market forces, there is sufficient evidence to support the contention that CP's market share was enhanced early in the 2003-04 crop year as a result of its decision to initially increase its largest incentive discounts and reduce its general freight rates, while CN opted largely to extend those it already had in place. Even if subsequent events later tempered this gain in CP's market share, it remains nevertheless true that both carriers assumed, and maintained, distinctly different approaches to the pricing of their services in the marketplace while also complying with the revenue cap.

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 19.0 million tonnes in the 2003-04 crop year.[119] This represented a 60.6% increase from the 11.8 million tonnes recorded a year earlier. [See Table 3D-1 in Appendix 3.]

The resolution of the labour dispute that effectively closed the port of Vancouver for several months in the 2002-03 crop year helped increase the volume directed through Vancouver by 122.2%, to 9.2 million tonnes from 4.2 million tonnes a year earlier. In addition, Prince Rupert also experienced a sharp rise in its handlings, which climbed to 2.8 million tonnes from 2.1 million tonnes the year before. Together, their volumes served to increase the overall share of grain moved through west coast ports to 63.5% from 53.3%.

Figure 67: Western Canadian Ports – Grain Throughput

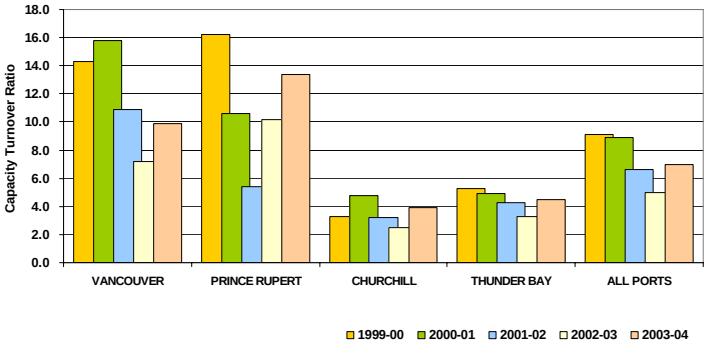


At Thunder Bay, the dominant eastern gateway, throughput increased by 23.5% to 6.4 million tonnes. Churchill, the port with traditionally the lowest volume, saw its throughput increase by 54.2% to over 0.5 million tonnes.

Capacity Turnover

The increase in throughput was the chief force behind a 40.0% gain in the capacity-turnover ratio of the GHTS's terminal elevators, which climbed to 7.0 turns from 5.0 turns a year earlier. Moreover, year-over-year gains were noted for each of the ports. With an increase of 56.0% Churchill posted the sharpest rise, to 3.9 turns from 2.5 turns the year before. This was followed by Vancouver, up by 37.5% to 9.9 turns; Thunder Bay, up by 36.4% to 4.5 turns; and Prince Rupert, up by 31.4% to 13.4 turns. [See Table 3D-2 in Appendix 3.]

Figure 68: Average Terminal Capacity Turnover



Thunder Bay's capacity-turnover ratio was

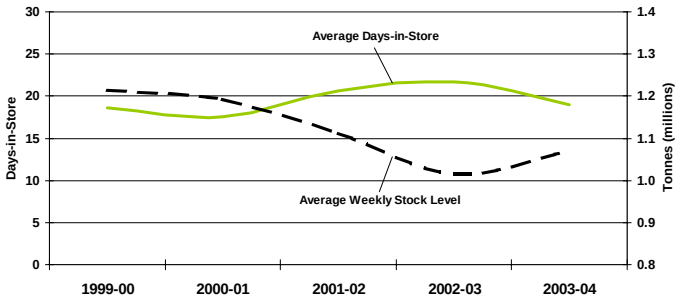
[119] Includes grains, oilseeds and special crops covered by the Canada Grain Act as recorded by the Canadian Grain Commission at unload. May differ from data from railway sources based on originated traffic.

bolstered somewhat by the de-licensing of Agricore United's "M" terminal. This was because the facility's 91,000 tonnes of storage capacity had been idle for much of the 2002-03 crop year, which helped to draw down the port's overall ratio to 3.3 in that crop year. But with the company having redirected any grain the elevator would have handled through to its remaining facilities, it effectively achieved an 18.4% improvement in handling efficiency for the 2003-04 crop year. Moreover, this improvement translated into a 6.4% gain for the port of Thunder Bay as a whole. Had this net decrease in licensed storage capacity not been taken into account, the port's ratio would have been marginally lower.[120]

Terminal Elevator Inventories

In addition to increasing the capacity-turnover ratio, the terminal elevator system's higher throughput also brought about an increase in the amount of grain held in inventory at these facilities. The average weekly stock level rose by a modest 5.2%, to 1.1 million tonnes from 1.0 million tonnes the year before.

Figure 69: Terminal Elevators – Weekly Stock Level and Days-in-Store



Wheat stocks traditionally account for about half of the system's overall inventories. But in the last crop year wheat stocks fell by 10.3%, to just under 0.5 million tonnes, which represented a lesser 43.5% of the total. This 53,200-tonne decline underscored the fact that the overall increase in inventories was derived chiefly from increases in the stocks of other grains. In addition to wheat, flaxseed was the only other grain to post a reduction, which fell by 16.6% to an average of 37,300 tonnes. Net increases in the stocks of durum, barley, canola, oats, and peas totalled 113,500 tonnes. Over half of this came from increases in barley and durum inventories, which rose by 40,700 tonnes and 29,500 tonnes respectively. [See Table 3D-3 in Appendix 3.]

To a large extent, the increase in terminal stocks was also accompanied by a decrease in the amount of time grain spent in inventory. The overall average number of days-in-store for the 2003-04 crop year shows a year-over-year decrease of 12.5%, falling to 19.0 days from 21.7 days the year before. Although component averages varied widely by both port and commodity, the improvements proved widespread. As was the case with country elevator stocks, the decline for the 2003-04 crop year was enhanced by a strong performance in the fourth quarter, when the average number of days-in-store at terminal elevators fell to the lowest level seen during the GMP – 16.0 days. [See Table 3D-4 in Appendix 3.] Some of the more pronounced changes are summarized as follows:

	Days in Store	Change	Remarks
Terminal Ports			
Churchill	17.0 days	Down 36.8%	The most significant change of all western ports
Prince Rupert	8.7 days	Down 17.9%	Lowest average number of days-in-store
Vancouver	17.6 days	Down 16.2%	
Thunder Bay	23.2 days.	Down 10.1%	
Notable Grains			
Barley,	36.4 days	Down 63.1%	The largest change
Oats	25.7 days	Down 58.3%	
Wheat	16.4 days	Down 23.4%	The lowest overall average of all grains

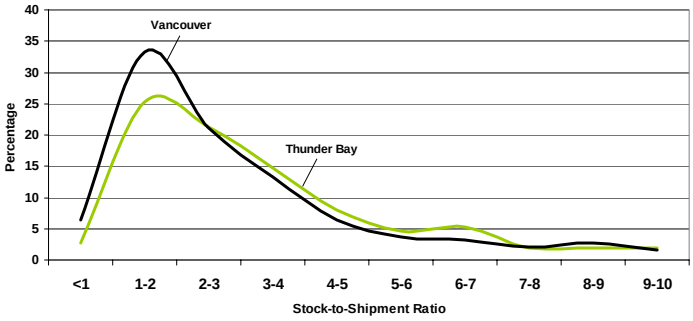
[120] The capacity turnover ratio of the terminal elevator network is an average based on individual facility handlings. Without being able to identify the volume of grain that would have passed through the now closed Agricore United facility, the magnitude of the improvement in the ratio for Thunder Bay, as well as that of the network as a whole, cannot be directly assessed.

Whether these stocks were sufficient to meet short-term demand can best be gauged by the average weekly stock-to-shipment ratio. 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.[121] For Vancouver, the posted average of all stock-to-shipment ratios – save that of oats – came in comfortably above a value of 2.0.[122] Four out of seven major grains showed year-over-year reductions as a result of the improved balance between supply and demand in the 2003-04 crop year. The ratio for wheat showed the most substantive decline, falling by 56.5% to 2.5. Other decliners included: flaxseed, down 22.9% to 6.3; barley, down 14.1% to 3.5; and peas, down 3.2% to 3.0. [See Table 3D-5 in Appendix 3.]

As with Vancouver, the average ratios for all stocks except oats at Thunder Bay were well above a value of 2.0. Here too, the ratios tied to four grains – specifically wheat, canola, oats and flaxseed – showed decreases from the previous crop year. The most sizeable reduction was posted by canola, which fell 51.9% to 3.2. Among the gainers, durum stocks showed the largest relative increase, rising 45.4% to 4.0. At Prince Rupert, the average ratio for wheat fell by 43.6% to 1.2.[123] The ratios posted by Churchill fell by 20.2% to 2.0 in the case of wheat, and climbed by 314.4% to 4.4 in the case of durum.

On the whole, these measures affirm that sufficient terminal stocks were generally maintained in the face of an upturn in throughput, and vessel demand. Although grade-based weekly stock-to-shipment ratios show greater variation, they also indicate that the stocks on-hand were generally sufficient to meet demand. [See Table 3D-6 in Appendix 3.]

Figure 70: Distribution of Weekly Stock-to-Shipment Ratios



Even so, stock shortages were not avoided entirely. When examining the frequency with which weekly stock-to-shipment ratios fall below a value of 1.0, the ports of Vancouver and Prince Rupert can be seen to have suffered grain shortages more often than Thunder Bay.[124] In fact, when comparing the frequency with which these shortfalls occurred, Vancouver can be seen to have experienced a shortage in about 6.3% of all cases. This was more than twice the 2.7% rate of occurrence at Thunder Bay.

Port Operations

A total of 726 vessels called for grain at western Canadian ports during the 2003-04 crop year, 39.6% more than the 520 noted the year before. What's more, with an average of 4.0 days, these vessels spent 7.0% less time in port than in the preceding crop year. This denoted the best average recorded under the GMP. On the whole, this performance underscores the fact that with few overall strains having been placed upon the GHTS during the 2003-04 crop year, and generally sufficient stocks of grain on hand at terminal elevators, vessels were able to avoid delays and reduce their turnaround times. [See Table 3D-7 in Appendix 3.]

[121] 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.

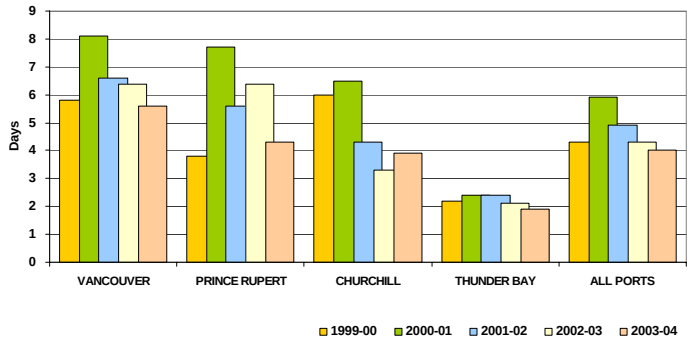
[122] A high proportion of direct hit shipments distorted the weekly ratios for oats.

[123] 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 five crop years covered by the GMP.

[124] A stock-to-shipment ratio of 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.

