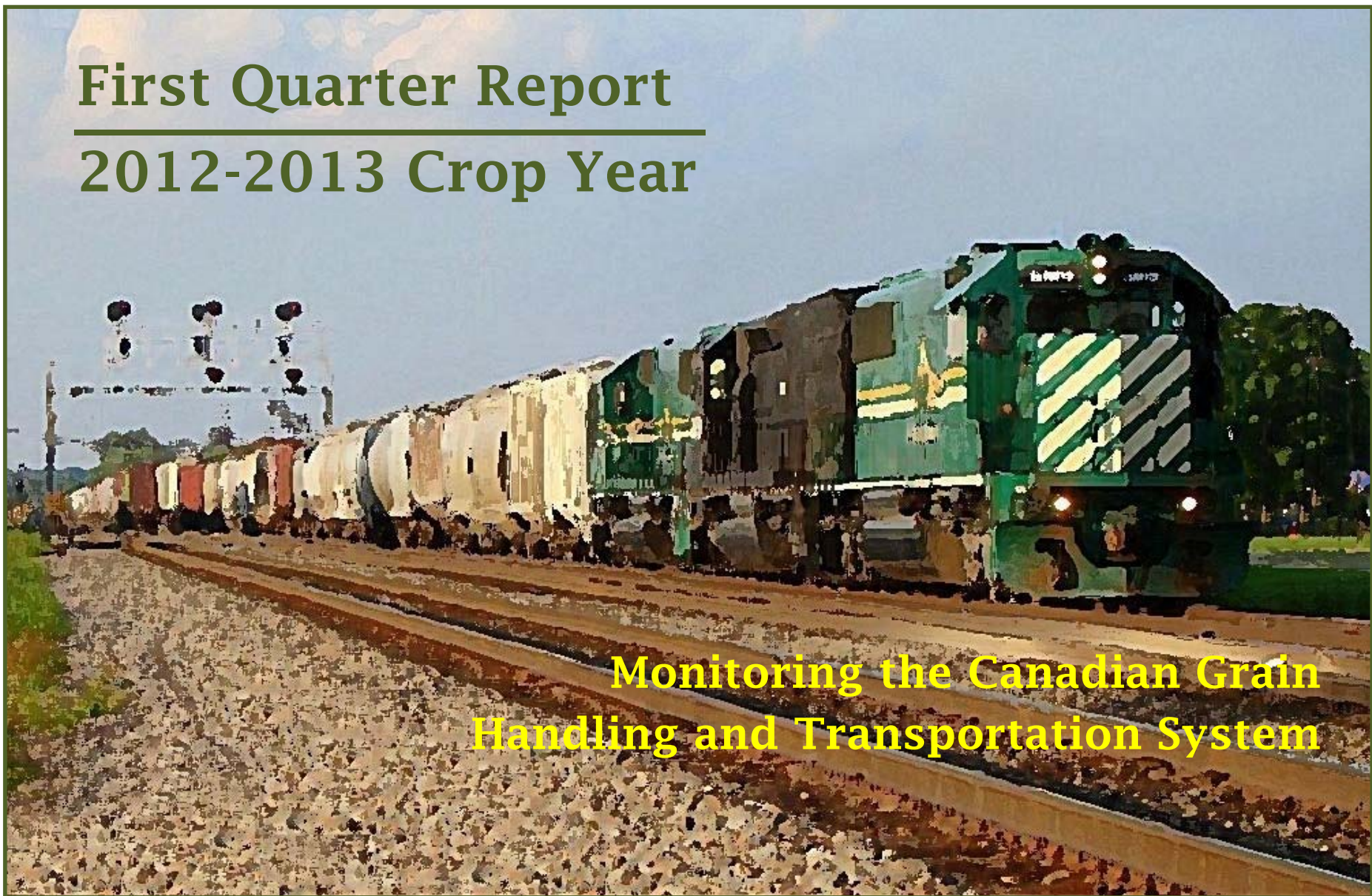


# First Quarter Report

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## 2012-2013 Crop Year



Government of Canada  
Gouvernement du Canada



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## Foreword

The following report details the performance of Canada's Grain Handling and Transportation System (GHTS) for the three months ended 31 October 2012, and focuses on the various events, issues and trends manifest in the movement of Western Canadian grain during the first quarter of the 2012-13 crop year.

As with the Monitor's previous quarterly and annual reports, the report that follows is structured around a number of measurement indicators. Since the close of the 2009-10 crop year these have been organized into a six-group series, comprised of:

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

As in the past, each series builds on data collected by the Monitor from the industry's various stakeholders, and frames the discussion using year-over-year comparisons. To that end, activity in the 2012-13 crop year is largely gauged against that of the 2011-12 crop year. But the Grain Monitoring Program (GMP) was also intended to frame recent activity against the backdrop of a longer time series. Beginning with the 1999-2000 crop year - referred to as the GMP's "base" year - the Monitor has now assembled reliable quarterly data in a time series that extends through fourteen crop years. This data constitutes the backbone of the GMP, and is used widely to identify significant trends and changes in GHTS performance. It should also be noted that, as a result of the federal government's decision to repeal the Canadian Wheat Board's monopoly over the sale of wheat and barley, the measures pertaining to its tendering and advance-car-awards programs have now been discontinued.

Although the data tables presented in Appendix 4 of this report can only depict a portion of this time series, the full series can be obtained as an .XLSX spreadsheet from the Monitor's website ([www.quorumcorp.net](http://www.quorumcorp.net)). Additional .PDF copies of this report, as well as all past reports, can also be downloaded from the Monitor's website.

QUORUM CORPORATION

Edmonton, Alberta

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## Table of Contents

<b>Executive Summary</b> .....	<b>1</b>
<b>Section 1: Production and Supply</b> .....	<b>6</b>
PRODUCTION AND SUPPLY .....	7
<b>Section 2: Traffic and Movement</b> .....	<b>10</b>
COUNTRY ELEVATOR THROUGHPUT .....	11
RAILWAY TRAFFIC .....	11
TERMINAL ELEVATOR THROUGHPUT.....	14
<b>Section 3: Infrastructure</b> .....	<b>16</b>
COUNTRY ELEVATOR INFRASTRUCTURE .....	17
RAILWAY INFRASTRUCTURE .....	21
TERMINAL ELEVATOR INFRASTRUCTURE.....	24
<b>Section 4: Commercial Relations</b> .....	<b>26</b>
TRUCKING RATES .....	27
COUNTRY ELEVATOR HANDLING CHARGES.....	27
RAILWAY FREIGHT RATES .....	28
TERMINAL ELEVATOR HANDLING CHARGES .....	30
COMMERCIAL DEVELOPMENTS .....	30
<b>Section 5: System Efficiency and Performance</b> .....	<b>34</b>
COUNTRY ELEVATOR OPERATIONS .....	35
RAILWAY OPERATIONS .....	37
TERMINAL ELEVATOR OPERATIONS.....	39
PORT OPERATIONS .....	41
SYSTEM PERFORMANCE .....	42
<b>Section 6: Producer Impact</b> .....	<b>44</b>
PRODUCER NETBACK.....	45
PRODUCER CARS.....	46
<b>Appendix 1: Program Background</b> .....	<b>48</b>
<b>Appendix 2: Commodity Guide</b> .....	<b>49</b>
<b>Appendix 3: Acknowledgements</b> .....	<b>50</b>



## Executive Summary

### PRODUCTION AND SUPPLY

Following two consecutive years of spring flooding, Western Canadian farmers, benefitting from generally favourable growing conditions, brought in the largest harvest since the 2009-10 crop year. Moreover, above-average yields and quality were reported across much of the prairies. As a result, overall grain production for the 2012-13 crop year increased by 3.8%, to 55.6 million tonnes from the previous crop year's 53.5 million tonnes. When combined with a comparatively lower 6.1 million tonnes of carry-forward stocks, the grain supply reached 61.7 million tonnes. This embodied a 0.7% reduction from the previous crop year's 62.2 million tonnes.

### TRAFFIC AND MOVEMENT

Despite a modest decrease in the grain supply, the Grain Handling and Transportation System's (GHTS) total handlings grew noticeably in the first quarter of the 2012-13 crop year. This resulted in record-setting volumes under the Grain Monitoring Program (GMP) for the tonnage delivered to country elevators, moved by rail and loaded onto ships.

- Country elevator throughput, as gauged by all road and rail shipments from the primary elevators situated across western Canada, increased by 9.9%, to 9.9 million tonnes from 9.0 million tonnes a year earlier. Although all provinces reported gains, the most significant increase in shipments were tied to those originating in Manitoba and Alberta, which rose by 35.0% and 10.8% respectively. Saskatchewan posted a marginal increase of just 0.2%.
- The amount of grain moved by rail to western Canadian ports increased by 7.2%, to a GMP record of 8.7 million tonnes, from 8.2 million tonnes a year earlier. As in past years, the vast majority of this traffic, some 8.4 million tonnes, moved in covered hopper cars. The remaining 295,300 tonnes moved in a combination of boxcars and containers for bulk and bagged grain shipments, as well as tankcars for export canola oil.
- The port of Vancouver remained the principal export destination for western Canadian grain, with covered-hopper-car shipments increasing by 13.9%, to a GMP record of 4.9 million tonnes, from 4.3 million tonnes. In comparison, Prince Rupert posted a 6.1% increase, with volume climbing to 1.1 million tonnes from 1.0 million tonnes. Thunder Bay posted a 0.3% reduction in traffic volume, with shipments remaining largely unchanged at 2.1 million tonnes. In contrast, rail shipments to Churchill decreased by 22.1%, to 383,300 tonnes from 491,800 tonnes.
- Port throughput, as measured by the volume of grain shipped from terminal elevator and bulk loading facilities located at Canada's four western ports, totalled 7.6 million tonnes in the first quarter of the 2012-13 crop year. This represented a new

GMP record and a 6.6% increase over the 7.1 million tonnes handled in the same period a year earlier. Vancouver accounted for 55.2% of this volume, with total marine shipments increasing by 10.4%, to 4.2 million tonnes from 3.8 million tonnes. This was supported by a somewhat greater 15.9% increase in volume for Prince Rupert, which rose to 1.1 million tonnes from 919,100 tonnes a year earlier. Thunder Bay witnessed a marginal reduction in volume, with a 0.2% decline leaving its throughput effectively unchanged at 1.9 million tonnes. Churchill reported a 13.3% decrease in its handlings, which fell to 421,000 tonnes from 485,500 tonnes.

## INFRASTRUCTURE

The infrastructure that defines the GHTS in western Canada has undergone significant change in the last 13 years. Much of this reflects the rationalization of the country elevator network, which saw significant transformation in the first years of the Grain Monitoring Program (GMP). Still, the evolution continues, with the following changes being noted in the first three months of the 2012-13 crop year.

- The total number of country elevators increased by 0.3%, to 387 from 386 at the close of the previous crop year. This served to reduce the accumulated loss since the beginning of the GMP to 617 facilities, or 61.5%. Much the same was true of the network's grain delivery points, which increased by 0.4%, to 272 from 271. This was complemented by 33,000 tonnes of added storage capacity, with the overall total being raised to slightly under 6.8 million tonnes for the first time since the close of the 2000-01 crop year.
  - With the loss of 214.0 route-miles of track in northwestern Saskatchewan, the western Canadian railway network shrank by 1.2% in the first quarter of the 2012-13 crop year, leaving 17,616.3 route-miles in place. Although this denotes a contraction of 9.5% from the 19,468.2 route-miles in place at the beginning of the GMP, the decline remains substantially less than that of the elevator system it serves. There was also a shift in the balance between the Class 1 and non-Class-1 carriers as a result of the creation of two new shortline railways: the Lake Line Railroad; and the Long Creek Railroad. This served to reduce the infrastructure under Class 1 management to 14,923.4 route-miles, or 84.7%, and that under the non-Class-1 carriers to 2,692.9 route-miles, or 15.3%.
  - With no changes to the terminal elevator network recorded in the first quarter of the 2012-13 crop year, the system remained comprised of 16 licensed facilities with 2.2 million tonnes of storage capacity. Thunder Bay continued to hold the largest share of these assets, with seven elevators and 43.6% of the storage capacity. Vancouver held second place with seven facilities and 40.9% of the system's storage capacity. Prince Rupert and Churchill both followed with one terminal elevator each, and storage capacity shares of 9.5% and 6.4% respectively.
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## COMMERCIAL RELATIONS

The 2012-13 crop year brought the most significant change to the functioning of the GHTS in three generations: repeal of the CWB's monopoly over the sale of western Canadian wheat and barley. But in the face of that transition, there was little substantive change to the cost of the commercial services used to move grain through the GHTS, with the most significant coming through heightened railway freight rates.