Prince Rupert showed the greatest overall reduction in the amount of time spent by vessels in port. Its average of 4.3 days fell by 32.4% from the 6.4-day average of the 2002-03 crop year.[125] In the case of Vancouver – where almost one-half of all vessel calls were made – the total amount of time spent in port averaged 5.6 days, with 2.4 days spent waiting to load, and 3.2 days loading.[126] This marked a 12.5% reduction from the 6.4-day average of a year earlier. Moreover, it constituted the port's best achievement under the GMP.

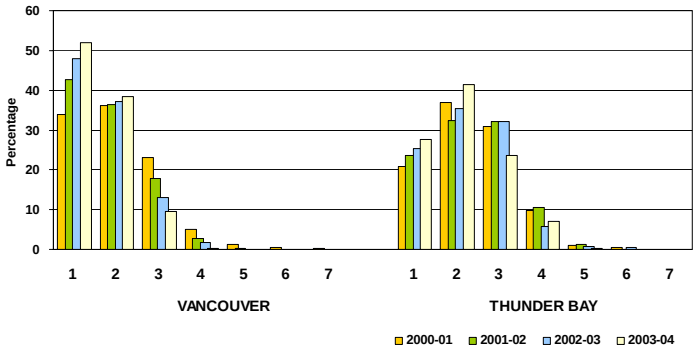
Figure 71: Average Vessel Time in Port



With a 1.9-day average, the overall amount of time spent by vessels in Thunder Bay came in 9.5% under the previous crop year's record-setting 2.1-day average. Of this, 0.6 days were spent waiting to load, and 1.3 days actually loading. Worthy of particular mention is the fact that Thunder Bay continues to post the lowest average of any western Canadian port, largely as a result of the greater regularity of vessel movements in the St. Lawrence Seaway. Against this general trend went Churchill, where a four-fold increase in the amount of time ships spent waiting in port added 1.5 days to the previous year's half-day average. It must be noted, however, that a 0.9-day reduction in the average amount of time spent loading actually helped to contain this increase. As a result, the average amount of time vessels spent in port rose by 18.2%, to 3.9 days from 3.3 days a year earlier.

The distribution of vessel time in port also shows that most ships required a lesser amount of time to clear. In the case of Vancouver, the proportion of vessels requiring more than five days in port fell to 41.4% from 54.9% a year earlier. Similarly, Prince Rupert saw its proportion fall to 24.3% from 40.7% in the same period. At Thunder Bay, where the proportion is traditionally even lower, only 1.7% required such lengthy stays versus 4.1% a year earlier. Only Churchill saw the proportion of vessels in port for longer than five days increase to 20.0% from 11.1% the year before. [See Table 3D-8 in Appendix 3.]

Figure 72: Number of Berths per Vessel



These results were partially fuelled by a reduction 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 declined marginally to 48.1% from 52.0% a year earlier. At Thunder Bay, the proportional decrease was somewhat smaller, and fell to 72.5% from 74.7% in the same period.[127] [See Table 3D-9 in Appendix 3.]

[125] The 6.4-day average cited for the 2002-03 crop year was heavily influenced by longer days in port during the first quarter, and the shifting of the vessel program in response to the labour disruption that effectively closed the port of Vancouver for much of the first half.

[126] 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.

[127] 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.

Demurrage and Dispatch

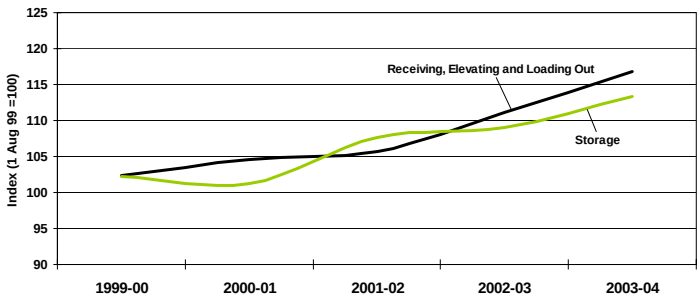
Members of the WGEA and the CWB reported total vessel demurrage costs and dispatch earnings to the Monitor.[128] Demurrage costs and dispatch earnings increased in aggregate at all ports during the 2003-04 crop year. Net earnings of $15.2 million reflect a 324.6% increase from the $3.6 million recorded for the previous crop year. At the Pacific Seaboard, demurrage costs increased from $0.7 million to $2.3 million (or 217.5%), while dispatch earnings increased from $1.9 million to $9.6 million (or 406.2%). Annual vessel demurrage at Churchill, Thunder Bay, and along the St. Lawrence Seaway, increased by 4,203.1%, from $57,500 to $2.5 million, while dispatch earnings increased by 321.2% – from $2.5 million to $10.3 million. To a degree, these substantial increases reflect the larger volumes handled during the 2003-04 crop year. The consistent, high-quality nature of the crop also contributed to the larger dispatch earnings. While only the exporters know the specific reasons for the increase in demurrage charges, there was an indication that the repositioning of stock needed to meet an increased east coast export program was a contributing factor. [See Table 3D-10 in Appendix 3.]

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 reduction in the average amount of time vessels spend in port along with the increase in net dispatch earnings, indicate that vessels are, in general, loading in accordance with the lay days provided within their charters. Still, there were some notable vessel delays that resulted in demurrage charges. It is, however, important to view these statistics in context, and to be cognizant of the varying risk management strategies employed among exporters. The number of lay days is negotiated as part of the vessel charter, and constitutes but one facet in the overall merchandising activities of these exporters.

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 2003-04 crop year these ranged from a low of about $8.00 per tonne for wheat, to a high of about $12.50 for canola. The fees assessed for storage ranged between $0.06 and $0.10 per tonne, per day.

Figure 73: 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 2003-04 crop year. The composite price index shows this increase as having amounted to 5.1% for a second consecutive year. This means that over the course of the past two crop years, these rates have risen by 10.5%. This denotes the main portion of the overall 16.8% increase in these rates since the beginning of the GMP.

Increases posted by Vancouver's terminal elevators ranged from 2.3% to 4.7%. At Prince Rupert, this spread went from zero to 7.8%. Thunder Bay saw changes that ranged from a 1.2% reduction to a 6.9% increase, with the outlier being a 12.4% increase in the rate for wheat. [See Table 3D-11 in Appendix 3.]

For a second consecutive year, Churchill's rates saw the most substantive increases. These spanned from 6.4% low to a high of 13.6%. It must be noted, however, that these increases appeared aimed at achieving greater parity with the comparatively higher per-tonne rates posted by other terminal elevator companies.

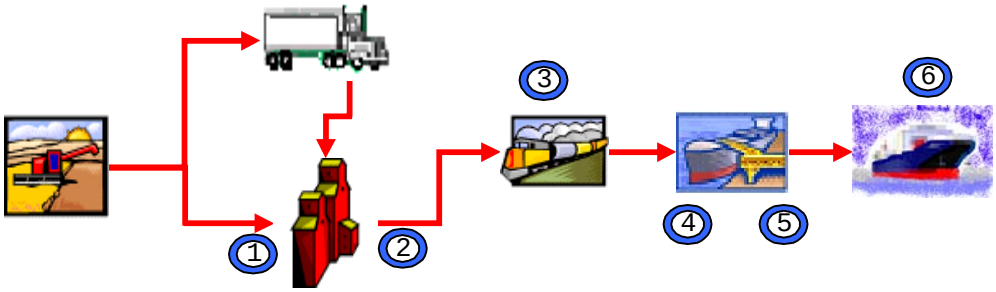
[128] Note should be made of the fact that the data – which is both un-audited and aggregated – pertains to vessel shipments made during each crop year and, as such, may vary from the figures presented in the financial statements of these organizations.

The charges for terminal storage have also risen since the beginning of the GMP. In the 2003-04 crop year, these rates rose by 4.0%, and brought the accumulated price increase over the last five years to 13.3%. Thunder Bay and Vancouver reported the largest year-over-year gains, with increases of 5.7% and 4.7% respectively. The overall increase in the composite price index was tempered by a 10.7% reduction in the rates posted by Prince Rupert.[129]

3.5 Summary Observations

As outlined in the Monitor's earlier reports, the supply chain model provides a framework for examining the workings of the GHTS as a whole. Moreover, the amount of time taken by grain as it moved through the supply chain can be taken as an indication of its overall effectiveness. In the 2002-03 crop year this amounted to an average of 79.7 days, which represented a significant deterioration from the 67.4 days realized a year earlier. Not only did the 2003-04 crop year see this reversed, its 62.3-day average beat the 2000-01 crop year's record low of 64.6 days by another 2.3 days (or 3.6%).

Figure 74: The GHTS Supply Chain



	SUPPLY CHAIN ELEMENT	TABLE	1999-00	2000-01	2001-02	2002-03	2003-04	SUPPLY CHAIN EFFECT
	SPEED RELATED							
2	Country Elevator – Average Days-in-Store	3B-4	41.7	38.3	38.0	47.9	34.4	▼
3	Average Railway Loaded Transit Time (days)	3C-4	9.2	8.8	8.8	10.1	8.9	▼
5	Terminal Elevator – Average Days-in-Store	3D-4	18.6	17.5	20.6	21.7	19.0	▼
	Average Total Days in GHTS		69.4	64.6	67.4	79.7	62.3	▼
	SERVICE / ASSET RELATED							
1	Average Country Elevator Capacity Turnover Ratio	3B-2	4.8	5.0	4.5	3.7	5.5	▲
4	Average Terminal Elevator Capacity Turnover Ratio	3D-2	9.1	8.9	6.6	5.0	7.0	▲
3	Average Railway Car Cycle (days)	3C-4	19.9	16.4	17.1	20.4	16.7	▼
6	Average Vessel Time in Port (days)	3D-7	4.3	5.9	4.9	4.3	4.0	▼

[129] 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.

This 17.4-day (or 21.8%) reduction in the pace at which grain moved through the GHTS stemmed mainly from a substantial decline in the amount of time grain spent in inventory. Over three-quarters of the reduction came from a 13.5-day (or 28.2%) decline in the primary elevator system's average number of days-in-store, which fell to an average of 34.4 days from 47.9 days the year before.

This was furthered by a 2.7-day (or 12.4%) reduction in the amount of time grain spent in inventory at terminal elevators, which fell to an average of 19.0 days from the preceding crop year's 21.7-day average. An additional 1.2 days was derived from a reduction in the railways' average loaded transit time, which fell by 13.5% to 8.9 days from the preceding crop year's 10.1-day average.

With these results, a few general observations concerning the supply chain's performance during the 2003-04 crop year are warranted:

- Firstly, an increase in the volume of grain handled by the GHTS has brought about noticeable improvements in the effectiveness of the supply chain. With increased activity, country elevator inventories turned over faster, and grain spent 28.2% less time in storage. This in turn brought about adjustments in railway service to meet prevailing demand, and reduced the average loaded transit time by 13.5%. The greater volume that also passed through the terminal elevator system also helped reduce the amount of time grain spent in inventory by 12.4%. In both the country and terminal elevator systems, the impact of lower inventories during the fourth quarter, as producer deliveries declined relative to shipments and exports, significantly influenced the annual results.

- Secondly, despite an increase in the volume already handled, the 2003-04 crop year's potential grain movement – as represented by a grain supply of 53.1 million tonnes – still falls short of the 62.6 million tonnes set in the first year of the GMP. In representing 84.9% of that first year's grain supply, the pressures brought to bear on the GHTS cannot be fully indicative of those that would be occasioned by a return to higher operating levels. As such, the performance of the GHTS in the 2003-04 crop year must be viewed as a partial test of the system's capabilities. Even so, problems – particularly as regards the supply of railcars – were encountered at this lower threshold.

- Thirdly, some of the difficulty associated with car supply may well have had less to do with railway efficiency than with the draw-down effects of allocating a greater proportion of carrying capacity to long-haul domestic and international markets. Although market forces may have augmented the volume of grain shipped by rail to eastern Canada, the US, and Mexico, it also detracted from the carrying capacity that would have otherwise been available to move grain to the four ports of western Canada.

- Fourthly, the overall effectiveness of the GHTS remains largely unchanged. That is to say, grain still moves through the system in much the same way, and in much the same timeframe, as it did when he GMP was introduced. This is reflected in terminal elevator storage times, and railway average loaded transit times, that are within but a few percentage points of their previous bests under the GMP. Still, the biggest gain has been brought on by reduction in the amount of time given over to the storage of grain in the country elevator system.

- Finally, the GHTS's continuing evolution into a network of comparatively fewer elevator facilities, with higher storage capacities, and the ability to load railcars in greater numbers than ever before, has allowed the grain companies and the railways to reduce their overall costs. The savings derived from these improvements in financial efficiency are being shared – at least in part – with producers through such competitive mechanisms as trucking premiums. These benefits have in turn ultimately allowed producers to offset – but not fully neutralize – escalations in the direct cost of country elevator handling, rail transportation, and terminal elevator handling.

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 – 2003-04 Crop Year

Port Performance

- *Increased volume did not hinder overall reliability of the GHTS in delivering grain to western Canadian ports.*
- *Reliability reflected in:*
  - *The average time spent by vessels in port was reduced*
  - *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 shipments at western Canadian terminal elevators generally resulted in significant reductions to the average weekly stock-to-vessel-requirements ratio.*
  - *Vancouver*
    - *Wheat – 3.5; down by 29.0% from last crop year.*
    - *Canola – 3.6; up 23.7%.*
  - *Thunder Bay*
    - *Wheat – 4.8; down by 29.3% from last crop year.*
    - *Canola – 3.0; down by 30.4%.*
- *Stock-to-shipment ratios reinforce findings relating to increased throughput.*
  - *Vancouver*
    - *CWB grains – 3.3; down by 24.7% from last crop year.*
    - *Non-CWB grains – 3.7; down by 14.4%.*
  - *Thunder Bay*
    - *CWB grains – 6.0; down by 9.2% from last crop year.*
    - *Non-CWB grains – 3.1; down by 39.4%.*
- *Terminal handling revenues climbed as a result of increased grain volumes.*
  - *Vancouver revenues totalled $134.9 million.*
    - *Up by 171.4% from last crop year.*
  - *Thunder Bay revenues totalled $61.7 million.*
    - *Up by 5.4% from last crop year.*
- *CWB carrying costs climbed as a result of increased grain volumes.*
  - *Pacific Seaboard carrying costs totalled $52.5 million.*
    - *Up by 134.3% from last crop year.*
  - *Thunder Bay carrying costs totalled $40.9 million.*
    - *Up by 35.7% from last crop year.*

Indicator Series 4 – Service Reliability

Table	Indicator Description	Notes	BASE 1999-00	CURRRENT REPORTING PERIOD (1) 2002-03	2003-04	% VAR	
	Port Performance [Subseries 4A]						
4A-1	Avg. Weekly Stock-to-Vessel Requirements Ratio – VCR – Wheat		3.1	4.9	3.5	-29.0%	▼
4A-1	Avg. Weekly Stock-to-Vessel Requirements Ratio – VCR – Canola		2.5	2.9	3.6	23.7%	▲
4A-1	Avg. Weekly Stock-to-Vessel Requirements Ratio – TBY – Wheat		5.6	6.8	4.8	-29.3%	▼
4A-1	Avg. Weekly Stock-to-Vessel Requirements Ratio – TBY – Canola		2.8	4.3	3.0	-30.4%	▼
4A-2	Avg. Weekly Stock-to-Vessel Requirements Ratio – Grade	(2)					
4A-3	Avg. Weekly Stock-to-Shipment Ratio – VCR – CWB Grains		3.5	4.3	3.3	-24.7%	▼
4A-3	Avg. Weekly Stock-to-Shipment Ratio – VCR – Non-CWB Grains		3.6	4.3	3.7	-14.4%	▼
4A-3	Avg. Weekly Stock-to-Shipment Ratio – TBY – CWB Grains		4.6	6.6	6.0	-9.2%	▼
4A-3	Avg. Weekly Stock-to-Shipment Ratio – TBY – Non-CWB Grains		3.3	5.0	3.1	-39.4%	▼
4A-4	Terminal Handling Revenue ($millions) – Vancouver		$192.7	$49.7	$134.9	171.4%	▲
4A-4	Terminal Handling Revenue ($millions) – Thunder Bay		$82.1	$58.6	$61.7	5.4%	▲
4A-4	CWB Carrying Costs ($millions) – Pacific Seaboard		$63.3	$22.4	$52.5	134.3%	▲
4A-4	CWB Carrying Costs ($millions) – Thunder Bay		$31.3	$30.1	$40.9	35.7%	▲

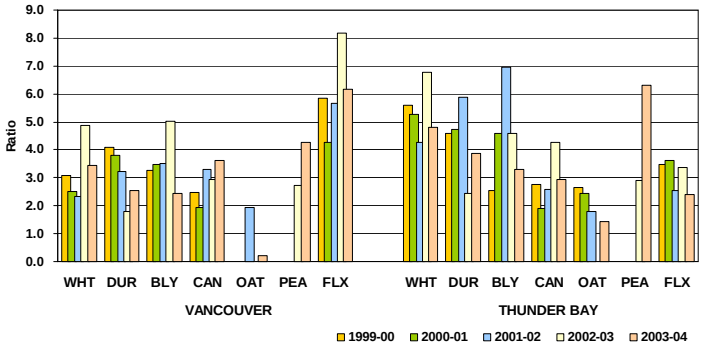
(1) – In order to provide for more direct comparisons, the values for the 1999-2000 through 2003-04 crop years are "as at" or cumulative to 31 July unless otherwise indicated.
(2) – Changes in the data cited cannot be depicted within the summary framework presented here. The reader is encouraged to consult the detailed data tables found in Appendix 3 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.[130]

With respect to the average weekly stock-to-vessel requirements ratios for grains held in inventory at the port of Vancouver, the 2003-04 crop year produced some sharp year-over-year changes. Among CWB grains, the ratio posted for wheat fell by 29.0%, to 3.5 from 4.9 a year earlier. This was joined by a 51.5% decline in the average ratio for barley, which fell to 2.4 from 5.0. Durum, on the other hand, posted an increase of 40.1% to 2.5 from 1.8 the year before. In the case of non-CWB grains, the results proved equally mixed: increases in the ratios for canola and peas, while that of flaxseed declined. With the exception of oats, none of the ratios fell below a value of 2.0.

Figure 75: Stock-to-Vessel Requirements Ratio



At Thunder Bay, decliners nudged out gainers. Paralleling the case in Vancouver, the ratios for wheat and barley posted declines of about one-third from their 2002-03 crop year highs, to 4.8 and 3.3 respectively. Similarly, the average ratio for durum rose by 57.6% to 3.9 from 2.5 a year earlier. Among the non-CWB grains, the ratios for canola and flaxseed declined by 30.4% and 28.8% respectively, while that of peas more

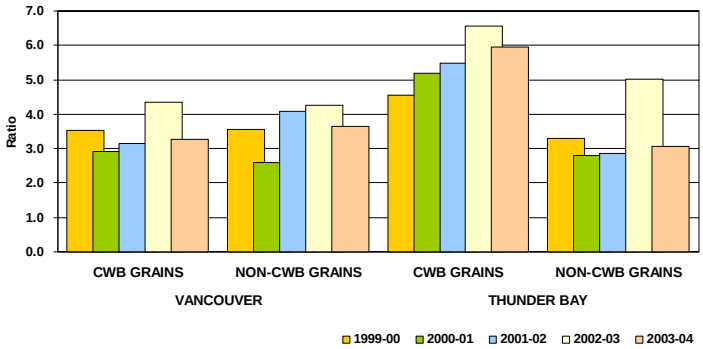
[130] Ratio values of one or more denote sufficient volume on hand to meet short-term demand. Upward or downward movements in this ratio are indicative of a relative change in short-term inventory levels. It should be noted that these ratios can display great variability owing to the uneven nature of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

than doubled to 6.3. Here too, none of the average ratios fell below a value of 2.0. [See Table 4A-1 in Appendix 3.]

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 annual shipment of two to three million tonnes 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 3.]

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 76: 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 24.7% during the 2003-04 crop year, to 3.3 from 4.3. The average ratio for non-CWB grains fell by 14.4%, to 3.7 from 4.3. At Thunder Bay, the average ratio for CWB grains declined to 6.0 from 6.6 (or 9.2%), while the average for non-CWB grains fell to 3.1 from 5.0 (or 39.4%). Clearly, these values reveal that ample stocks were on hand to meet the prevailing short-term demand. [See Table 4A-3 in Appendix 3.]

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 3.]

Total reported terminal revenues for the 2003-04 crop year increased dramatically at Vancouver, rising from $49.7 million to $134.9 million (or 171.4%). At Thunder Bay, total reported terminal revenues rose less sharply, from $58.6 million to $61.7 million (or 5.4%). These increases are directly related to the overall gain in throughput previously mentioned at these ports.

Total CWB carrying costs along the Pacific Seaboard rose by 134.3% in the 2003-04 crop year – to $52.5 million from $22.4 million the year before. At Thunder Bay carrying costs rose by 35.7% – to $40.9 million from $30.1 million a year earlier. Again, these increases were chiefly the result of greater throughput.

4.2 Summary Observations

An examination of the stock-to-vessel requirement, and stock-to-shipment, ratios reveal that sufficient grain was available at the terminals to meet prevailing demand. Although the degree of coverage afforded by these stocks generally decreased from those observed a year earlier, it largely reflected the upsurge in terminal throughput. 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, it would appear that the reliability of the GHTS was adequate for the task demanded.

Balancing the need for both efficiency and reliability within the GHTS is one that continually challenges all within the stakeholder community. For those concerned with the operation of terminal elevators, these challenges often involve trade-offs between system efficiency and reliability. In a sense, any "just-in-time" approach to inventory management strives to reduce the time and cost associated with any product moving through the logistics chain to an absolute minimum without detracting from the chain's overall reliability. In the context of the GHTS, stock-to-vessel requirement, and stock-to-shipment, ratios with values of about 1.0 might be considered as an optimal target under such an approach.

Yet the values observed for these ratios over the course of the past five crop years have typically been well in excess of 2.0. Such values betray an effort to protect the system's reliability in delivering grain to port. But it does so at the expense of system efficiency since inventories are maintained at levels well in excess of that required to meet prevailing demand. It is difficult, if not impossible, to determine the appropriate ratio value that would see the balance between system efficiency and reliability effectively optimized, particularly given the diversity of grains, grades, protein content, and other stock characteristics. In any event, this is a matter for the facility operators and stakeholders themselves. With this in mind, the Monitor is of the view that the GHTS is presently operating in a reliable manner.