- Slumping oil prices did much to contain the commercial trucking rates associated with moving grain in the 2012-13 crop year. As a result, the composite price index for short-haul trucking remained unchanged at 162.2.
- Railway freight rates moved generally higher in the first quarter of the 2012-13 crop year. Once again, these increases proved to be corridor specific. For westbound movements into Vancouver and Prince Rupert these increases ranged from 10% to 13%, depending on the originating carrier. Eastbound rates into Thunder Bay and Churchill proved more mixed, with CN posting selective reductions averaging less than 2%, while CP applied a wholesale increase in excess of 9%. By the close of the period, the single-car rates in the Vancouver and Thunder Bay corridors had effectively risen by an average of 12.0% and 4.2% respectively.
- Few changes were noted in the per-tonne rates assessed by grain companies for a variety of primary elevator handling activities in the first quarter of the 2012-13 crop year. These ranged from no change in the rates they assessed for the removal of dockage or storage, to a 0.1% increase in those tied to the receiving, elevating and loading out of grain.
- There was little real change to the rates assessed by the GHTS's terminal elevators for the receiving, elevating and loading out of grain in the first quarter of the 2012-13 crop year, with selective reductions leading the way to a 0.4% decline in the composite price index. Much the same was true of storage charges, which showed an even less significant 0.1% gain.

## Commercial Developments

There were a number of significant developments in the commercial activities surrounding the movement of grain in the first quarter of the 2012-13 crop year. Moreover, these will have a bearing on the workings of the GHTS in the years ahead.

- Following passage of The Marketing Freedom for Grain Farmers Act in December 2011, the Canadian Wheat Board (CWB) lost its long-held monopoly over the sale of western Canadian wheat and barley with the commencement of the 2012-13 crop year. This meant that producers were no longer obligated to sell wheat and barley intended for domestic consumption and export solely to the CWB. Many in the grain industry had long argued for this change and had been preparing for open-market operations since the federal government announced its plans to introduce the enabling legislation. All available indications suggest that the GHTS performed well in the first three months of the 2012-13 crop year. The new marketing environment brought increased competition between grain companies, with price often being the key consideration in the producers' delivery choice. The new environment also appeared to have given farmers better flexibility in terms of grades, delivery options and predictable cash

flow. In comparison, the revamped CWB appeared to face a number of transitional challenges. Since it possessed no grain-handling assets of its own, the CWB signed a variety of agreements with individual grain companies that would see these firms handling grain on its behalf. Even so, there were reported instances where elevator managers were reluctant to accept farmer deliveries on behalf of the CWB without a clear plan for outward shipping. Concerns that Canada's grain pipeline would initially struggle in the wake of the ending of the CWB's monopoly subsided as record or near-record volumes were moved by the system.

- The 2011-12 crop year saw the first significant changes in the makeup of the terminal elevator network in several years. Although no further changes were reported in the first quarter of the 2012-13 crop year, there were indications that others were pending. The most noteworthy of these involved a planned expansion of the Richardson International facility in North Vancouver. In August 2012 the company applied to Port Metro Vancouver for a permit to increase the storage capacity of this facility through the addition of a concrete annex. The \$120-million investment would increase the facility's storage capacity by 64.8%, to 178,000 tonnes from its current 108,000 tonnes. Already handling some 3 million tonnes of grain and oilseeds annually, this expansion would enable the company to boost its yearly throughput to over 5 million tonnes. This proposal came atop other anticipated changes in the makeup of Richardson International's terminal-elevator network, which stemmed from the expected approval of the Glencore takeover of Viterra, and which included provisions for the sale of certain commercial interests and assets to Richardson International. Assuming the closure of these transactions, these assets will significantly enhance the company's grain-handling abilities in both the Canadian and international marketplace.

#### SYSTEM EFFICIENCY AND PERFORMANCE

Despite a modest decrease in the grain supply, which fell to 61.7 million tonnes from 62.2 million tonnes a year earlier, the amount of grain shipped in the first three months of the 2012-13 crop year reached a GMP record of 8.7 million tonnes. As a result, the pressures brought to bear on the GHTS as a whole proved to be the maximum yet observed for an opening quarter under the GMP.

- The overall amount of time involved in moving grain through the supply chain fell by 4.2% in the first quarter of the 2012-13 crop year, to an average of 45.1 days from the previous crop year's overall 47.1-day average. This was due primarily to the reduced time spent by grain in storage in country elevators, which fell by an average of 1.6 days. A further 0.8 days was gained from a reduction in the railways' loaded transit time. Detracting from these gains was a 0.4-day increase in the amount of time grain spent in inventory at a terminal elevator. Nevertheless, this result ranked among the lowest yet observed under the GMP.
- While the measures gathered under the GMP suggest that the GHTS bore these pressures reasonably well, there were signs that the system might also have begun to bend under the stress. These indications, which largely began to manifest themselves towards the end of October 2012, centred on some emergent problems with railcar supply in the country. Although shippers were comparatively pleased with the service they were receiving from the railways, these problems suggested that the demand for carrying capacity might have begun to exceed what the railways were capable of providing. Even so, grain was moving to export position more effectively and efficiently than it did a year earlier.

## PRODUCER IMPACT

All of the data assembled since the beginning of the GMP has consistently shown that the financial returns arising to producers have been heavily influenced by the prevailing price of grain. While the export basis has unquestionably risen over time, it is the prevailing price of the commodity that continues to have the most sway over these returns. The GMP only includes the producer netback in the Monitor's annual reports since certain elements integral to the calculation are not available until after the close of the crop year itself. Nevertheless, current price and input-cost data is collected for both wheat and canola as a means of providing some insight into their probable impact on the per-tonne financial return arising to producers. Some of the changes observed during the first three months of the 2012-13 crop year are summarized below.

- The CWB's Harvest Pool Return Outlook (Harvest PRO) for 1 CWRS wheat (13.5% protein) moved steadily higher in the first quarter. Gauged against the 2011-12 crop year's final realized price of \$326.04 per tonne, the Harvest PRO grew by a factor of 12.3%, closing out the period at an average of \$366.00 per tonne. To a large extent this rise in price reflected an expected tightening in international supplies, with global wheat production anticipated to decline by about 6%. As a result, the financial returns accruing to producers are largely expected to increase in the 2012-13 crop year, perhaps reaching their best showing yet under the GMP.
- The Vancouver cash price for 1 Canada canola also moved higher in the first quarter. However, the average of \$597.00 per tonne proved only marginally greater than the previous crop year's final average of \$589.21 per tonne. Here too, the expected tightening of oilseed supplies in the face of strong demand did much to sustain prices. The increase in price noted thus far into the 2012-13 crop year suggests that producers of 1 Canada canola will witness only a marginal improvement in their per-tonne financial returns.

Producer-car loading has increased substantially since the beginning of the GMP. This has come about as a result of many factors, not the least of which has been the formation of producer-car loading groups. Some of the more significant changes observed in the first quarter of the 2012-13 crop year are noted below.

- The number of producer-car loading sites situated throughout western Canada has been reduced by almost half since the beginning of the GMP, with only 366 of the original 709 left in service at the close of the 2011-12 crop year. The first three months of the 2012-13 crop year saw the closure of but one site, which reduced the remainder to 365. In the process, the Class 1 carriers' count diminished by three sites while that of the Class 2 and 3 carriers rose by two. By the end of the period, the number of sites operated by the major railways had fallen to 231 while those tied to the shortlines had increased to 134.
- Even in the face of the reduction in producer-car-loading sites, producer-car shipments have risen significantly. Shipments in the first quarter increased by 14.2%, rising to 2,053 carloads from 1,798 carloads in the same period a year earlier.

## Section 1: Production and Supply

Indicator Description	Table	1999-00	2010-11	2011-12	2012-13				YTD	% VAR
					Q1	Q2	Q3	Q4		
<b>Production and Supply</b>										
Crop Production (000 tonnes)	1A-1	55,141.7	50,071.2	53,543.9	55,596.8				55,596.8	3.8%
Carry Forward Stock (000 tonnes)	1A-2	7,418.2	11,200.1	8,627.9	6,108.9				6,108.9	-29.2%
Grain Supply (000 tonnes)		62,559.9	61,271.3	62,171.8	61,705.7				61,705.7	-0.7%
Crop Production (000 tonnes) - Special Crops	1A-3	3,936.7	5,617.4	4,474.6	4,946.9				4,946.9	10.6%

## PRODUCTION AND SUPPLY

Following two consecutive years of spring flooding, Western Canadian farmers, benefitting from generally favourable growing conditions, brought in the largest harvest since the 2009-10 crop year. Moreover, above-average yields and quality were reported across much of the prairies. As a result, overall grain production for the 2012-13 crop year increased by 3.8%, to 55.6 million tonnes from the previous crop year's 53.5 million tonnes. [Table 1A-1]

Despite the increase in domestic production, global grain supplies were tightening. Production problems in the Black Sea as well as the American Midwest were the primary factors in this but were supported by smaller harvests in South America as well as Australia, all of which served to bolster or maintain commodity prices.

### Provincial Distribution

Reduced grain production was the rule for all provinces except Manitoba, where a 62.1% increase raised production to 9.2 million tonnes from 5.7 million tonnes a year earlier. This expansion, which resulted in a better-than-average harvest for Manitoba, was attributable in large measure to the absence of severe flooding.<sup>1</sup>

Alberta led the list of decliners with a 1.2-million-tonne, or 5.8%, drop in production, which fell to 19.6 million tonnes from the 20.8-million-tonne record set a year earlier. Saskatchewan followed with a more modest decline of 235,500 tonnes, with the province's harvest slipping to 26.5 million tonnes from 26.7 million tonnes. Adding to this was a 13.7%

<sup>1</sup> Although Manitoba has often experienced flooding of the Red and Assiniboine Rivers in the spring, an unusually heavy snowfall led to a severe flooding of the Assiniboine River in 2011. Described as a once-in-300-year event, the flood significantly affected crop production in the western part of the province. This was aggravated by flooding of the Souris River, which also flows into the Assiniboine River.

Figure 1: Precipitation Compared to Historical Distribution (1 April to 27 August 2012)

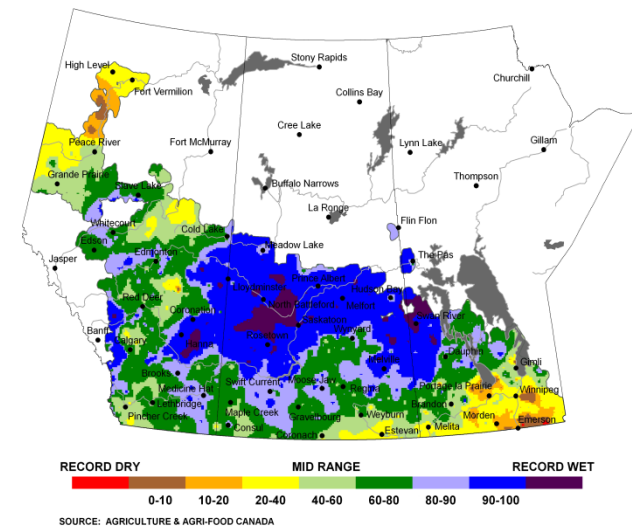
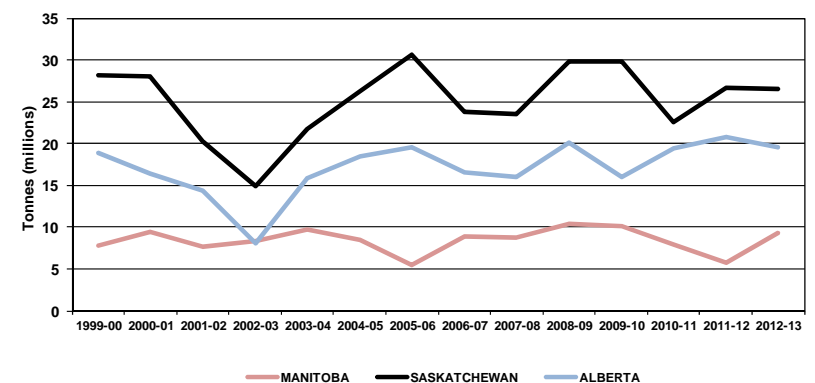


Figure 2: Provincial Grain Production



decrease in British Columbia production, which fell to 283,200 tonnes from the previous crop year's 328,200 tonnes.