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 – 2003-04 Crop Year

Producer Netback and Sampling Methodology

- *Sampling methodology defines 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 19.0% to $160.92 per tonne.*
    - *Durum – decreased 17.0% to $181.80 per tonne.*
- *Final Realized Price:*
  - *Significant reductions attributable to higher grain supplies.*
    - *Wheat – decreased 15.6% to $211.14 per tonne.*
    - *Durum – decreased 14.1% to $229.20 per tonne.*
- *Export Basis:*
  - *Wheat – decreased 3.1% to $54.87 per tonne.*
  - *Durum – decreased 11.4% to $64.72 per tonne.*
- *Average direct costs:*
  - *Weighted applicable freight costs decreased 4.1% for wheat, and 0.4% for durum.*
    - *Due largely to reduced Freight Adjustment Factors.*
  - *Trucking costs remain unchanged.*
  - *Primary elevation costs increase by 2.8% for wheat, and 4.1% for durum.*
  - *Gross CWB costs increased by 0.9% for wheat, and decreased by 26.5% for durum.*
- *Total producer benefits:*
  - *Increased as a result of heightened competition between grain companies.*
  - *Average trucking premiums:*
    - *Wheat – increased by 7.3% to $4.25 per tonne.*
    - *Durum – increased 25.5% to $4.68 per tonne.*
  - *CWB transportation savings increased by 16.3% to $3.14 per tonne.*

Export Basis and Producer Netback – Non-CWB Commodities

- *Producer netback:*
  - *Reductions driven largely by price reductions.*
    - *Canola – decreased 5.7% to $344.60 per tonne.*
    - *Yellow Peas – decreased 35.1% to $157.02 per tonne.*
- *Average prices for non-CWB commodities declined as a result of increased supplies:*
  - *Canola –.decreased 6.6% to $387.11 per tonne.*
  - *Yellow Peas – decreased 30.9% to $224.77 per tonne.*
- *Average western Canadian export basis for non-CWB commodities:*
  - *Reductions due largely to a narrowing of the price differential.*
    - *Canola – decreased by 13.2% to $42.51 per tonne.*
    - *Yellow Peas – decreased by 18.6% to $67.75 per tonne.*

Producer Car Loading

- *Number of producer-loading sites decreases 5.0% to 492.*
  - *Decreases for both Class 1 and shortline railways.*
    - *Marginally lower decline of 4.3% noted for shortline railways.*
- *Producer-car shipments increased 192.9% to 9,399.*
  - *Denotes largest producer-car volume recorded under the GMP.*
  - *Increase primarily reflects the upsurge in grain volumes, and the expansion of license-exempt facilities.*

Indicator Series 5 – Producer Impact

Table	Indicator Description	Notes	BASE 1999-00	CURRRENT REPORTING PERIOD (1) 2002-03	2003-04	% VAR	
	Export Basis [Subseries 5A]						
	Manitoba East						
5A-1A	1 CWRS Wheat ($ per tonne)	(2)	$54.20	$54.26	$53.17	-2.0%	▼
5A-1B	1 CWA Durum ($ per tonne)	(2)	$60.29	$66.34	$58.19	-12.3%	▼
5A-1C	1 Canada Canola ($ per tonne)	(2)	$61.58	$58.40	$50.45	-13.6%	▼
5A-1D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.93	$82.71	$67.04	-18.9%	▼
	Manitoba West						
5A-2A	1 CWRS Wheat ($ per tonne)	(2)	$57.80	$59.68	$56.06	-6.1%	▼
5A-2B	1 CWA Durum ($ per tonne)	(2)	$65.37	$69.53	$58.87	-15.3%	▼
5A-2C	1 Canada Canola ($ per tonne)	(2)	$58.67	$58.66	$51.64	-12.0%	▼
5A-2D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.93	$82.71	$67.04	-18.9%	▼
	Saskatchewan Northeast						
5A-3A	1 CWRS Wheat ($ per tonne)	(2)	$58.10	$57.49	$56.16	-2.3%	▼
5A-3B	1 CWA Durum ($ per tonne)	(2)	$68.31	$75.29	$66.34	-11.9%	▼
5A-3C	1 Canada Canola ($ per tonne)	(2)	$54.38	$52.99	$48.83	-7.9%	▼
5A-3D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.93	$83.33	$67.84	-18.6%	▼
	Saskatchewan Northwest						
5A-4A	1 CWRS Wheat ($ per tonne)	(2)	$56.42	$56.76	$57.11	0.6%	–
5A-4B	1 CWA Durum ($ per tonne)	(2)	$70.53	$75.15	$67.58	-10.1%	▼
5A-4C	1 Canada Canola ($ per tonne)	(2)	$50.88	$49.72	$47.38	-4.7%	▼
5A-4D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.84	$82.87	$67.57	-18.5%	▼
	Saskatchewan Southeast						
5A-5A	1 CWRS Wheat ($ per tonne)	(2)	$59.40	$61.17	$60.32	-1.4%	▼
5A-5B	1 CWA Durum ($ per tonne)	(2)	$65.22	$71.14	$63.43	-10.8%	▼
5A-5C	1 Canada Canola ($ per tonne)	(2)	$57.47	$52.82	$48.15	-8.8%	▼
5A-5D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.72	$83.31	$67.83	-18.6%	▼
	Saskatchewan Southwest						
5A-6A	1 CWRS Wheat ($ per tonne)	(2)	$57.22	$57.02	$56.78	-0.4%	–
5A-6B	1 CWA Durum ($ per tonne)	(2)	$68.12	$74.52	$65.71	-11.8%	▼
5A-6C	1 Canada Canola ($ per tonne)	(2)	$55.75	$50.67	$46.34	-8.5%	▼
5A-6D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.66	$83.17	$67.80	-18.5%	▼
	Alberta North						
5A-7A	1 CWRS Wheat ($ per tonne)	(2)	$53.20	$51.83	$51.50	-0.6%	–
5A-7B	1 CWA Durum ($ per tonne)	(2)	$71.67	$76.50	$70.08	-8.4%	▼
5A-7C	1 Canada Canola ($ per tonne)	(2)	$50.39	$40.88	$38.55	-5.7%	▼
5A-7D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.29	$82.71	$67.86	-18.0%	▼
	Alberta South						
5A-8A	1 CWRS Wheat ($ per tonne)	(2)	$48.81	$47.26	$47.47	0.4%	–
5A-8B	1 CWA Durum ($ per tonne)	(2)	$66.06	$70.12	$60.64	-13.5%	▼
5A-8C	1 Canada Canola ($ per tonne)	(2)	$48.07	$41.12	$36.68	-10.8%	▼
5A-8D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.93	$82.71	$67.85	-18.0%	▼
	Peace River						
5A-9A	1 CWRS Wheat ($ per tonne)	(2)	$53.57	$56.31	$54.20	-3.7%	▼
5A-9B	1 CWA Durum ($ per tonne)	(2)	$71.00	$77.02	$70.37	-8.6%	▼
5A-9C	1 Canada Canola ($ per tonne)	(2)	$52.14	$42.87	$41.61	-2.9%	▼
5A-9D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.93	$82.63	$67.55	-18.3%	▼
	Western Canada						
5A-10A	1 CWRS Wheat ($ per tonne)	(2)	$54.58	$56.65	$54.87	-3.1%	▼
5A-10B	1 CWA Durum ($ per tonne)	(2)	$67.63	$73.05	$64.72	-11.4%	▼
5A-10C	1 Canada Canola ($ per tonne)	(2)	$52.51	$48.97	$42.51	-13.2%	▼
5A-10D	Canadian Large Yellow Peas – No. 2 or Better ($ per tonne)	(2)	$54.76	$83.19	$67.75	-18.6%	▼
	Producer Loading [Subseries 5B]						
5B-1	Producer Loading Sites (number) – Class 1 Carriers		415	380	360	-5.3%	▼
5B-1	Producer Loading Sites (number) – Class 2 and 3 Carriers		120	138	132	-4.3%	▼
5B-1	Producer Loading Sites (number) – All Carriers		535	518	492	-5.0%	▼
5B-2	Producer Car Shipments (number) – Covered Hopper Cars		3,441	3,209	9,399	192.9%	▲

(1) – In order to provide for more direct comparisons, the values for the 1999-2000 through 2003-04 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.[131] 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 hundreds of grain 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 Canada grain easily exceeds 1,000.[132] 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.[133] 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: [134]

- 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 encompass:

- 30 stations with one or more high-throughput grain elevators;
- 27 stations with one or more conventional grain elevators;
- 19 stations that are local to the branch line railway network; and
- 10 stations that are directly served by regional and shortline railway carriers.

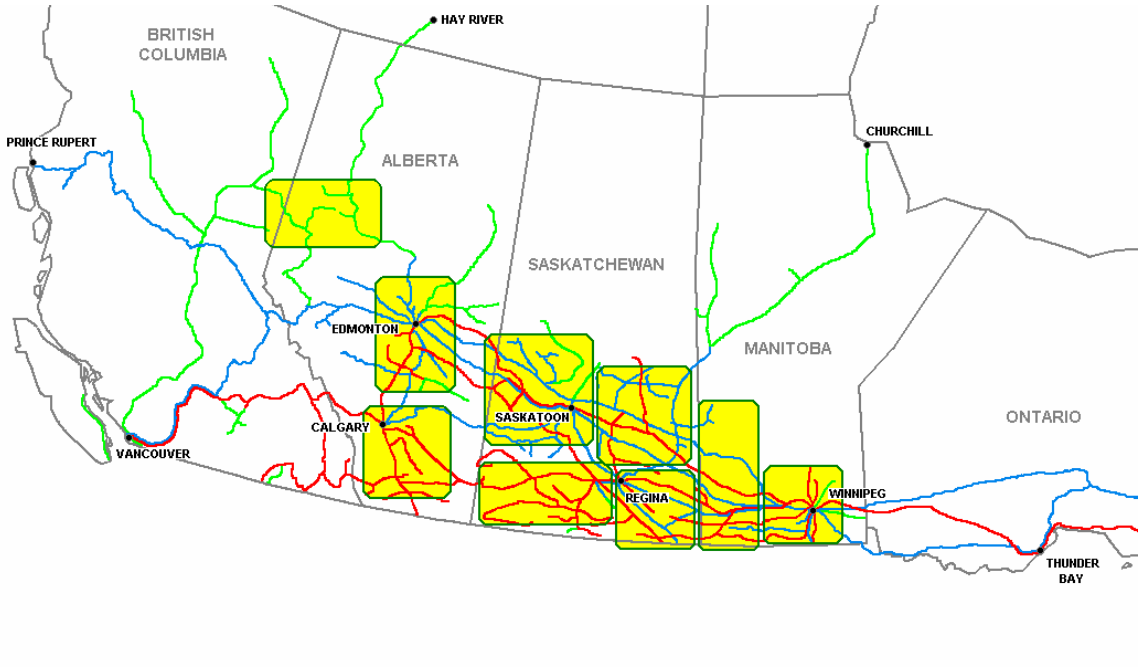
[131] In its basic form, producer netback equates to the residual left after subtracting the logistics cost from a grain's sale price.

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

[133] 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).

[134] 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.

Figure 77: 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.[135]

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.

[135] 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 provincial Pulse Growers Associations on the delivery of yellow peas.[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.
8) – Levies for Manitoba and Alberta producers are refundable. The Saskatchewan levy stood at 0.75% on 1 August 2002, and rose to 1.00% 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.

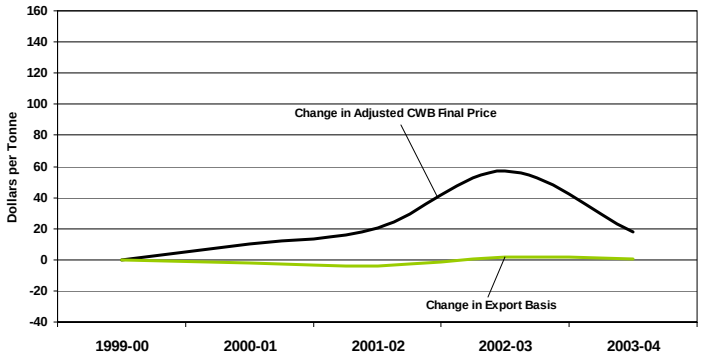
5.2 Export Basis and Producer Netback – CWB Grains (Wheat and Durum)

5.21 1CWRS Wheat

As reported in the Monitor's annual report for the 2002-03 crop year, the netback to producers from the delivery of 1CWRS wheat has risen steadily under the GMP. From an average of $143.25 per tonne in the 1999-2000 crop year, the producer's netback climbed by 38.6% to $198.57 per tonne in the 2002-03 crop year. Much of this $55.32-per-tonne improvement stemmed from a 29.0% increase in the price of 1CWRS wheat itself. In comparison, the export basis climbed by only 3.8% during this period, and reduced the producers' price gain by only 3.6%.

The 2003-04 crop year saw the first reversal in this four-year record. For the 2003-04 crop year, the producers' netback for 1CWRS wheat fell by $37.65 per tonne (or 19.0%) to $160.92 per tonne. As was the case when the price of 1CWRS wheat was rising, the recent downward movement in price was the primary force in this deterioration. A modest $1.78-per-tonne (or 3.1%) reduction in the export basis, which fell from $56.65 per tonne to $54.87 per tonne, helped cushion this decline.

Figure 78: Change in Netback Components – 1CWRS Wheat



Still, over the course of the past five crop years, the visible netback to producers has increased by $17.67 per tonne (or 12.3%). Again, it must be said that this improvement was derived chiefly from a net increase of $17.96 per tonne in the price of 1CWRS wheat. In comparison, the export basis has changed relatively little, increasing by a mere $0.29 per tonne (or 0.1%) since the beginning of the GMP. This was largely because higher trucking premiums and CWB savings effectively offset the increases associated with a variety of direct input costs. These changes are summarized below.

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

						2003-04 / 1999-2000		
	1999-2000	2000-01	2001-02	2002-03	2003-04	$ VAR	% VAR	
CWB Final Price	$192.43	$202.58	$217.02	$250.20	$211.14	$18.71	9.7%	▲
Plus: CWB Costs (Net)	5.40	5.14	1.14	5.02	4.65	-0.75	-13.9%	▼
Adjusted CWB Final Price	197.83	207.72	218.16	255.22	215.79	17.96	9.1%	▲
Direct Costs	56.90	55.91	56.48	63.31	62.26	5.36	9.4%	▲
Less: Trucking Premiums	-2.32	-3.01	-3.62	-3.96	-4.25	-1.93	83.2%	▲
CWB Savings	0.00	-0.61	-2.47	-2.70	-3.14	-3.14	N/A	▲
Export Basis	54.58	52.29	50.39	56.65	54.87	0.29	0.1%	▲
Producer Netback	$143.25	$155.43	$167.77	$198.57	$160.92	$17.67	12.3%	▲

Final Realized Price

As already mentioned, positive price movement has been the chief force underlying the improvement in the visible netback to producers. Until recently, prices under the GMP had risen steadily 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 were the chief forces underlying what had been the first real increase in prices since the 1995-96 crop

year. Drought conditions in both Canada as well as other producing countries later helped to push prices to a peak of $250.20 in the 2002-03 crop year, and second highest on record.

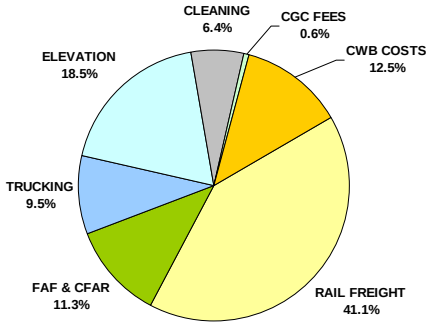
For the 2003-04 crop year, the Final Realized Price for 1CWRS wheat (13.5% protein) was $211.14 per tonne. This marked a reduction of 15.6% from the $250.20-per-tonne recorded a year earlier. Much of the price erosion in the 2003-04 crop year stemmed from the combined forces of higher global wheat production, continued export competition, weaker global demand, and a strengthening of the Canadian dollar. Although a moderation in the value of the Canadian dollar lent some degree of price support in the latter part of the crop year, it was not enough to counter these broader forces.

Export Basis

The export basis has proven to be highly stable over the course of the GMP, and has never varied significantly from its five-year average of $53.76 per tonne. In fact, the export basis for 1CWRS wheat, which amounted to $54.87 per tonne in the 2003-04 crop year, stood only 0.1% above the $54.58-per-tonne value that had been recorded at the beginning of the GMP.

The export basis has two structural components. The first relates to the direct costs incurred by producers in delivering grain to market. These include freight, trucking, elevation, dockage, CGC weighing and inspection, as well as the applicable operating costs of the CWB. The second component encompasses all of the financial benefits accruing to producers through the receipt of any offset to these expenses; typically trucking premiums and CWB transportation savings.[136]

Figure 79: Wheat Export Basis – Direct Costs



Over the course of the past five crop years, the direct cost component in the export basis has climbed by 9.4%, from an average of $56.90 per tonne in the 1999-2000 crop year to $62.26 per tonne in the 2003-04 crop year. The largest single element in these costs is the applicable freight, which incorporates not only the per-car charges for a railway shipment, but the applicable CWB Freight Adjustment Factor (FAF). In the 1999-2000 crop year, the average weighted applicable freight for 1CWRS wheat in western Canada amounted to $31.87 per tonne, and represented 56.0% of direct costs. Although the per-tonne average had climbed to $33.32 per tonne by the end of the 2003-04 crop year, its proportion to total direct costs declined slightly to 53.5%.

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 deemed to have held steady at $5.94 for the 2003-04 crop year. This follows a decline in 2002-03, which was a result of a rollback in the fuel surcharges that had been applied throughout much of the 2000-01 and 2001-02 crop years. And although this means that the cost of trucking remains at the value recorded in the first year of the GMP, its share of total direct costs has fallen from 10.4% to 9.5%.

- 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. Increased tariff rates raised the average cost of elevation by 18.3% to $11.53 per tonne in the 2003-04 crop year, and pushed its share of total direct costs up marginally to 18.5%. 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.

[136] 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.

- 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 12.6% to an average of $4.01 per tonne for the 2003-04 crop year, their contribution to total direct costs remained essentially unchanged at 6.4%. As with primary elevation tariffs, the rates posted therein 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 five crop years. On a proportional basis, they constitute a mere 0.6% of total direct costs.[137]

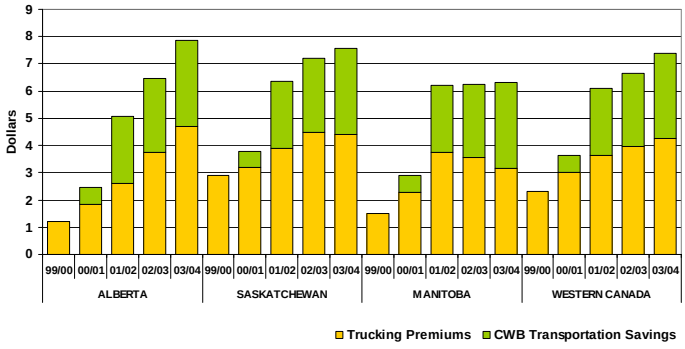
- Gross CWB Costs: These costs effectively reflect the per-tonne operating costs of the CWB, and are ultimately paid by producers through the CWB's pool accounts. Gross CWB costs averaged $5.40 per tonne in the 1999-2000 crop year, and comprised 9.5% of the total direct costs for 1CWRS wheat. By the 2003-04 crop year, however, they had increased to an average of $7.79 per tonne, and accounted for a somewhat higher 12.5% of the total direct costs.

As already mentioned, these direct costs are offset by the financial benefits that accrue to producers through the receipt of any trucking premiums and CWB transportation savings.[138] The trucking premiums paid by grain companies for 1CWRS wheat deliveries in the GMP's nine sampling areas rose by 83.2% between the 1999-2000 and 2003-04 crop years, from an average of $2.32 per tonne to $4.25 per tonne. On a proportional basis, these premiums offset an increasingly larger amount of the producer's direct costs: 4.1% in the 1999-2000 crop year; 5.4% in the 2000-01 crop year; 6.3% in both the 2001-02 and 2002-03 crop years; and 6.8% in the 2003-04 crop year.

The grain companies' use of such premiums to attract grain into their facilities is neither new, nor a result of recent reforms to the GHTS. To be sure, their use is a long established practice. Even so, the available evidence suggests that an increase in the competition between grain companies has been pushing these premiums ever higher.

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 totalled $0.61 per tonne, and offset the direct costs tied to 1CWRS wheat by just 1.1%. By the 2002-03 crop year, however, these savings had increased more than four-fold – to $2.70 per tonne – and countered 4.3% of total direct costs. Data for the 2003-04 crop year shows that these savings climbed by 16.3% to $3.14 per tonne, and offset 5.0% of total direct costs.

Figure 80: Wheat Export Basis – Producer Benefits (dollars per tonne)



When combined with the trucking premiums discussed previously, the overall value of these producer benefits has steadily risen: from $2.32 per tonne, with an offset value of 4.1% in the 1999-2000 crop year; to $7.39 per tonne, with an offset value of 11.9% in the 2003-04 crop year.

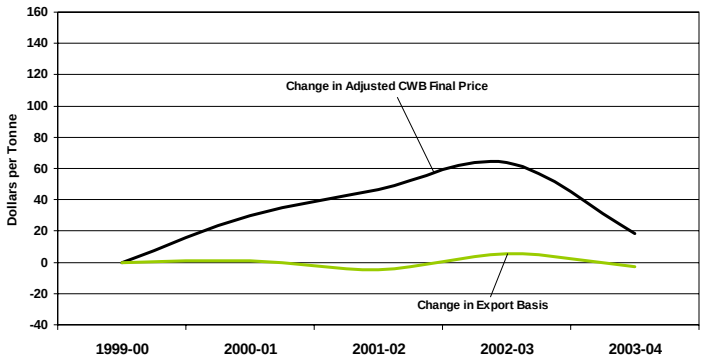
[137] The CGC weighing and inspection costs reported here have been adjusted in order to avoid overlap with the portion of such charges assessed by the grain companies through their primary elevation tariffs, and a possible distortion of the export basis.

[138] 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.

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 climbed 36.4% to $218.96 per tonne by the end of the 2002-03 crop year. In equal measure, much of this $58.48-per-tonne improvement stemmed from a 28.0% increase in the price of 1CWA durum. Similarly, an 8.0% increase in the export basis during this period effectively reduced the producers' price gain by 8.5%.

Figure 81: Change in Netback Components – 1CWA Durum



For the 2003-04 crop year, the producers' netback for 1CWA durum fell by $37.16 per tonne (or 17.0%) to $181.80 per tonne. As was the case when the price of durum was rising, this reduction in the financial return to producers came as a result of recent price declines. Were it not for an $8.33-per-tonne (or 11.4%) reduction in the export basis in this same period, the erosion would have proven even greater.