### Commodity Distribution

The 2012 growing season saw increased production for a number of crops. Wheat, durum and barley saw a collective increase of 8.1%, against a 1.7% reduction in the output of oilseeds and other commodities. With total wheat, durum and barley production rising to 32.6 million tonnes from 30.1 million tonnes a year earlier, this sector accounted for 58.6% of total grain production. The remainder, which fell to 23.0 million tonnes from 23.4 million tonnes the previous crop year, took a smaller 41.4% share.

The 2.5-million-tonne expansion in wheat, durum and barley production was largely shaped by a 10.5% increase in the amount of wheat harvested, which rose to 20.5 million tonnes from 18.5 million tonnes a year earlier. This was augmented by the effects of a 10.9% increase in durum production, which saw output rise to 4.6 million tonnes from 4.2 million tonnes the previous year. A 0.8% increase for barley saw production rise to 7.5 million tonnes from 7.4 million tonnes.

With 13.2 million tonnes of production, canola accounted for 57.4% of the 23.0 million tonnes of oilseeds and other commodities harvested in the 2012-13 crop year. Still, this represented a 1.3-million-tonne decrease from the 14.5 million tonnes of canola produced a year earlier, owing in large measure to the adverse effects of a poorer yield. Adding to this loss was a 466,400-tonne decrease in oat production, which fell to 2.4 million tonnes from 2.8 million a year earlier. These losses were tempered somewhat by a collective 1.3-million-tonne increase in the output of other commodities, chiefly dry peas and soybeans.

Figure 3: Grain Production - Major Commodity Groupings

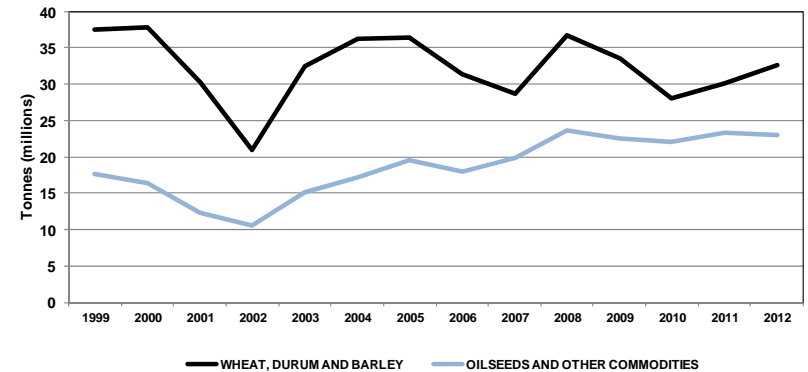
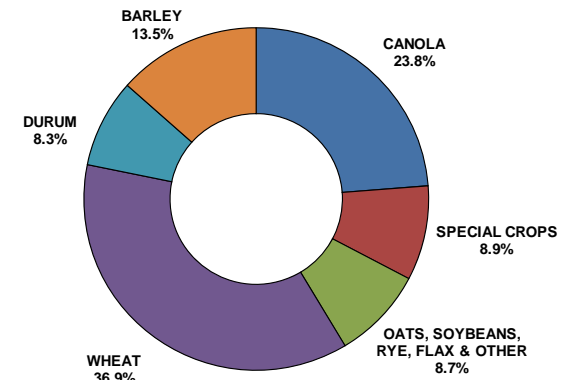


Figure 4: Major Grain Production - 2012-13 Crop Year



## Special Crops

Notwithstanding the broader production decline for oilseeds and other commodities, the output of special crops rebounded.<sup>2</sup> Total production for the sector amounted to 4.9 million tonnes, up 10.6% from the 4.5 million tonnes reported a year earlier. This 472,300-tonne gain reflected a 13.1% increase in dry pea production – the sector’s largest single crop – which rose to 2.8 million tonnes from 2.5 million tonnes a year earlier. This gain was augmented by comparatively substantive increases in the output of chickpeas, dry beans and sunflower seed. Detracting somewhat from this were losses for lentils, mustard seed and canary seed. [Table 1A-3]

## Carry-Forward Stock and Western Canadian Grain Supply

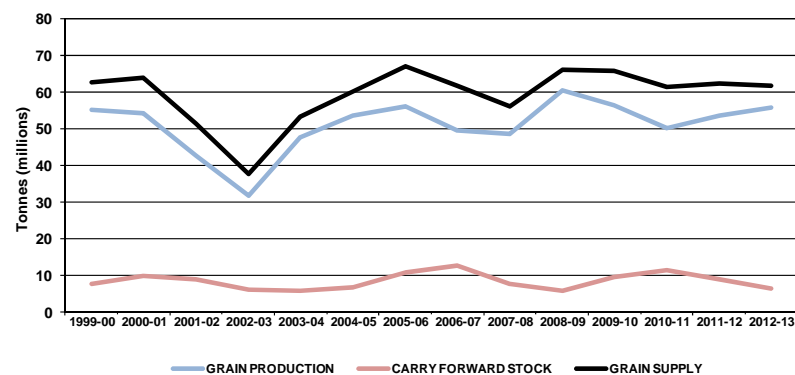
While grain production has the most immediate impact on the grain supply, it is also affected by the amount of grain held over in inventory from the previous crop year. In fact, carry-forward stocks typically account for about one-sixth of the overall grain supply.<sup>3</sup> These stocks tend to move in conjunction with changes in grain production, albeit on a lagging basis.

Totalling some 6.1 million tonnes, these stocks proved to be 29.2% less than the 8.6 million tonnes that had been carried forward a year earlier. Much of the impetus for this 2.5-million-tonne reduction came from the

<sup>2</sup> For the purposes of the GMP, special crops are defined as including the following: dry peas; lentils; mustard seed; canary seed; chickpeas; dry beans; sunflower seed; safflower seed; buckwheat; and fababeans. An often referenced subset of special crops, known as pulse crops, encompasses dry peas, lentils, chickpeas, dry beans and fababeans.

<sup>3</sup> Carry-forward stocks are defined as inventories on hand, be it on farms or at primary elevators, at the close of any given crop year (i.e., 31 July). As such, they are also deemed to be the stocks on hand as the new crop year begins (i.e., 1 August). The carry-forward stocks cited here are derived from data provided by Statistics Canada and the Canadian Grain Commission.

Figure 5: Western Canadian Grain Supply



continuing strong demand for Canadian export grain in the previous crop year, which drew down year-end stock levels. When combined with 55.6 million tonnes of new production, the grain supply reached 61.7 million tonnes. This embodied a 0.7% reduction from the previous crop year’s 62.2 million tonnes. [Table 1A-2]

With a 1.2-million-tonne reduction in carry-forward stocks, Alberta posted the most substantive decline. This was enlarged by reductions of 918,100 tonnes and 424,000 tonnes for Saskatchewan and Manitoba respectively. Only British Columbia, which reported an increase of 42,200 tonnes, provided an offset to these reductions. With the exception of oats and rye, the carry-over for all major grain stocks moved sharply lower.

## Section 2: Traffic and Movement

Indicator Description	Table	2012-13								
		1999-00	2010-11	2011-12	Q1	Q2	Q3	Q4	YTD	% VAR
<b>Country Elevator Throughput</b>										
Grain Throughput (000 tonnes) - Primary Elevators	2A-1	32,493.9	32,270.4	35,338.7	9,874.0	-	-	-	9,874.0	9.9%
<b>Railway Traffic</b>										
Railway Shipments (000 tonnes) - All Grains	2B-1	26,439.2	28,007.8	29,261.9	8,743.0	-	-	-	8,743.0	7.2%
Railway Shipments (000 tonnes) - Hopper Cars	2B-1	25,664.6	27,096.7	28,152.9	8,447.7	-	-	-	8,447.7	6.8%
Railway Shipments (000 tonnes) - Non-Hopper Cars	2B-1	774.7	911.1	1,109.0	295.3	-	-	-	295.3	21.6%
Special Crop Shipments (000 tonnes) - All Grains	2B-2	2,102.9	3,524.7	2,623.4	1,165.8	-	-	-	1,165.8	11.3%
Special Crop Shipments (000 tonnes) - Hopper Cars	2B-2	1,844.1	3,480.6	2,476.5	1,129.0	-	-	-	1,129.0	11.7%
Special Crop Shipments (000 tonnes) - Non-Hopper Cars	2B-2	258.7	44.2	147.0	36.8	-	-	-	36.8	0.7%
Hopper Car Shipments (000 tonnes) - Origin Province	2B-3									
Hopper Car Shipments (000 tonnes) - Primary Commodities	2B-4	25,664.6	27,096.7	28,152.9	8,447.7	-	-	-	8,447.7	6.8%
Hopper Car Shipments (000 tonnes) - Detailed Breakdown	2B-5									
Hopper Car Shipments (000 tonnes) - Grain-Dependent Network	2B-6	8,685.9	7,672.8	8,490.9	2,559.5	-	-	-	2,559.5	8.6%
Hopper Car Shipments (000 tonnes) - Non-Grain-Dependent Network	2B-6	16,978.7	19,423.8	19,662.0	5,888.2	-	-	-	5,888.2	6.1%
Hopper Car Shipments (000 tonnes) - Class 1 Carriers	2B-7	23,573.5	26,145.6	27,029.3	8,143.5	-	-	-	8,143.5	6.4%
Hopper Car Shipments (000 tonnes) - Non-Class-1 Carriers	2B-7	2,091.0	951.0	1,123.6	304.3	-	-	-	304.3	18.9%
<b>Terminal Elevator Throughput</b>										
Grain Throughput (000 tonnes) - All Commodities	2C-1	23,555.5	25,428.1	26,896.9	7,570.3	-	-	-	7,570.3	6.6%
Hopper Cars Unloaded (number) - All Carriers	2C-2	278,255	283,101	295,397	92,740	-	-	-	92,740	11.2%
Hopper Cars Unloaded (number) - CN	2C-2	144,800	151,554	151,790	47,923	-	-	-	47,923	24.0%
Hopper Cars Unloaded (number) - CP	2C-2	133,455	131,547	143,607	44,817	-	-	-	44,817	0.2%



### COUNTRY ELEVATOR THROUGHPUT

Country elevator throughput, as gauged by all road and rail shipments from the primary elevators situated across western Canada, increased by 9.9% in the first three months of the 2012-13 crop year. This resulted in the establishment of a new GMP record, with 9.9 million tonnes being handled against a previous best of 9.4 million tonnes, and 9.0 million tonnes a year earlier.