Still, over the course of the past five crop years, the visible netback to producers has increased by $21.32 per tonne (or 13.3%). Again, it must be reiterated that this improvement was derived chiefly from a net increase of $18.41 per tonne in the price of 1CWA durum. The remaining $2.91-per-tonne improvement was derived from a 4.3% reduction in the export basis. These changes are summarized below.

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

						2003-04 / 1999-2000		
	1999-2000	2000-01	2001-02	2002-03	2003-04	$ VAR	% VAR	
CWB Final Price	$206.79	$234.17	$257.12	$266.88	$229.20	$22.41	10.8%	▲
Plus: CWB Costs (Net)	21.32	23.97	17.35	25.13	17.32	-4.00	-18.8%	▼
Adjusted CWB Final Price	$228.11	$258.14	$274.47	$292.01	$246.52	$18.41	8.1%	▲
Direct Costs	70.77	72.88	69.65	79.48	72.54	1.77	2.5%	▲
Less: Trucking Premiums	-3.14	-3.56	-4.13	-3.73	-4.68	-1.54	49.0%	▲
CWB Savings	0.00	-0.61	-2.47	-2.70	-3.14	-3.14	N/A	▲
Export Basis	67.63	68.71	63.05	73.05	64.72	-2.91	-4.3%	▼
Producer Netback	$160.48	$189.43	$211.42	$218.96	$181.80	$21.32	13.3%	▲

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 visible netback to producers of 1CWA durum over the first four years of the GMP. Until the last crop year, the Final Realized Price of 1 CWA durum moved steadily upwards from an initial value of $206.79 per tonne in the 1999-2000 crop year. Limited supplies of high-grade milling durum in the face of reduced North American production was largely responsible for pushing the Final Realized Price to a height of $266.88 per tonne in the 2002-03 crop year.

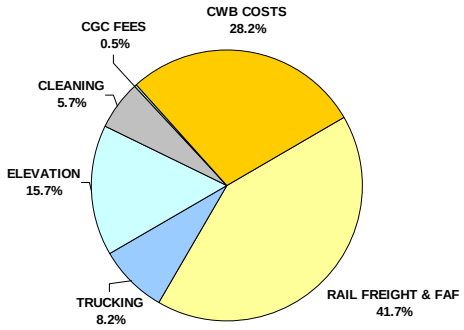
For the 2003-04 crop year, however, the Final Realized Price for 1CWA durum (13.5% protein) tumbled by 14.1% to $229.20 per tonne. A significant factor in this decline was the harvesting of a bumper crop in North Africa, which has traditionally constituted the largest durum-importing region in the world. Plentiful Canadian stocks also helped contribute to a worldwide oversupply of durum.

Export Basis

As was outlined previously with respect to 1CWRS wheat, the export basis for 1CWA durum has also proven fairly stable. Although a greater degree of variation has been observed, the export basis has fluctuated around a five-year average of $67.43 per tonne. In fact, the 2003-04 crop year's export basis of $64.72 per tonne fell 4.0% below this value, and 4.3% below the $67.63-per-tonne value recorded in the first year of the GMP.

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. Changes to the makeup of both of these components have contributed to produce this overall reduction in the export basis.

Figure 82: Durum Export Basis – Direct Costs



After having climbed from an average of $70.77 per tonne in the 1999-2000 crop year to $79.48 per tonne in the 2002-03 crop year, the direct costs tied to 1CWA durum fell by 8.7% in the 2003-04 crop year, to $72.54 per tonne. As with 1CWRS wheat, freight constitutes the single largest element in the makeup of these costs, although it is less encumbered by a FAF component.[139] For the 2003-04 crop year, the weighted average freight charge for the movement of 1CWA durum amounted to $30.23 per tonne, and accounted for 41.7% of total direct costs. A diminishment in the FAF has helped to contain these costs, and as such, its share of total direct costs has fallen slightly from the 42.5% it represented in the first year of the GMP.

Gross CWB costs also fell over the course of the past five crop years: from $21.32 per tonne in the first year of the GMP to $20.46 per tonne in the 2003-04 crop year. Notwithstanding year-to-year fluctuations, the share of total direct costs attributable to this cost element has fallen from 30.1% to 28.2%.

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

- Trucking Costs: The commercial costs tied to a 40-mile haul held steady at $5.94 in the 2003-04 crop year. These are the same values cited earlier with respect to wheat, and are equal to the commercial trucking costs first recorded in the 1999-2000 crop year. On a proportional basis they account for a slightly lesser share of total direct costs – 8.2% in the 2003-04 crop year versus 8.4% five 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 20.9% to an average of $11.41 per tonne in the 2003-04 crop year. This increase was a key driver in the observed rise in total direct costs over the past five crop years, and increased its share to 15.7% of the total.

[139] 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.

- 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 13.8% to an average of $4.12 per tonne in the 2003-04 crop year, and its share of total direct costs advanced to 5.7%.

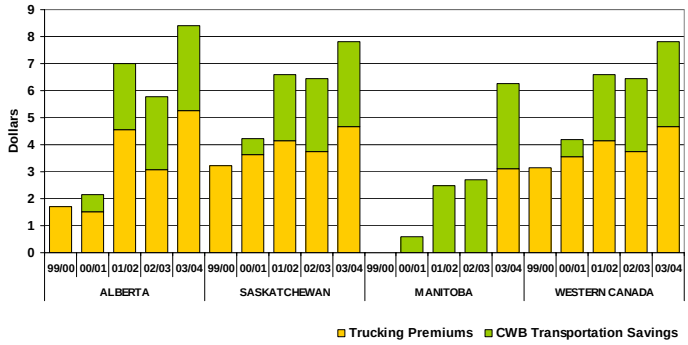
- CGC Weighing and Inspection Fees: These costs remained unchanged at an average of $0.38 per tonne throughout the course of the past five crop years. On a proportional basis, they constitute only 0.5% of total direct costs.

The trucking premiums paid by grain companies for 1CWA durum deliveries rose by 49.0% between the 1999-2000 and 2003-04 crop years, from an average of $3.14 per tonne to $4.68 per tonne. Although year-over-year variations were recorded, they have typically provided a 5.0% offset to total direct costs. The offset seen in the 2003-04 crop year, however, accounted for a somewhat greater 6.5% of total direct costs. 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.[140]

The CWB transportation savings are equally applicable in the movement of 1CWA durum. In the 2000-01 crop year, this savings amounted to $0.61 per tonne, and helped reduce total direct costs by 0.8%. By the 2003-04 crop year, however, this savings had increased five-fold – to $3.14 per tonne – and accounted for an offset to total direct costs of 4.3%.

When examined on a combined basis, these producer benefits have risen from a total $3.14 per tonne in the 1999-2000 crop year, to $7.82 per tonne in the 2003-04 crop year. Moreover, as an offset to total direct costs, they have more than doubled – climbing from 4.4% to 10.8%.

Figure 83: Durum Export Basis – Producer Benefits



[140] 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.

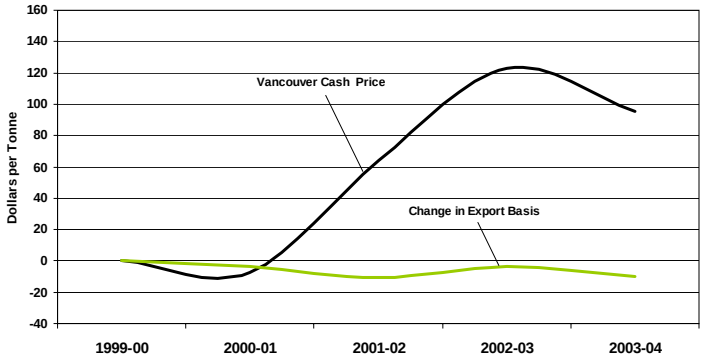
5.3 Export Basis and Producer Netback – Non-CWB Commodities (Canola and Peas)

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 steadily over 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. Here too, the 2003-04 crop year brought the first real decline in the producer's netback since the beginning of the GMP, albeit a comparatively modest 5.7% reduction to $344.60 per tonne.

Still, the five-year gain in the netback to producers of 1 Canada canola amounted to $105.50 per tonne (or 44.1%). In fact, this net improvement proved to be the most substantive amongst the four commodities tracked under the GMP.

Figure 84: Change in Netback Components – 1 Canada Canola



In equal measure, this improvement was largely derived from an increase in the market price of 1 Canada canola. Indeed, of the total $105.50-per-tonne improvement cited, fully $95.50 (or 90.5%) was derived from an improvement in the Vancouver cash price. The remaining $10.00 (or 9.5%) came from a reduction in the export basis itself. The broader nature of these changes are summarized below.

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

	1999-2000	2000-01	2001-02	2002-03	2003-04	2003-04 / 1999-2000 $ VAR	2003-04 / 1999-2000 % VAR	
Vancouver Cash Price	$291.61	$284.46	$355.67	$414.36	$387.11	$95.50	32.7%	▲
Direct Costs	54.99	51.00	42.85	49.08	42.79	-12.20	-22.2%	▼
Less: Trucking Premiums	-2.48	-1.89	-0.84	-0.11	-0.28	2.20	-88.7%	▼
Export Basis	52.51	49.11	42.01	48.97	42.51	-10.00	-19.0%	▼
Producer Netback	$239.10	$235.35	$313.66	$365.39	$344.60	$105.50	44.1%	▲

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 global 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 by 6.6% 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 4.1 million tonnes a year earlier, typified this general improvement in supply. Although prices in the first half moved

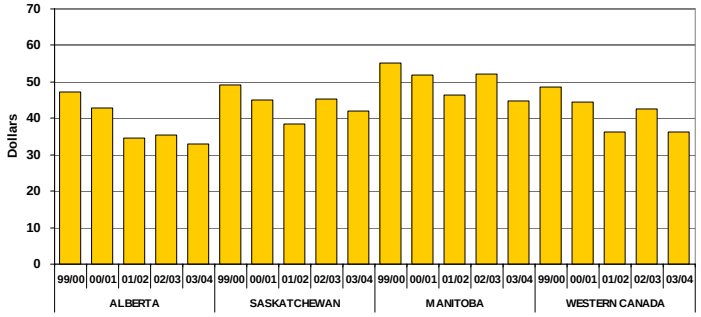
beyond $438.00 per tonne, expectations of a comparatively better harvest for the 2004-05 crop year, along with greater competition in export markets and continued strength in the Canadian dollar helped push down prices in the latter half of the year.

Export Basis

The export basis for 1 Canada canola has decreased by 19.0% over the past five years, and fell from an average of $52.51 per tonne in the 1999-2000 crop year, to $42.51 in the 2003-04 crop year. Other than in the 2002-03 crop year, when the export basis increased to $48.97 per tonne, this downward tendency has proven to be fairly continual.

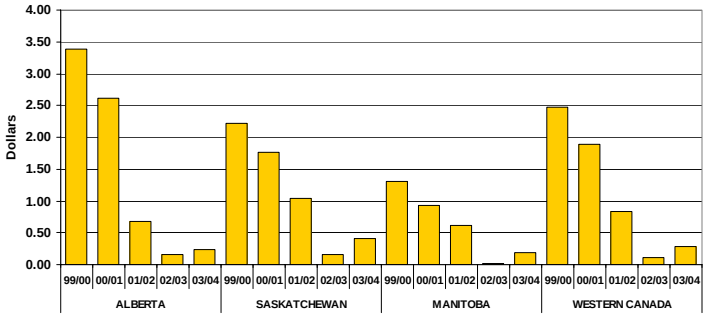
The export basis for non-CWB commodities have the same basic structural components as do CWB grains: the direct costs incurred in delivering grain to market; and any financial benefits that serve to offset them. However, over 80% of the direct costs tied to non-CWB commodities cannot be examined directly. 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 85: 1Canada 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 22.2% between the 1999-2000 and 2003-04 crop years, from an average of $54.99 per tonne to $42.79 per tonne.[141] Much of this reduction stemmed from a 25.5% narrowing of the price differential.[142] 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. By the end of the 2003-04 crop year, the price differential had fallen from an average of $48.55 per tonne to $36.19 per tonne.[143]

Figure 86: 1Canada Canola – Producer Benefits (dollars per tonne)



The second largest component in the direct costs for canola is that of trucking from the farm gate to an elevator or processor. As was mentioned previously, these costs are estimated to have returned to the levels witnessed in the

[141] The 2002-03 crop year was the only exception to this trend, however, with direct costs rising by 14.5% to an average of $49.08 per tonne from the previous year.

[142] 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.

[143] In the 2002-03 crop year, the price differential for 1Canada canola actually widened – by 17.6% to $42.64 per tonne. This signalled that demand for the product had fallen, and that buyers were no longer willing to surrender as great a proportion of the Vancouver price as they had been. An analysis of primary elevator inventories reveals that the average weekly canola stock level climbed by 57.1% – to 388,000 tonnes from 247,000 tonnes a year earlier. With ample inventories on hand, the grain companies were likely to reduce their spot price in order to discourage further producer deliveries.

first year of the GMP, amounting to $5.94 per tonne. Owing to the narrowing of the price differential, trucking accounted for 14.0% of total direct costs in the 2003-04 crop year, a somewhat greater proportion than the 10.8% it represented five years earlier. The remaining direct costs, which accounted for just 1.5% of the overall total, were derived from a provincial check-off that is applied as a means of funding the Canola Growers' Association.

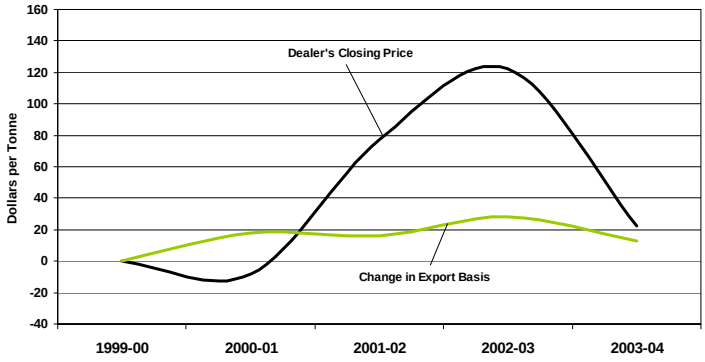
Trucking premiums are not as aggressively used to attract deliveries of non-CWB commodities. The premiums reported as having been paid by grain companies for 1 Canada canola deliveries in each of the nine sampling areas fell by 88.7% between the 1999-2000 and 2003-04 crop years, decreasing from an average of $2.48 per tonne to only $0.28 per tonne. These premiums represented an offset of 4.5% to the direct costs during the base year, but have been declining fairly steadily since then. In the 2003-04 crop year, they provided an offset of just 0.7%.

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 signaling 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 $84.93 per tonne (or 35.1%) in the 2003-04 crop year, to $157.02 per tonne from $241.95 per tonne a year earlier. This substantially eliminated the gains made in the previous four crop years, where the producers' netback had gone from an average of $147.78 per tonne in the 1999-2000 crop year, to $241.95 in the 2002-03 crop year. As with other commodities, much of this recent decline in the producer netback was attributable to a 30.9% reduction in the price of the commodity itself.

Figure 87: Change in Netback Components – Large Yellow Peas



Still, over the course of the past five years, the netback has posted a net improvement of $9.24 per tonne (or 6.3%). This, however, constituted the weakest gain amongst the four commodities tracked under the GMP. Of the total $9.24-per-tonne improvement cited, $22.23 was attributable to a net increase in the dealer's closing price. Even so, an increase of $12.99 per tonne in the export basis effectively reduced the producers' price gain by 58.4%. These changes are summarized below.

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

						2003-04 / 1999-2000		
	1999-2000	2000-01	2001-02	2002-03	2003-04	$ VAR	% VAR	
Dealer's Closing Price	$202.54	$194.60	$279.85	$325.14	$224.77	$22.23	11.0%	▲
Direct Costs	54.94	72.95	71.61	83.33	67.86	12.92	23.5%	▲
Less: Trucking Premiums	-0.18	-0.23	-0.64	-0.14	-0.11	0.07	-38.9%	▼
Export Basis	54.76	72.72	70.97	83.19	67.75	12.99	23.7%	▲
Producer Netback	$147.78	$121.88	$208.88	$241.95	$157.02	$9.24	6.3%	▲

Dealer's Closing Price

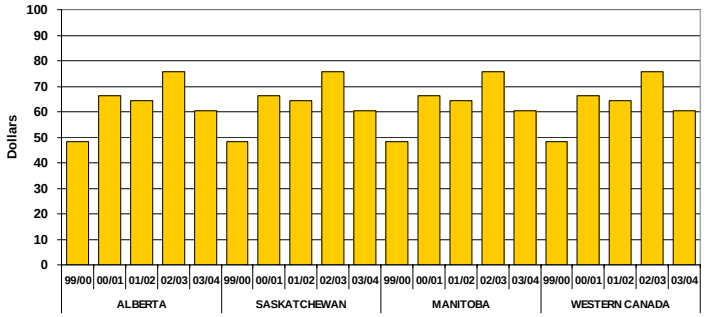
In keeping with the patterns observed for other commodity prices, the 2003-04 crop year saw a reduction in the price of large yellow peas after a four-year run up. In equal measure, price has proven to be the key determinant in the netback for this commodity over the past five years. And although the price of large yellow peas is sensitive to the wider influences of the international marketplace, Canadian supplies have significant sway in the marketplace itself.[144]

Notwithstanding a modest decline in the 2000-01 crop year, the average annual price of 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 yellow peas declined by 30.9% to $224.77 per tonne in the 2003-04 crop year. This constituted the sharpest single-year price reduction among the four commodities tracked under the GMP.

Export Basis

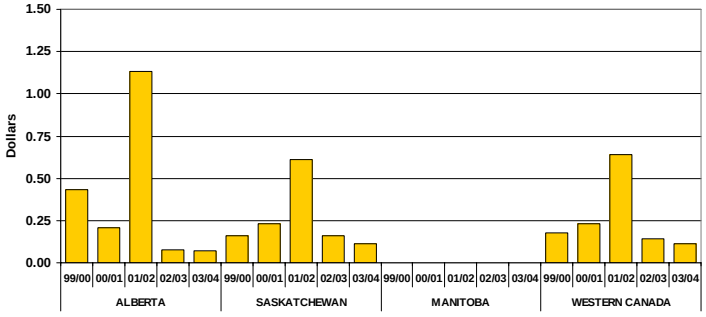
In contrast with those of wheat, durum, and canola, the export basis of large yellow peas was the only one to have posted a net increase over the course of the GMP. In fact, the export basis had actually reached a height of $83.19 per tonne in the 2002-03 crop year, an increase of 51.9% over the $54.76 per tonne it had been four years earlier. Nevertheless, the export basis for large yellow peas fell along with those of other commodities in the 2003-04 crop year, by 18.6% to $67.75 per tonne. Furthermore, this decline proved to be the steepest among the four commodities.

Figure 88: 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 already presented. Likewise, over 80% of these direct costs also cannot be examined directly. Instead, a price differential between the dealer's closing price and the grower's bid closing price is calculated as an approximation for the cost of freight as well as other handling, cleaning, and storage activities.

Figure 89: Large Yellow Peas – Producer Benefits (dollars per tonne)



Over the first four years of the GMP, the price differential increased by 56.6%, and climbed to $75.52 per tonne from $48.23 per tonne in the 1999-2000 crop year. For the 2003-04 crop year, this differential fell by 20.2% to $60.28 per tonne, and accounted for 89.0% of total direct costs.

[144] 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*. Canada's leadership role was lost to France in 2002 as a result of reduced production.

The second largest component in the direct costs of large yellow peas is trucking. As elsewhere, these costs are estimated using an average haul distance of 40 miles, and are deemed to have amounted to about $5.94 per tonne in the 2003-04 crop year. On a comparative basis, this element accounted for 8.8% of total direct costs in the 2003-04 crop year. The remaining 2.4% was derived from a levy assessed by the provincial Pulse Growers Association at the time of delivery.

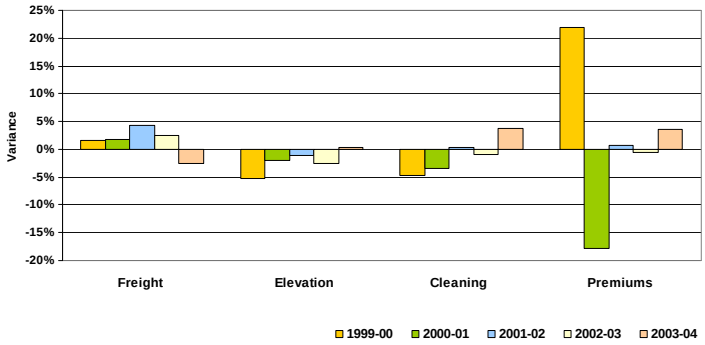
Trucking premiums are even less commonly used to encourage the delivery of peas than they are for canola. In fact, with the exception of the 2001-02 crop year, the average value of such premiums has generally been declining under the GMP. From an average of $0.18 per tonne for the 1999-2000 crop year, these premiums amounted to only $0.11 per tonne in the 2003-04 crop year. In total, these premiums represented an offset to direct costs of less than 0.2%.

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 90 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 2003-04 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 during the previous two years, it remains significantly less than that observed at the beginning of the GMP, and falls within acceptable limits.

Figure 90: Cash Ticket Variances



The GMP utilizes posted tariff rates to reflect freight, elevation and cleaning charges. For the first time, the freight deductions seen in the sample of cash tickets for the 2003-04 crop year were marginally less than those reflected by the weighted averages used for applicable freight in the analysis. This variation, however, was still within acceptable limits.[145]

For the 2003-04 crop year, the charges for elevation on cash tickets were virtually identical to the averages drawn from the applicable tariffs. Those for cleaning were slightly higher than 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 below 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. In the 1999-2000 crop year, data from the cash tickets revealed trucking premiums that were – on average – about 22% higher than reported on an aggregated basis by the grain companies. In the 2000-01

[145] 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.

crop year, data from cash tickets showed trucking premiums to be about 18% lower. 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. For the 2003-04 crop year, the variance widened marginally to 3.5%. Again, this variance was well within the bounds of statistical error.

The variance in the cash ticket data pertaining to trucking premiums during the first two crop years must be viewed in the context of the challenge involved in obtaining this information. The information systems used by the grain companies were not designed to extract this data. As a result, considerable effort was necessary to ensure that the data collected had a common basis, and was relatable for analytical purposes. The greater variances observed during the 1999-2000 and 2000-01 crop years reflect these initial difficulties.