Although provincial throughputs all increased, there were significant differences in the gains made. With a 35.0% increase, Manitoba saw the largest expansion in tonnage, with throughput rising to 1.9 million tonnes from 1.4 million tonnes a year earlier. Alberta followed with a 10.8% increase in shipments, which rose to 3.2 million tonnes from 2.9 million tonnes. Saskatchewan posted a gain of just 0.2%, with primary-elevator shipments rising to 4.7 million tonnes from 4.6 million tonnes a year earlier. [Table 2A-1]

### RAILWAY TRAFFIC

The amount of regulated grain moved by rail to western Canadian ports in the first quarter of the 2012-13 crop year increased by 7.2%, to a GMP record of 8.7 million tonnes, from the 8.2 million tonnes shipped in the same period a year earlier. As in past years, the vast majority of this traffic, some 8.4 million tonnes, moved in covered hopper cars. The remaining 295,300 tonnes moved in a combination of boxcars and containers for bulk and bagged grain shipments, as well as tankcars for export canola oil. These latter movements represented a comparatively small fraction of total railway shipments, although their share rose to 3.4% from 3.0% a year earlier. [Table 2B-1]

Special-crop shipments in the first quarter amounted to 1.2 million tonnes, a gain of 11.3% over the 1.0 million tonnes shipped a year earlier. Hopper-car shipments accounted for 96.8% of this volume, rising by 11.7%, to 1.1 million tonnes from 1.0 million tonnes. A much smaller 0.7% increase in non-hopper-car shipments (boxcars, containers and

Figure 6: Primary Elevator Throughput

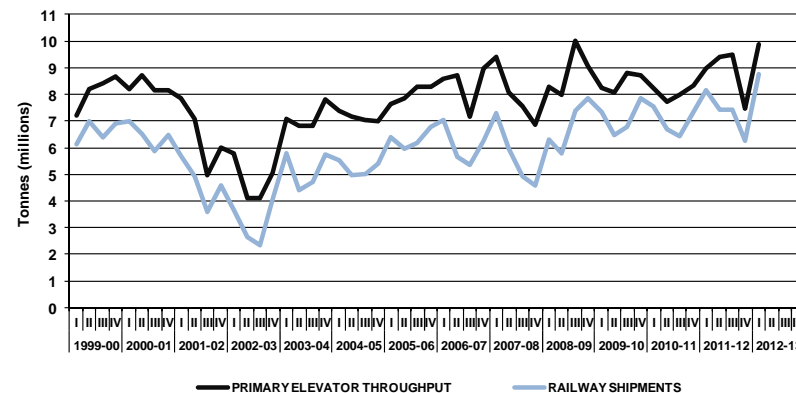
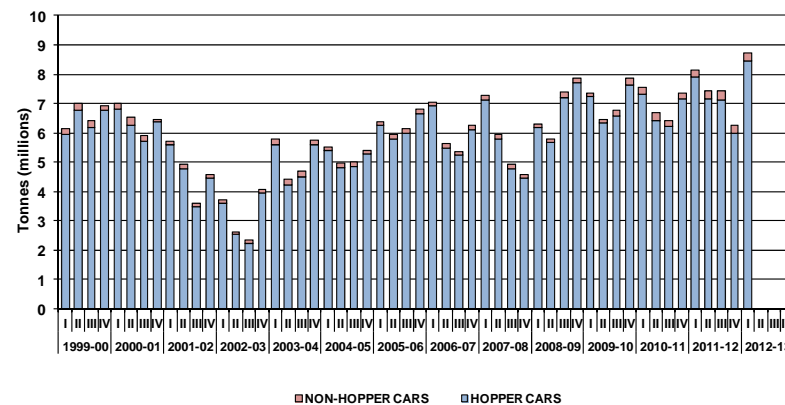


Figure 7: Railway Shipments - Hopper and Non-Hopper Cars



tankcars) resulted in its share of the overall movement falling to 3.2% from 3.5%. [Table 2B-2]

### Hopper Car Movements

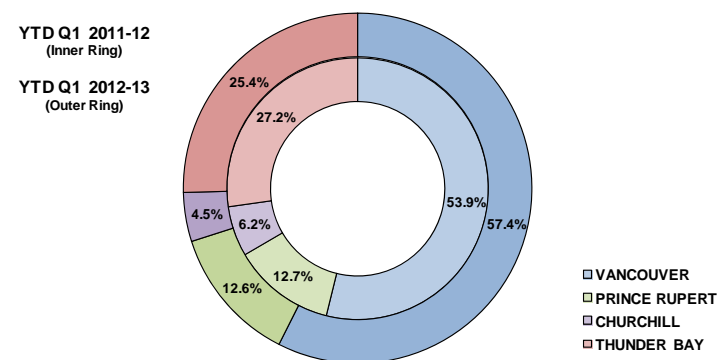
Western Canadian hopper-car shipments reached a GMP record of 8.4 million tonnes in the first quarter of the 2012-13 crop year, a gain of 6.8% over the 7.9 million tonnes handled in the same three-month period a year earlier. This proved to be a substantially greater initial movement than suggested by either the 3.8% increase in grain production or the 0.7% reduction in the overall grain supply.

The result was largely shaped by an increase in traffic from Manitoba and Alberta. For its part, Manitoba reported an increase of 40.4%, with total tonnage rising to 1.2 million tonnes from 871,200 tonnes a year earlier. This was followed by Alberta with a 7.3% increase, which saw shipments lifted to just under 3.0 million tonnes from 2.8 million tonnes. A 124.4% gain was also posted by British Columbia, with shipments for the period climbing to 83,000 tonnes from 37,000 tonnes. Although these gains were nominally contained by a 1.5% decline in Saskatchewan-originated tonnage, total shipments remained effectively unchanged at 4.2 million tonnes. [Tables 2B-3 through 2B-5]

While the volume of grain directed into the GHTS is largely shaped by the grain supply, its movement is constrained by the railways' available carrying capacity. This encompasses more than just the number of hopper cars allocated to moving grain, and ultimately reflects several other resource constraints, including the availability of motive power and crews. Equally important is the efficacy with which these resources are employed. Without doubt, a large portion of the incremental volume gain stems from a 30% reduction in the average car cycle. But a moderate contribution has also come from a 3.4% increase in payload weights, much of which has been tied to the railway industry's use of larger hopper cars and an upgrading of the government-owned fleet.<sup>4</sup>

<sup>4</sup> In 2007 the Government of Canada concluded new agreements with CN and CP for the operation of its government-owned fleet of covered hopper cars. A key

Figure 8: Railway Hopper Car Shipments - Destination Port



### Destination Ports

The port of Vancouver remained the principal export destination for western Canadian grain in the first quarter of the 2012-13 crop year. Traffic to Vancouver increased by 13.9%, to a GMP record of 4.9 million tonnes from the 4.3 million tonnes directed there in the same period a year earlier. The port's share of railway shipments also increased, rising to 57.4% from 53.9%. In comparison, Prince Rupert posted a 6.1% increase in railway shipments, with volume climbing to 1.1 million tonnes from 1.0 million tonnes. Despite this gain, the port took a marginally lesser share of the overall movement, which fell to 12.6% from 12.7%. On a combined basis the west coast ports handled 70.1% of the grain directed to export position, a noticeable gain over the 66.6% share secured a year

provision in these agreements was the requirement that both carriers physically refurbish the cars, and raise the maximum load limit to 286,000 pounds from 263,000 pounds. This has helped to raise the average payload for a carload of grain to 88.9 tonnes from the 85.9 tonnes benchmarked in the base year.

earlier. For the most part, the increase in westbound grain shipments did not detract from those moving eastward. While shipments into both Thunder Bay and Churchill fell during the first quarter, the overall decline was limited to a combined 115,400 tonnes, or 4.4%. Moreover, the reduction in rail deliveries into Thunder Bay claimed just 6,900 tonnes of this total, with total shipments remaining largely unchanged at 2.1 million tonnes. Even so, the port's share of total railway hopper-car shipments fell to 25.4% from 27.2%. The more striking drop in volume came from a 22.1% decline in railway shipments to Churchill, which fell to 383,300 tonnes from 491,800 tonnes a year earlier. This also resulted in a traffic-share reduction, which decreased to 4.5% from 6.2%.<sup>5</sup>

### Grain-Dependent and Non-Grain-Dependent Originations

The effect of both elevator and railway rationalization continues to manifest itself in changes to the railways' traffic mix. In the first three months of the 2012-13 crop year, the tonnage originated by the non-grain-dependent network increased by 6.1%, to 5.9 million tonnes from 5.6 million tonnes a year earlier. At the same time, traffic originating at points on the grain-dependent network rose by a somewhat greater 8.6%, to 2.6 million tonnes from 2.4 million tonnes.

As these results suggest, the non-grain-dependent network continues to garner a larger share of the overall traffic volume. In the first quarter of the 2012-13 crop year, 69.7% of all the grain originated in western Canada was forwarded from points on the non-grain-dependent network. Even so, this value stands only marginally ahead of the 66.2% share earned in the GMP's base year. The reverse is of course true of the traffic

<sup>5</sup> Through to the end of the 2011-12 crop year the port of Churchill had benefited from the support of the Canadian Wheat Board (CWB). In the transition to a marketing environment where the CWB no longer exercised its traditional monopoly, the trade was slow to capitalize upon movements through the port. In Churchill's already short shipping season, this resulted in the first vessels being loaded a full week later than the previous year.

Figure 9: Hopper Car Shipments - Grain-Dependent Originations

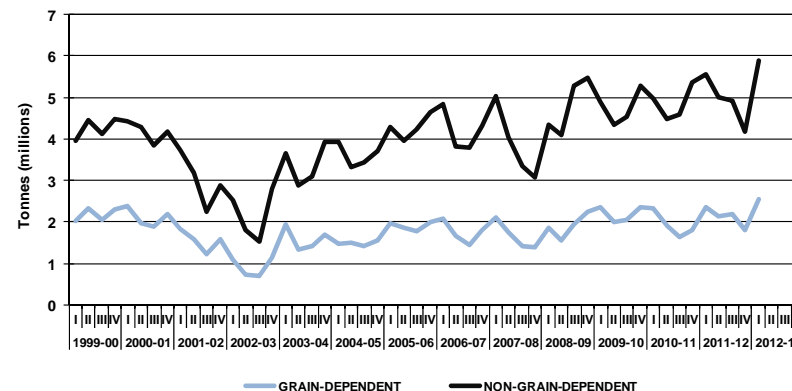
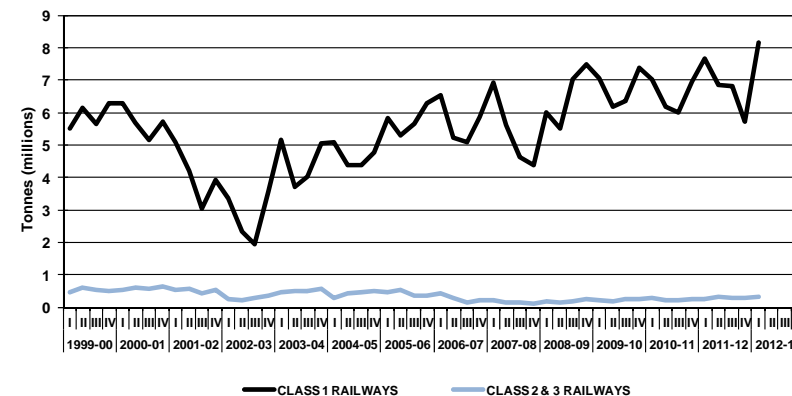


Figure 10: Hopper Car Shipments - Carrier Originations



originated by the grain-dependent network, whose relative share fell to 30.3% from 33.8% over the same span of time. [Table 2B-6]

### Class 1 and Non-Class-1 Originations

The same structural influences are also apparent in the volumes of grain originated by the Class 1 and non-Class-1 railways. Nominally, the tonnage originated by the Class 1 carriers increased by 6.4% in the first three months of the 2012-13 crop year, to 8.1 million tonnes from 7.7 million tonnes. At the same time, the establishment of two new shortline railways, the Lake Line Railway and the Long Creek Railroad, helped lift non-Class-1-carrier volume by a more substantive 18.9%, to 304,300 tonnes from 255,900 tonnes.

Even with the recent addition of several new shortline railways, the traffic originated by non-Class-1 carriers has declined fairly significantly over the course of the GMP. In the first quarter of the 2012-13 crop year their share of total originations amounted to just 3.6%, less than half of the 8.1% share benchmarked in the GMP’s base year. [Table 2B-7]

Even so, the traffic originated by shortline railways has not fallen as sharply as the number of licensed elevators served by them, which were reduced by 70.7% in the same period. In fact, the data indicates that increased producer-car loading has helped replace a significant portion of the traffic lost following the closure of these facilities. Current estimates indicate that producer-car loading now accounts for about 60% of their total grain shipments; four times the share accorded to them in the first year of the GMP.

### TERMINAL ELEVATOR THROUGHPUT

Port throughput, as measured by the volume of grain shipped from the terminal elevator and bulk loading facilities located at Canada’s four western ports, totalled 7.6 million tonnes in the first three months of the 2012-13 crop year. As with country elevator and railway shipments, this denoted a new volume record for the period under the GMP, easily

Figure 11: Terminal Elevator Throughput

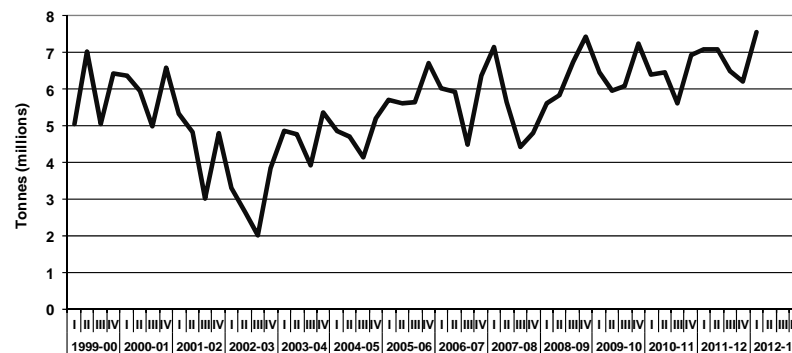
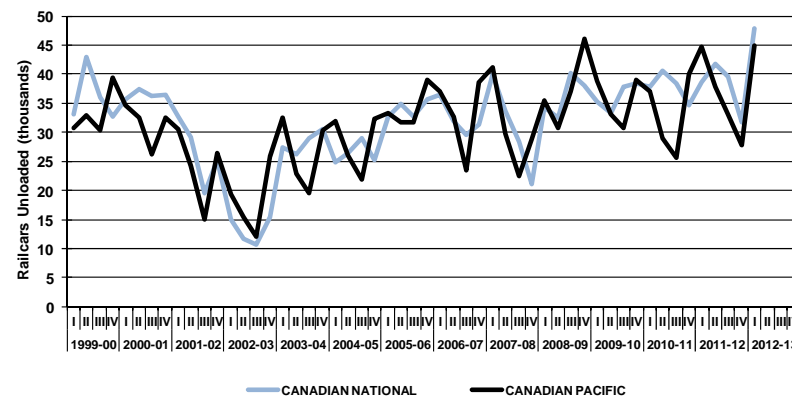


Figure 12: Terminal Elevator Unloads - Delivering Carrier



surpassing the former record of 7.1 million tonnes set five years earlier by 6.0%. Similarly, the first-quarter's throughput also surpassed the 7.1 million tonnes handled in the same period a year earlier, albeit by the slightly wider margin of 6.6%. [Table 2C-1]

This result was driven by increased throughputs at the west-coast ports of Vancouver and Prince Rupert. For the largest of these, Vancouver, total marine shipments increased by 10.4%, to 4.2 million tonnes from 3.8 million tonnes a year earlier. This represented more than half, 55.2%, of the GHTS's total throughput. Complementing this was Prince Rupert, which reported a somewhat greater expansion, with shipments rising by 15.9%, to 1.1 million tonnes from 919,100 tonnes. In combination, the tonnage passing through these two ports represented 69.3% of the system's overall total, a gain over the 66.3% share they garnered in the same period of the previous crop year.

Of course, the gain made by the west coast ports was reflected in a loss for the GHTS's other two ports. The combined share secured by the ports of Thunder Bay and Churchill in the first quarter of the 2012-13 crop year fell to 30.7% from 33.7% a year earlier. For its part, Thunder Bay saw only a modest downturn, with throughput falling by only 0.2%, to remain effectively unchanged at 1.9 million tonnes. Comparatively, Churchill fared worse, with the first quarter's throughput declining for a second consecutive year, falling by 13.3%, to 421,000 tonnes from 485,500 tonnes a year earlier. This constituted the port's smallest throughput in six years.

### Terminal Elevator Unloads

The number of covered hopper cars unloaded at terminal elevators increased by 11.2% in the first quarter of the 2012-13 crop year, to 92,740 cars from 83,388 cars a year earlier. This result was characterized by a sharp rise in the number of cars unloaded by the Canadian National Railway (CN), which rose by 24.0%, to 47,923 cars from 38,661 cars a year earlier. Comparatively, the handlings of the Canadian Pacific Railway (CP) remained largely unchanged, rising by just 0.2%, to 44,817 cars from

44,727 cars. As a result, CN was the largest grain handling railway in western Canada, with a share of 51.7% against 48.3% for CP.

The west coast ports of Vancouver and Prince Rupert both benefited from an increase in grain shipments. Traffic destined to Vancouver rose by 15.6%, with 50,083 cars unloaded versus 43,313 cars a year earlier. Of particular interest was the relative division between CN and CP, with the former carrier's handlings into the port rising by 36.9% in the face of the latter's much lesser 2.8% increase. To a large extent, the greater gain made by CN appeared to reflect the advancements it had made in bringing a more predictable scheduled service to grain shippers. The effects of this were equally visible in the amount of grain directed to Prince Rupert, which rose by 16.0%, to 12,345 cars from 10,641 cars a year earlier.

In comparison, Thunder Bay posted a more modest gain in traffic, with its handlings climbing by 7.1%, to 25,596 cars from 23,890 cars a year earlier. Much of this gain was tied to the carryover of a heavier durum movement from the dying weeks of the preceding crop year. Even so, CN saw a more substantive rise in its handlings into Thunder Bay, with a 12.9% increase leading to 8,587 cars unloaded versus 7,603 cars in the same period the year previous. In comparison, CP registered an increase of only 4.4%, to 17,009 cars from 16,287 cars. Running counter to this was Churchill, which reported a 14.9% reduction in volume, with handlings of 4,716 cars versus 5,544 cars a year earlier. [Table 2C-2]

## Section 3: Infrastructure

Indicator Description	Table	2012-13								
		1999-00	2010 -11	2011-12	Q1	Q2	Q3	Q4	YTD	% VAR
<b>Country Elevator Infrastructure</b>										
Delivery Points (number)	3A-1	626	273	271	272	-	-	-	272	0.4%
Elevator Capacity (000 tonnes)	3A-1	7,443.9	6,369.4	6,739.7	6,772.7	-	-	-	6,772.7	0.5%
Elevators (number) - Province	3A-1	917	366	386	387	-	-	-	387	0.3%
Elevators (number) - Railway Class	3A-2									
Elevators (number) - Grain Company	3A-3									
Elevators Capable of MCB Loading (number) - Province	3A-4	317	241	246	246	-	-	-	246	0.0%
Elevators Capable of MCB Loading (number) - Railway Class	3A-5									
Elevators Capable of MCB Loading (number) - Railway Line Class	3A-6									
Elevator Closures (number)	3A-7	130	13	39	1	-	-	-	1	-97.4%
Elevator Openings (number)	3A-8	43	13	59	2	-	-	-	2	-96.6%
Delivery Points (number) - Accounting for 80% of Deliveries	3A-9	217	85	n/a	n/a	-	-	-	n/a	n/a
<b>Railway Infrastructure</b>										
Railway Infrastructure (route-miles) - Total Network	3B-1	19,390.1	17,830.3	17,830.3	17,616.3	-	-	-	17,616.3	-1.2%
Railway Infrastructure (route-miles) - Class 1 Network	3B-1	14,503.0	15,249.5	15,029.0	14,923.4	-	-	-	14,923.4	-0.7%
Railway Infrastructure (route-miles) - Non-Class-1 Network	3B-1	4,887.1	2,580.8	2,801.3	2,692.9	-	-	-	2,692.9	-3.9%
Railway Infrastructure (route-miles) - Non-Grain-Dependent Network	3B-1	14,513.5	14,245.1	14,245.1	14,151.7	-	-	-	14,151.7	-0.7%
Railway Infrastructure (route-miles) - Grain-Dependent Network	3B-1	4,876.6	3,585.2	3,585.2	3,464.6	-	-	-	3,464.6	-3.4%
Served Elevators (number)	3B-3	884	349	358	358	-	-	-	358	0.0%
Served Elevators (number) - Class 1 Carriers	3B-3	797	320	334	334	-	-	-	334	0.0%
Served Elevators (number) - Non-Class-1 Carriers	3B-3	87	29	24	24	-	-	-	24	0.0%
Served Elevators (number) - Grain-Dependent Network	3B-3	371	117	115	114	-	-	-	114	-0.9%
Served Elevators (number) - Non-Grain-Dependent Network	3B-3	513	232	243	244	-	-	-	244	0.4%
Served Elevator Capacity (000 tonnes)	3B-3	7,323.0	6,290.7	6,602.4	6,625.3	-	-	-	6,625.3	3.5%
Served Elevator Capacity (000 tonnes) - Class 1 Carriers	3B-3	6,823.2	6,119.0	6,428.0	6,443.8	-	-	-	6,443.8	2.5%
Served Elevator Capacity (000 tonnes) - Non-Class-1 Carriers	3B-3	499.7	171.7	174.4	181.6	-	-	-	181.6	4.1%
Served Elevator Capacity (000 tonnes) - Grain-Dependent Network	3B-3	2,475.4	1,755.6	1,868.2	1,863.3	-	-	-	1,863.3	-0.3%
Served Elevator Capacity (000 tonnes) - Non-Grain-Dependent Network	3B-3	4,847.6	4,535.1	4,734.2	4,762.0	-	-	-	4,762.0	5.9%
<b>Terminal Elevator Infrastructure</b>										
Terminal Elevators (number)	3C-1	15	15	16	16	-	-	-	16	0.0%
Terminal Elevator Storage Capacity (000 tonnes)	3C-1	2,678.6	2,475.6	2,213.8	2,213.8	-	-	-	2,213.8	0.0%

### COUNTRY ELEVATOR INFRASTRUCTURE

At the outset of the 1999-2000 crop year, there were 1,004 licensed primary and process elevators on the prairies. By the end of the 2011-12 crop year, that number had fallen by 61.6% to 386, making this decline one of the most visible facets of changes to the GHTS.<sup>6</sup> [Table 3A-1]

The first three months of the 2012-13 crop year saw little meaningful change, with the elevator network gaining just a single additional facility. This raised the total number of elevators in western Canada to 387, and reduced the accumulated loss since the beginning of the GMP to 617 facilities, or 61.5%. The marginal scope of the changes witnessed over the course of the last several years continues to suggest that grain-elevator rationalization has largely concluded, and that the network's overall size has largely stabilized.

Much the same is true of the decline in grain delivery points, which have largely fallen in conjunction with the reduction in licensed elevators. By the close of the 2011-12 crop year the scope of this network had been reduced by 60.4%, to 271 delivery points from the 685 that had been in place at the beginning of the GMP. This count increased marginally in the first three months of the 2012-13 crop year, with the overall number rising by one to 272. This served to trim the net reduction in delivery points during the GMP to 60.3%.

#### Provincial Distribution

At the close of the first quarter, 197 of western Canada's licensed elevators were situated in Saskatchewan. These facilities constituted 50.9% of the system's active total; a proportion similar to that held by the province at the beginning of the GMP. This was followed by Manitoba and Alberta, whose corresponding 95 and 89 elevators accounted for shares

Figure 13: Licensed Grain Elevators and Delivery Points

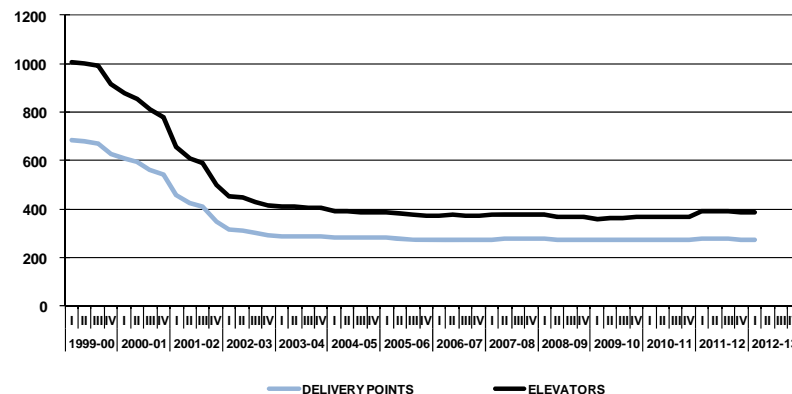
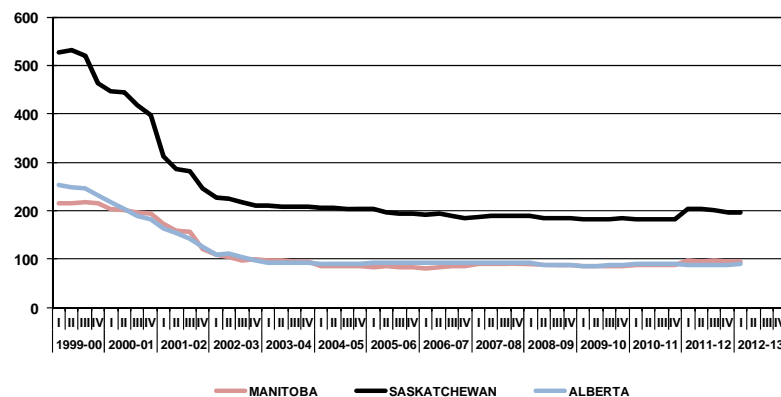


Figure 14: Licensed Grain Elevators - Provincial Distribution



<sup>6</sup> The reduction in licensed elevators cited here reflects the net change arising from elevator openings and closures over a given period.

of 24.5% and 23.0% respectively. The GHTS's remaining six facilities were divided between British Columbia, with five, and Ontario, with one.