In light of this, the Monitor has been encouraged by the improvements that have since been made. As a result, the Monitor is confident 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 to western Canadian grain producers.

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 Producer Netback Calculator 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 has gained considerable attention from the agricultural trade media, and has been widely promoted by several producer groups as well as the agriculture departments of all three prairie provinces.

The PNC's release and attendant promotion unfortunately coincided with 2004's initial seeding period. Consequently, the PNC did not gain the level of producer attention that was hoped. Despite this, the reaction from producers who subscribe and have become regular users of the system has been very positive. There are currently over 400 such users of the system who have made in excess of 2,000 specific calculations regarding the best means of delivering their grain to market. The PNC is an easy-to-use system that provides producers with immediate access to the information that they need to make better delivery decisions.[146]

For the purposes of the Grain Monitoring Program, not all of the PNC's goals have yet been met. Given the need for statistical validity, a minimum of 1,000 consistent users of the system are required. 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 annual report for the 2004-05 crop year 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.

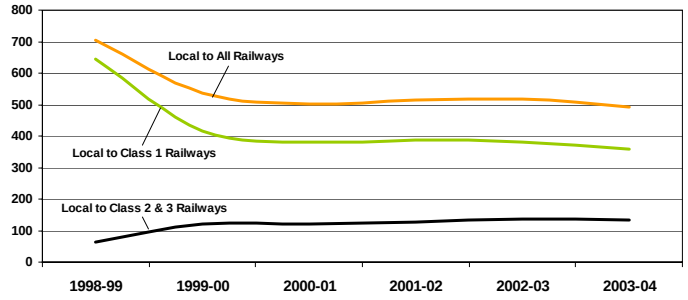
[146] For a more comprehensive review of the Producer Netback Calculator, see Appendix 2.

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

The aggregate number of producer loading sites has declined significantly since the beginning of the 1999-2000 crop year – falling from an estimated 706 to 492 by the end of the 2003-04 crop year (or 30.3%). 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 44.0% during the same period – from 643 to 360. Conversely, the number of sites local to the smaller Class 2 and 3 carriers more than doubled – increasing from 63 to 132 (or 109.5%). [See Table 5B-1 in Appendix 3.]

Regionally, Manitoba and Alberta posted the largest attrition rates, with the number of producer loading sites declining by an overall 50.8% and 39.2% respectively. The rate of decline in Saskatchewan was substantially less; the number of sites having fallen by 11.9% during the same five-year period. Hidden by these statistics is the fact that while the overall number of producer loading sites has declined significantly, there are signs that the network may be stabilizing. Since falling to 503 in the 2000-01 crop year, the number of producer loading sites has decreased by only 2.2%.

Figure 91: Producer-Car Loading Sites



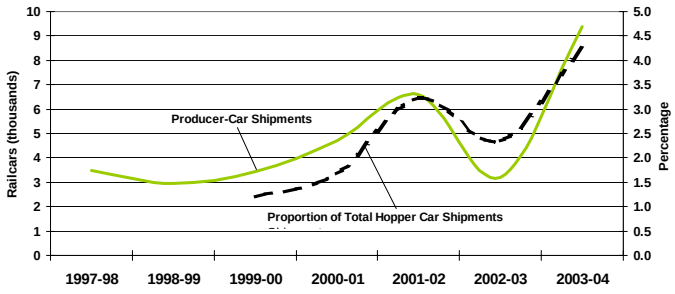
As discussed previously, some of the impetus for this stems from the recent establishment of non-licensed producer loading facilities, which has continued to expand. As at 31 July 2004, a total of 38 such facilities had received exemptions, with 29 in Saskatchewan, six in Alberta, and three in Manitoba.

Producer Car Shipments

Notwithstanding the overall reduction in the number of producer loading sites witnessed, producer-car shipments have been on the rise. Since the beginning of the GMP, these shipments have virtually tripled, increasing from 3,441 carloads to 9,399 carloads annually. And while still far below the peak levels witnessed in the early 1990's (when annual producer-car shipments averaged about 12,500), these volumes presented a clear upward trend.

The increase in producer-car shipments has come as a result of many factors, not the least of which includes the closure of local elevators, the collaboration of producer groups and the CWB, as well as the advent of license-exempt facilities. The reduced grain production over the past three years has also been an important factor, particularly given the sharp volume decline of the 2002-03 crop year. Nevertheless, the 2003-04 crop year saw producer-car volumes surge a full 40% beyond the GMP's previous record of 6,583 carloads. More importantly, its share of the total tonnage moved by covered hopper car has also climbed. From an estimated 1.2% in the 1999-2000 crop year, this share has increased by a factor of almost four, to claim 4.2% of the 2003-04 crop year's total movement. [See Table 5B-2 in Appendix 3.]

Figure 92: Producer-Car Shipments



5.7 Summary Observations

An examination of the per-tonne financial returns to producers of wheat, durum, canola, and large yellow peas, indicates that each has improved since the 1999-2000 crop year. These net gains ranged from a low of 6.3% for large yellow peas, to a high of 44.1% for 1 Canada canola. In the case of CWB grains, the increases amounted to 12.3% for 1CWRS wheat, and 13.3% for 1CWA durum. In almost all instances, the improvement came primarily as a result of an increase in the price of the commodity itself. Even so, these measures are period specific, and only gauge a differential with respect to current market conditions.

Within the wider framework of a time series, the producer's netback can be seen to have actually fallen by as much as 35.1% from highpoints recorded a year 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 five 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 0.1% (or $0.29 per tonne) in the case of wheat, and a decrease of 4.3% (or $2.91 per tonne) for durum. As for the non-CWB commodities, the changes proved more substantive: a decrease of 19.0% (or $10.00 per tonne) in the case of canola; and an increase of 23.7% (or $12.99 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 $5.07 per tonne and $4.68 per tonne for wheat and durum respectively, acted as counterweights to the escalation in such direct costs as transportation, elevation, cleaning, and storage. In the case of durum, the growth in these benefits actually exceeded that of the direct costs to produce a net reduction in the export basis.

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. Even so, there are also indications that producers are becoming 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.

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 five 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 $0.28 in the 2003-04 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. The net result is that the export basis within any one area can vary significantly from the western Canadian average. By way of example, the export basis for wheat can be seen to vary by as much as 13.5%.

On a final note, in an effort to improve the information used in calculating the export basis, and to enable producers to access the database used for the producer netback analysis, the Monitor has developed the Producer Netback Calculator. This internet-based tool allows producers to enter site-specific data, and

estimate the returns that they may derive from the delivery of their grain to various elevator facilities. At the same time, the data they return will provide valuable information regarding their average length of haul to elevators, choice of equipment, and other farm gate to elevator delivery issues – all of which will be used to enhance future reporting by the Monitor.

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www.quorumcorp.net

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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

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Edmonton, Alberta

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President, SJT Solutions
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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 is 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.[147] 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 and durum. 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.

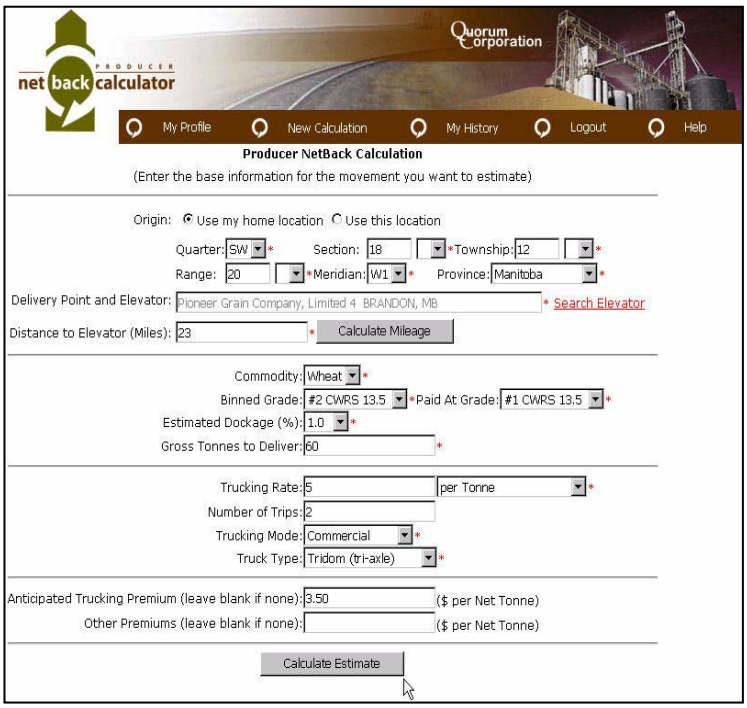

Figure A1: An image of the input screen for Quorum Corporation's Netback Calculator.

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.).

[147] 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.

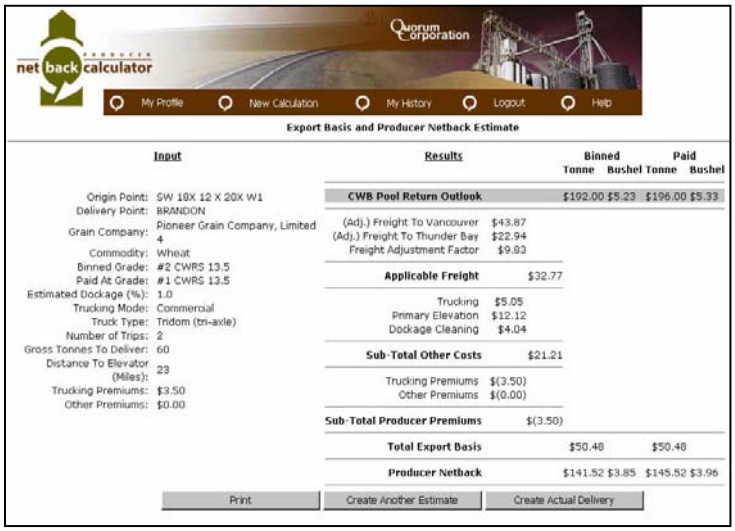

Figure A2: An image of the output screen for Quorum Corporation's Netback Calculator.

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 Transportation
Alberta RailNet
British Columbia Railways
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
ConAgra Grain, Canada
Gardiner Dam Terminal
Government of BC
Grain Growers of Canada
Great Sandhills Terminal
Great Western Rail
Inland Terminal Association of Canada
James Richardson International Ltd. (Pioneer Grain)
Keystone Agricultural Producers
Louis Dreyfus Canada Ltd.
Mainline Terminal Ltd.
Manitoba Agriculture
Manitoba Transportation and Government Services
Mid-Sask Terminal Ltd.
Mission Terminal Inc.
National Farmers Union
North East Terminal Ltd.
North West Terminal Ltd.
OmniTRAX Canada, Inc.
Parrish & Heimbecker Ltd.
N.M. Paterson & Sons Limited
Port of Churchill
Port of Prince Rupert
Port of Thunder Bay
Port of Vancouver
Prairie West Terminal
Prince Rupert Grain Ltd.
Rail America
Red Coat Road and Rail
Saskatchewan Agriculture and Food
Saskatchewan Highways and Transportation
Saskatchewan Association of Rural Municipalities
Saskatchewan Wheat Pool
South West Terminal
Statistics Canada
Terminal 22 Inc
Transport Canada
Vancouver Wharves Ltd. (BCR Marine)
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