Over the term of the GMP, Saskatchewan posted the greatest reduction in licensed elevation facilities, closing 330, or 62.6%, of its elevators. In comparative terms, the 163-elevator reduction in Alberta represented a slightly greater 64.7%. Manitoba followed with a 56.0%, or 121-elevator, reduction in its facilities. The comparable nature of these reductions indicates that elevator rationalization has been broadly based, and that the facilities of any single province have not been unduly targeted.

### Elevator Storage Capacity

Despite a 61.5% decline in the overall number of elevators, the network's storage capacity stands only 3.6% below the 7.0 million tonnes recorded at the outset of the GMP. This differential reflects the character of the tactical transformation that had taken place: that the grain companies were substituting the handling capacity inherent in their existing wood-crib elevators with that provided by a lesser number of more efficient high-throughput facilities. In fact, the capacity added through their investment in these larger facilities temporarily outpaced that removed by the closure of older elevators early in the GMP, raising the system's total storage capacity to a level of almost 7.6 million tonnes. But soon the reverse became true, and by the close of the 2003-04 crop year total GHTS storage capacity had fallen by 19.0%, to reach a low of 5.7 million tonnes.

As elevator closures began to moderate, this trend was again reversed. Marked by a 157,000-tonne expansion in the 2004-05 crop year, the system's total storage capacity began to increase steadily. By the close of the 2011-12 crop year, it had risen to slightly more than 6.7 million tonnes. The first three months of the 2012-13 crop year saw another 33,000 tonnes of storage capacity added to the system. This modest 0.5% gain effectively raised total storage capacity to slightly under 6.8 million tonnes, a value not seen since the close of the 2000-01 crop year.

Figure 15: Change in Licensed Elevators and Storage Capacity

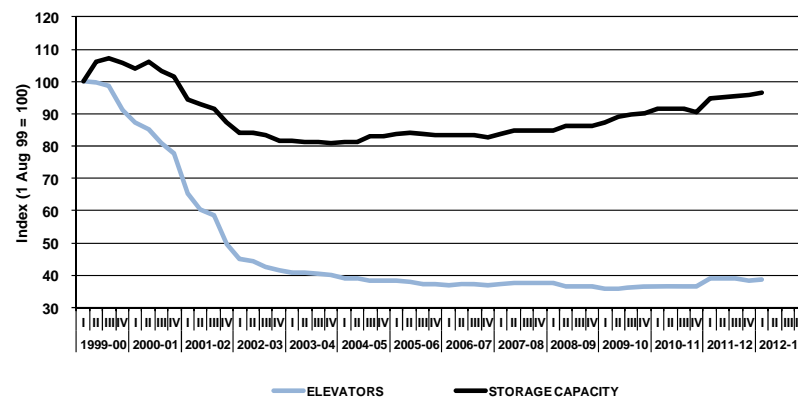
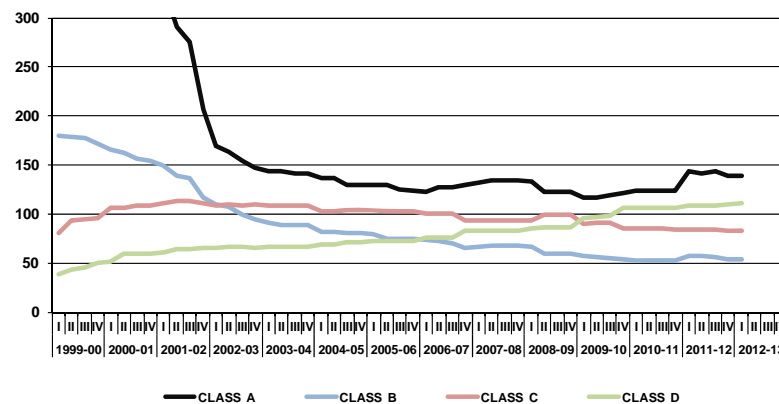


Figure 16: Licensed Elevators - Facility Class





## Facility Class

For comparative purposes, the GMP groups elevators into four classes. These classes are based on the loading capability of each facility, which is in turn defined by the number of railcar spots each possesses. Those with less than 25 car spots are deemed to be Class A facilities; those with 25-49, Class B; those with 50-99, Class C; and those with 100 or more, Class D.<sup>7</sup> In addition, the GMP deems Class C and D facilities to be high-throughput elevators given their ability to load railcars in larger numbers.

Within this framework, the composition of the elevator network has changed significantly over the course of the GMP. The most striking aspect has been the 80.3% decline in the number of Class A facilities, which dropped to 139 from the 705 in place at the beginning of the GMP. This was followed closely by a 70.0% reduction in Class B facilities, which fell to 54 from 180 over the same period. Juxtaposed against this was the trade's pronounced shift towards the use of high-throughput elevators. During this same period the number of Class C facilities grew by 2.5%, to 83 from 81, while the number of Class D facilities almost tripled, rising to 111 from 38.

These statistics illustrate that the prime target in elevator rationalization has been the conventional wood-crib facility. Of the 951 elevators closed since the beginning of the GMP, 724 related to the shutdown of Class A facilities.<sup>8</sup> To a large extent, this was because the economic efficiency of the high-throughput elevator had rendered these facilities obsolete. But

<sup>7</sup> The facility classes employed here mirror the thresholds delineated by Canada's major railways at the beginning of the GMP for the receipt of discounts on grain shipped in multiple-car blocks. At that time, these thresholds involved shipments of 25, 50 or 100 railcars. First introduced in 1987, these incentives were aimed at drawing significantly greater grain volumes into facilities that could provide for movement in either partial, or full, trainload lots.

<sup>8</sup> Statistics associated with elevator closures and openings are gross measures and do not distinguish between licensed facilities that may have been closed by one operator but, as a result of its subsequent sale, later reopened by another.

they had also been undermined by the financial incentives that the railways used to encourage grain to move in blocks of 25 or more railcars at a time.

These same forces also disfavoured the Class B facilities, albeit not to the same degree. More particularly, even though grain movements from these facilities were eligible to receive discounted freight rates, they were not as generous as those accorded shipments from high-throughput elevators. These small-block discounts were later reduced and ultimately eliminated.<sup>9</sup> As a result, over the course of the GMP, a total of 155 Class B facilities also closed. Together, Class A and B facilities account for 92.4% of all recorded elevator closures. [Table 3A-7]

In contrast to their share of closures, 211 of the 334 elevators opened during this period were Class A and B facilities. This differential calls attention to the fact that high-throughput facilities accounted for a much greater proportion of elevator openings than closures, 36.8% versus 7.6% respectively. Class C and D elevators were the only ones to have posted net increases since the 1999-2000 crop year. [Table 3A-8]

Since the close of the 2008-09 crop year, approximately half of the GTHS's elevators have been comprised of high-throughput facilities. More importantly, these facilities have claimed the lion's share of the system's storage capacity since the second year of the GMP. Although the proportions given over to high-throughput facilities remained effectively unchanged in the first three months of the 2012-13 crop year, with 50.1% of system elevators and 78.9% of its storage capacity, they continued to stand well above their respective base-year values of 11.9% and 39.4%.

<sup>9</sup> With the commencement of the 2003-04 crop year, CN eliminated the \$1.00-per-tonne discount that had been given to movements from Class B facilities since the beginning of the GMP, while CP reduced it to \$0.50 per tonne. By the close of the 2005-06 crop year, CP had also eliminated its discount on movements in blocks of 25-49 cars.

### Grain Companies

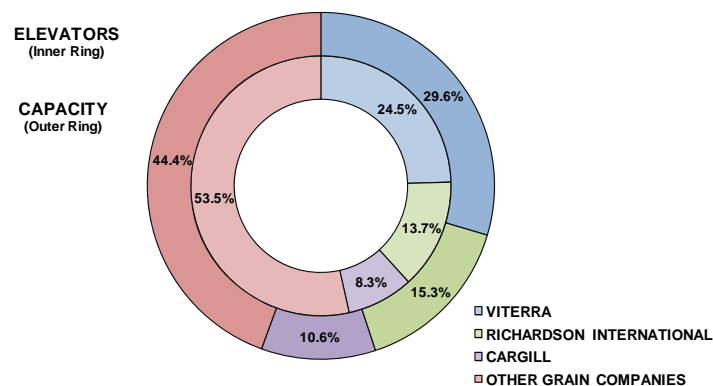
For a number of grain companies, the key to improving the economic efficiency of their grain-gathering networks has been to rationalize their elevator assets. With the cornerstone of this strategy being the replacement of smaller elevators by larger high-throughput facilities, it follows that this would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

The predecessors of today’s Viterra Inc. posted what amounts to the deepest overall reduction, with a net decrease of 605 facilities, or 86.4%, through the close of the first quarter.<sup>10</sup> Richardson International and Cargill posted the next deepest cuts, with elevator reductions of 49.5% and 45.8% respectively. This was complemented by Paterson Grain, with a 30.0% decrease, as well as Parrish and Heimbecker, with a reduction of 23.1%. [Table 3A-3]

Elevator closures have abated significantly since the creation of Viterra in 2007. Moreover, the total number of facilities actually began to rise after reaching a GMP low of 360 elevators in the first quarter of the 2009-10 crop year. However, much of the subsequent increase is misleading, since it largely reflects changes in the licensing requirements of the CGC rather than in the actual addition of new elevators. A number of companies, including Alliance Pulse Processors Inc., Simpson Seeds Inc. and Legumex-Walker Inc., figure prominently in this expansion since most - if not all - of their facilities had previously been unlicensed.

10 Viterra Inc. was formed in 2007 following Saskatchewan Wheat Pool’s purchase of Agricore United, which was itself the product of a merger between Agricore Cooperative Ltd. and United Grain Growers Limited in 2001. Given this heritage, Viterra Inc. is the corporate successor to the three largest grain companies in existence at the beginning of the GMP. The 605 closures cited here represent the net reduction posted by Viterra’s predecessor companies, which had a combined total of 700 elevators at the outset of the GMP.

Figure 17: Licensed Elevators and Capacity - Q1 2012-13 Crop Year



Nevertheless, there has been a 151.8% increase in the number of elevators operated by smaller grain companies, which has climbed to 141 from 56.

Even so, the proposed acquisition of Viterra by Glencore International PLC entails a significant shift in the ownership of strategic elevator assets. At the heart of this is the planned divestiture of Viterra’s interest in 19 country and two terminal elevators to Richardson International in an accompanying transaction. Notwithstanding the completion of this transfer, Viterra, Richardson International and Cargill would still control the bulk of the GHTS’s elevators and storage capacity, and would remain the dominant handlers of grain in western Canada. Together these three companies have consistently handled about 75% of the export grain moved by the GHTS since the beginning of the GMP.

This concentration is also reflected in the way grain is gathered into the system, with the vast majority of the grain being collected through fewer than half of the GHTS’s delivery points. In the 2010-11 crop year - the last for which statistics are available - 85 of the GHTS’s 219 active

delivery points took in 80% of the grain delivered. Although this 38.8% share is greater than the 33.5% recorded in the GMP's base year, it still suggests that deliveries remain highly concentrated within the smaller grain-gathering network. [Table 3A-9]

## RAILWAY INFRASTRUCTURE

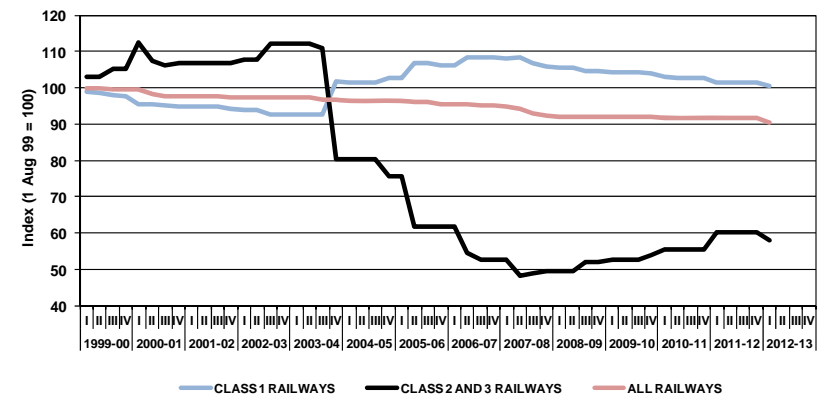
At the outset of the 1999-2000 crop year, the railway network in western Canada encompassed 19,468.2 route-miles of track. Of this, Class 1 carriers operated 76.2%, or 14,827.9 route-miles, while the smaller Class 2 and 3 carriers operated the remaining 23.8%, or 4,640.3 route-miles.<sup>11</sup> Although the railway network has contracted, the reduction has proven substantially less than that of the elevator system it serves. By the end of the 2011-12 crop year, the net reduction in western Canadian railway infrastructure amounted to just 8.4%, with the network's total mileage having been reduced to 17,830.3 route-miles overall. The largest share of this 1,637.9-route-mile reduction came from the abandonment of 1,369.5 route-miles of light-density, grain-dependent branch lines.<sup>12</sup> [Table 3B-1]

Notwithstanding its physical reduction, the railway network had changed in other ways as well. Much of this related to the transfer by CN and CP

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

12 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. This can lead to substantive differences between what might be considered the physical, and the legally-designated, grain-dependent branch line networks. 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.

Figure 18: Change in Route-Miles - Railway Class



of various branch line operations to a host of new shortline railways. This practice, which began in the mid 1990s, was one of the cornerstones in a wider industry restructuring that resulted in slightly more than one-quarter of the railway network in western Canada being operated by smaller regional and shortline carriers.

The first important variation in this restructuring strategy came in 2004 when CN acquired the operations of what was then western Canada's only Class 2 carrier, BC Rail Ltd. In addition, the waning financial health of most shortline carriers led many to either rationalize or sell their own operations. Ultimately, this resulted in a number of shortlines being reabsorbed into the operations of the Class 1 carrier that had originally spun them off.<sup>13</sup> By the close of the 2011-12 crop year, the network

13 The most significant of these reacquisitions came in January 2006 when RailAmerica Inc. sold most of its holdings in western Canada back to CN. Over the course of the next two years, CN also reacquired the operations of what had devolved into the Savage Alberta Railway as well as the Athabasca Northern Railway.

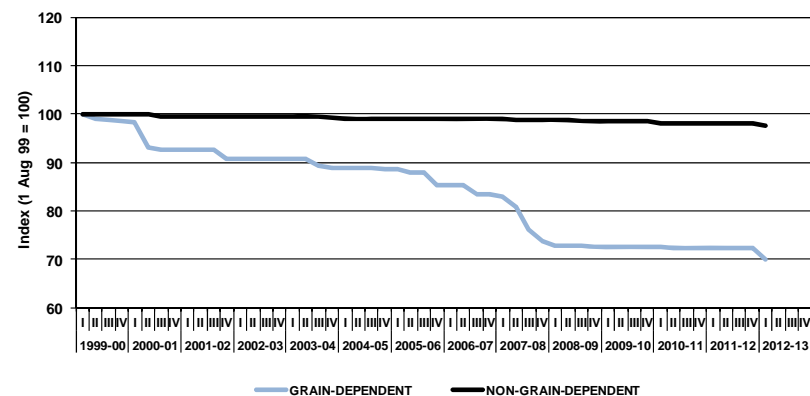
operated by the Class 1 carriers had actually increased 1.4%, to 15,029.0 route-miles, whereas that of the Class 2 and 3 carriers had declined by 39.6%, to 2,801.3 route miles.

Still, many of these shortlines had been established with an eye towards preserving railway service on what the Class 1 carriers had come to regard as uneconomic branch lines. While many of these branch lines were grain dependent, most shortlines proved incapable of reshaping the economics that had given rise to the grain industry's broader elevator-rationalization programs. Although these carriers could point to some success in attracting new business - much of which has been tied to increased producer-car loading - they ultimately could not prevent the grain companies from closing the smaller elevators that underpinned their commercial activity. In the face of several resultant business failures, the physical span of the prairie shortline network had contracted to less than half of the 2,011.0 route-miles that it had been at the outset of the GMP, ultimately falling to a low of 1,002.5 route-miles midway through the 2007-08 crop year.<sup>14</sup>

Notwithstanding this decline, the shortline industry was beginning to show signs of resurgence. Much of this could be traced back to the successful takeover of the Great Western Railway by a consortium of local municipal and business interests in 2004. Their model, which essentially integrated the railway's operations with local producer-car loading activity, fostered imitation. By the close of the 2011-12 crop year, another seven shortline railways had been established across the

<sup>14</sup> Prairie shortlines represent a geographic subset of the broader Class 2 and 3 railway classification cited previously. As at 31 January 2008 there were just eight shortline railways originating traffic on the prairies: Thunder Rail Ltd.; Carlton Trail Railway; Central Manitoba Railway; Fife Lake Railway; Great Western Railway Ltd.; Red Coat Road and Rail Ltd.; Southern Rails Cooperative Ltd.; and Wheatland Railway Inc.

Figure 19: Change in Route-Miles - Railway Network



prairies.<sup>15</sup> Five of these were based in Saskatchewan, where the provincial government proved more receptive to providing financial assistance.<sup>16</sup>

Although the creation of these new entities had a comparatively modest impact on the division between Class 1 and non-Class-1 infrastructure, the prairie shortline system was again expanding. At the close of the 2011-12 crop year, the shortline network had increased by a factor of 60%, to encompass 1,606.1 route-miles of track under the management of 15 separate carriers.

<sup>15</sup> The seven shortline railways created during this period were: Torch River Rail Inc.; Boundary Trail Railway Co.; Great Sandhills Railway; Last Mountain Railway; Battle River Railway; Stewart Southern Railway; and Big Sky Rail.

<sup>16</sup> The Government of Saskatchewan lent financial support to several shortline initiatives, most often through the extension of interest-free loans. Additional financial support has also come through the province's Shortline Railway Sustainability Program.

The 2012-13 crop year brought still other examples of this expansion with the formation of two new shortlines: the Lake Line Railroad (LLR) and the Long Creek Railroad (LCR). The LLR assumed operation of 41.0-route-miles of former CP track in Manitoba.<sup>17</sup> The LCR also took over the operation of a long-dormant section of CP track situated in southern Saskatchewan at about the same time.<sup>18</sup> As with many of the shortlines created before it, the establishment of these railways represented yet other steps in the broader effort to preserve local railway service.

Even so, the first quarter saw the discontinuance of another 214.0 route-miles of railway infrastructure, all of which was situated in northwestern Saskatchewan. Although much of this had been operated by the Carlton Trail Railway (CTR) since 1997, it encompassed three sections of former CN track: the Meadow Lake Subdivision; the Big River Subdivision; and the Blaine Lake Subdivision.<sup>19</sup> Declining traffic volumes in the face of mounting maintenance costs had led the CTR to suspend service on these lines in 2009. Following their subsequent listing as discontinuance candidates, local interests tried to put forward a purchase offer but ultimately failed to come to terms with the carrier. Following the collapse of these negotiations, both the CTR and CN moved to abandon these lines altogether.

17 The Lake Line Railroad initially assumed operation of CP's Winnipeg Beach Subdivision, a 31.9-route-mile section of track extending from Selkirk to Gimli. Another 9.1 route-miles was added when the carrier assumed operation of CP's Lac du Bonnet Subdivision, which extends from Beausejour to Molson.

18 The Long Creek Railroad assumed operation of CP's Bromhead Subdivision, a 42.0-route-mile section of track extending from Estevan to Tribune, and which had been lying dormant since about 2005.

19 The infrastructure cited here specifically includes a 93.4-route-mile section of the Meadow Lake Subdivision; a 31.5-route-mile section of the Big River Subdivision; and an 89.1-route-mile section of the Blaine Lake Subdivision. With the exception of a 22.6-route-mile section of the Blaine Lake Subdivision extending from Denholm to Speers Junction, which remained under CN's control, this branchline network was transferred to the Carlton Trail Railway.

Figure 20: Change in Local Elevators - Railway Class

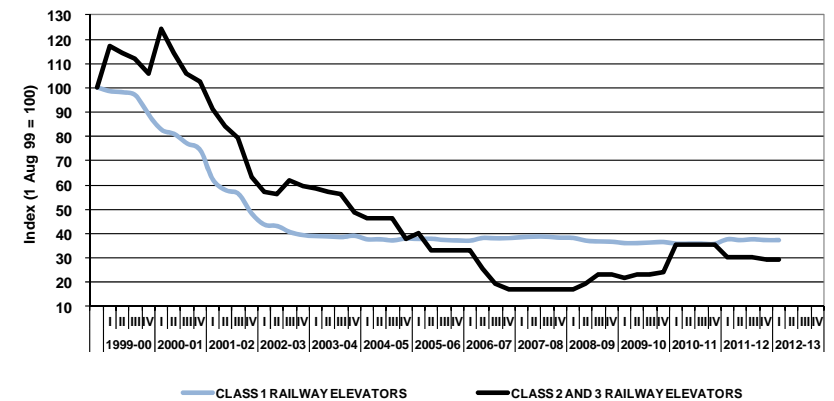
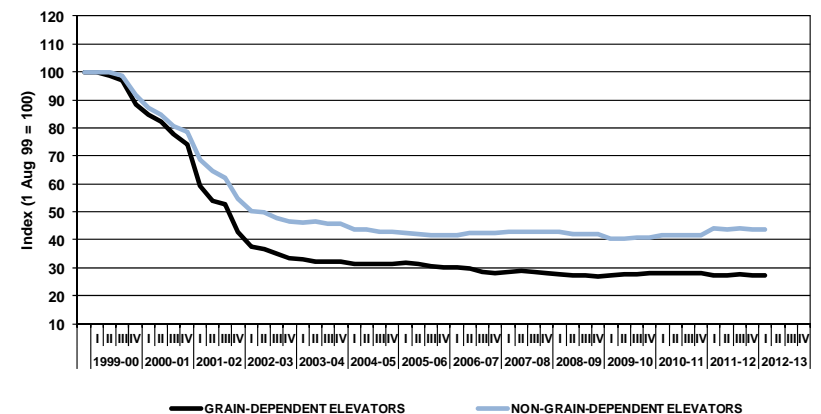


Figure 21: Change in Local Elevators - Railway Network



This effectively reduced the span of the railway network in western Canada by 1.2%, to 17,616.3 route-miles. Combined with transferences to new shortline carriers, this resulted in the number of route-miles accorded to the Class 1 railways being reduced by another 0.7%, to 14,923.4 route-miles from 15,029.0 route-miles. Similarly, that tied to the non-Class-1 carriers decreased by 3.9%, to 2,692.9 route-miles from 2,801.3 route-miles.

### Local Elevators

As previously outlined, the GHTS’s elevator infrastructure has been transformed more substantively over the course of the last thirteen years than has the railway network that services it. In broad terms, these facilities have decreased by 63.4% in number, to 358 from 979, and by 4.8% in terms of associated storage capacity, to 6.6 million tonnes from 6.9 million tonnes.<sup>20</sup>

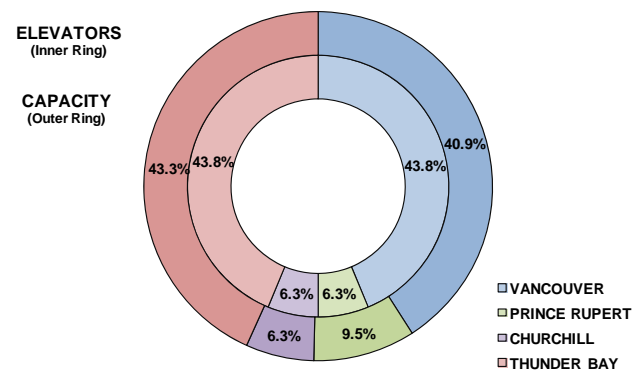
But these reductions have manifest themselves in noticeably different ways for the Class 1 and non-Class 1 railways. Although the relative number of elevators served by both carrier groups had fallen by analogous amounts through to the end of the first quarter, 62.8% in the case of the former and 70.7% in the case of the latter, there was a more pronounced decline in the associated storage capacity. For elevators local to Class 1 carriers, this amounted to a reduction of just 0.4%, whereas for those tied to the non-Class 1 carriers the reduction was a much steeper 63.5%. [Table 3B-3]

These latter changes underscore the fact that the grain companies have been investing in facilities served by the major railways rather than the shortlines, situating virtually all of their high-throughput elevators on the networks belonging to CN and CP.<sup>21</sup>

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

21 As at 31 October 2012 there were 193 high-throughput elevators served by rail. Of these, 185 were served by CN and CP, with only eight being served by shortlines.

Figure 22: Terminal Elevators - Q1 2012-13 Crop Year



A more telling portrayal comes from examining the change in facilities local to both the grain-dependent, and non-grain-dependent, railway networks. Elevators situated along the grain-dependent network have fallen by 72.9% since the beginning of the GMP, to 114 from 420. For those situated along the non-grain-dependent network, the decline was 56.4%, with the number of elevators having fallen to 244 from 559. The change in associated storage capacity shows an even greater contrast, with that of the grain-dependent network falling by 25.1%, to 1.9 million tonnes, while that of the non-grain-dependent network actually increased by 7.1%, to almost 4.8 million tonnes. On the whole, these patterns clearly indicate that the elevators tied to the grain-dependent railway network have diminished at a noticeably faster pace.

### TERMINAL ELEVATOR INFRASTRUCTURE

With no changes to the makeup of the terminal elevator network in the first quarter of the 2012-13 crop year, it remained comprised of 16 licensed terminal elevators with an associated storage capacity of 2.2

million tonnes. These values differ somewhat from the 14 elevators and 2.6 million tonnes of storage benchmarked in the GMP's base year.<sup>22</sup> [Table 3C-1]

While Thunder Bay continues to account for the majority of the GHTS's terminal-elevator assets, a decade's worth of incremental change has served to erode its position. Although unchanged in the first quarter of the 2012-13 crop year, Thunder Bay claimed 43.8% of the system's elevators and 43.3% of its licensed storage capacity; both reduced from the 50.0% shares noted thirteen years before.

A portion of Thunder Bay's relative loss came from the expansion of terminal operations in the greater Vancouver area. As a result, Vancouver now accounts for 43.8% of the system's terminal elevators and 40.9% of its licensed storage capacity. These values make significant gains over their corresponding base-year benchmarks of 35.7% and 36.3%.

While neither Prince Rupert nor Churchill saw changes to their terminal assets during this same period, both gained relatively higher standing as a result of the evolution at Thunder Bay and Vancouver. Both still registered one terminal elevator apiece, and storage capacity shares of 9.5% and 6.3% respectively.

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<sup>22</sup> Beyond the changes in its physical scope, there were a number of significant changes in terminal ownership. Much of this stemmed from the various corporate mergers and acquisitions that have taken place since the GMP began. The significant bearing on terminal ownership came from the merger of Agricore Cooperative Ltd. and United Grain Growers Limited, which combined to form Agricore United in 2001. This entity was itself bought out by Saskatchewan Wheat Pool in 2007, which subsequently rebranded itself as Viterra Inc.

## Section 4: Commercial Relations

Indicator Description	Table	2012-13								
		1999-00	2010-11	2011-12	Q1	Q2	Q3	Q4	YTD	% VAR
<b>Trucking Rates</b>										
Composite Freight Rate Index - Short-haul Trucking	4A-1	100.0	162.2	162.2	162.2	-	-	-	162.2	0.0%
<b>Country Elevators Handling Charges</b>										
Composite Rate Index - Receiving, Elevating and Loading Out	4B-1	100.0	122.8	122.9	123.1	-	-	-	123.1	0.1%
Composite Rate Index - Dockage	4B-1	100.0	151.7	154.1	154.1	-	-	-	154.1	0.0%
Composite Rate Index - Storage	4B-1	100.0	184.8	187.8	187.8	-	-	-	187.8	0.0%
<b>Railway Freight Rates</b>										
Composite Freight Rate Index - CN Vancouver	4C-1	100.0	104.8	112.4	124.7	-	-	-	124.7	10.9%
Composite Freight Rate Index - CP Vancouver	4C-1	100.0	112.8	114.8	129.8	-	-	-	129.8	13.1%
Composite Freight Rate Index - CN Thunder Bay	4C-1	100.0	120.2	136.0	134.5	-	-	-	134.5	-1.1%
Composite Freight Rate Index - CP Thunder Bay	4C-1	100.0	117.4	123.5	135.2	-	-	-	135.2	9.5%
Effective Freight Rates (\$ per tonne) - CTA Revenue Cap	4C-3	n/a	\$30.59	\$31.37	n/a	-	-	-	n/a	n/a
<b>Terminal Elevator Handling Charges</b>										
Composite Rate Index - Receiving, Elevating and Loading Out	4D-1	100.0	135.2	146.5	145.9	-	-	-	145.9	-0.4%
Composite Rate Index - Storage	4D-1	100.0	146.9	178.7	178.9	-	-	-	178.9	0.1%



## TRUCKING RATES

Short-haul trucking rates rose substantially between the 2004-05 and 2008-09 crop years, increasing by a factor of one-third from what they had been at the beginning of the GMP. Although this escalation was largely derived from rising fuel and labour costs, it was also supported by a heightened demand for carrying capacity, which allowed service providers a greater degree of latitude in passing these costs onto grain producers. Even with a subsequent collapse in crude oil prices, these rates remained unchanged through the close of the 2009-10 crop year.<sup>23</sup>

But the 2010-11 crop year saw oil prices regain a lot of lost ground, reaching as much as \$110 US per barrel by April 2011. This ultimately raised fuel prices and brought new pressure to bear on the cost of moving grain by truck. As a result, the composite price index for short-haul trucking rose to a GMP high of 162.2 by the close of the crop year. But market prices remained volatile through to the end of the 2011-12 crop year, ultimately closing at about \$96 US per barrel. Prices slipped still further in the first quarter of the 2012-13 crop year, falling to \$86 US per barrel. But despite this decline, trucking rates remained largely unaffected, with the composite price index standing unchanged at 162.2. [Table 4A-1]

## COUNTRY ELEVATOR HANDLING CHARGES

The per-tonne rates assessed by grain companies for a variety of primary elevator handling activities are the primary drivers of corporate revenues. Comparatively, those assessed for the receiving, elevating and loading out of grain are the most costly for producers. These are in turn followed by the charges levied for the removal of dockage (cleaning) and storage. These rates vary widely according to the activity, grain and province involved.

<sup>23</sup> The market price for West-Texas-Intermediate crude fell from a high of \$133 US per barrel in June 2008 to a low of just \$40 US per barrel by February 2009.

Figure 23: Change in Composite Freight Rates – Short-Haul Trucking

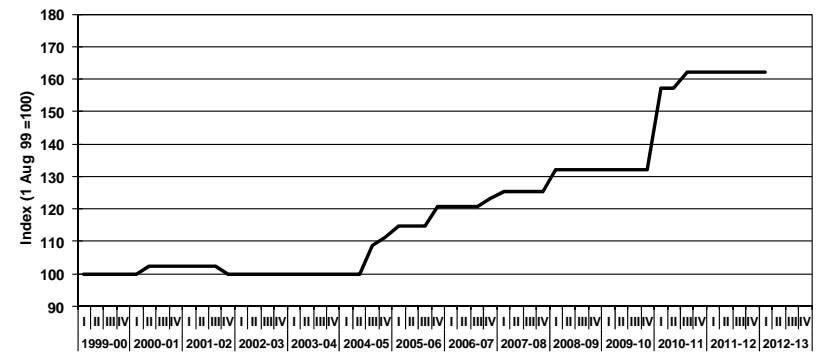
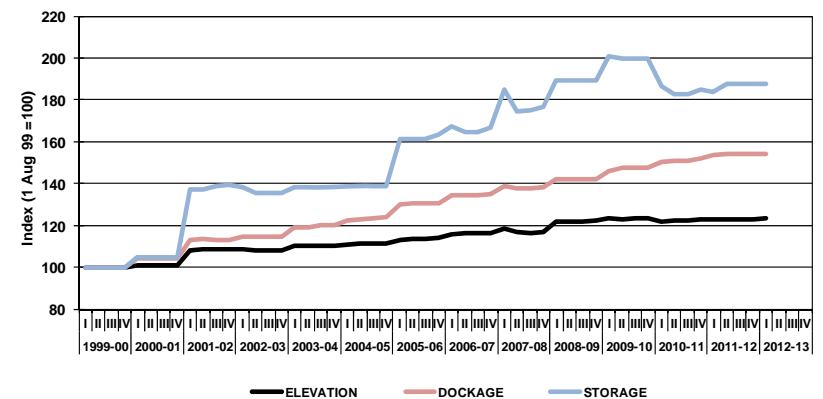


Figure 24: Change in Primary Elevator Handling Charges



Given the wide variety of tariff rates, the GMP necessarily uses a composite price index to track changes in them. Since the beginning of the GMP, the rates for all of these services have risen considerably. The smallest increases have been in those tied to the receiving, elevating and loading out of grain. Through to the end of the 2011-12 crop year, these costs had risen by 22.9%. The first three months of the 2012-13 crop year brought little change to these rates, with the overall composite price index rising by just 0.1%, to 123.1.

The rates associated with the removal of dockage have increased at a somewhat faster pace. Through to the end of the 2011-12 crop year, these rates had already increased by 54.1%. With no variation noted in the first quarter, the composite price index remained unchanged at 154.1.

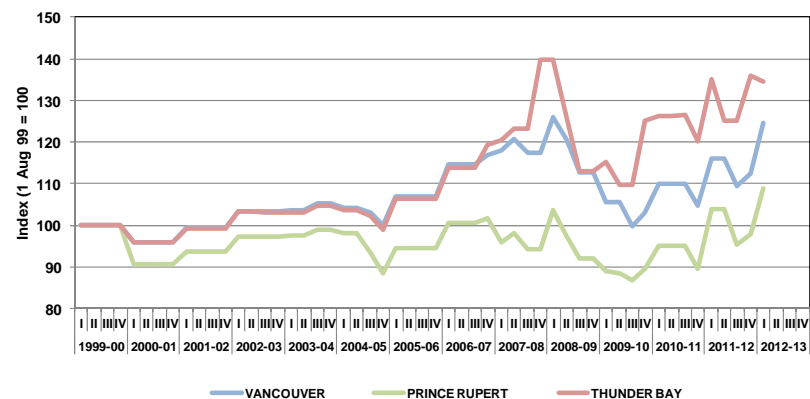
The most substantive rate escalations observed thus far have related to elevator storage. Much of the initial price shock came towards the end of the 2000-01 crop year, when these rates were raised by a factor of almost one-third. Since then they have continued to climb, rising by 87.8% through to the end of the 2011-12 crop year.<sup>24</sup> Here too, no variations were noted in the first quarter of the 2012-13 crop year. As a result, the composite price index remained unchanged at 187.8. [Table 4B-1]

## RAILWAY FREIGHT RATES

The single-car freight rates charged by CN and CP for the movement of regulated grain have changed substantially since the beginning of the GMP, evolving from what were largely mileage-based tariffs into a less rigidly structured set of more market-responsive rates. This became evident in the rate differentials that arose between specific grains and the ports to which they were destined. Much of this began to take shape at the beginning of the 2006-07 crop year when CN initiated a partial changeover to commodity-specific, per-car charges. With CP following

24 It should be noted that all tariff rates constitute a legal maximum, and that the rates actually paid by any customer for storage may well fall below these limits.

Figure 25: CN Single-Car Freight Rates - Primary Corridors



suit, a wholesale conversion in the rate structures of both carriers was completed by the close of the 2007-08 crop year. [Table 4C-1]

This restructuring also resulted in more substantive rate increases being applied against shipments to Thunder Bay and Churchill rather than those to the west coast. Even within this broader initiative, CN widened the financial advantage it had begun giving single-car shipments to Prince Rupert. Not to be overlooked was an initial move towards seasonal pricing, which attempted to link freight rates to the rhythmic demand change for railway carrying capacity. This structure was complicated even further as both carriers began to adjust rates with greater geographic selectivity in response to evolving competitive pressures.

With some exception, both CN and CP raised their single-car freight rates in the first quarter of the 2012-13 crop year. For its part, CN applied its increases to westbound movements late in the period, with rates in the Vancouver corridor rising by an average of 10.9% while those in the

Prince Rupert corridor rose by a marginally greater 11.1%. Selective decreases were made against the carrier's single-car rates into Thunder Bay and Churchill, which produced marginal average reductions of 1.1% and 1.5% respectively.<sup>25</sup> In comparison, CP advanced wholesale increases to its single-car rates at the beginning of the crop year, with the average escalation on movements into Vancouver and Thunder Bay amounting to 13.1% and 9.5% respectively.

An examination of the pricing changes enacted since the beginning of the GMP provides some insight into the evolution of today's single-car freight rates. With the close of the first quarter, the single-car rates applicable on the movement of grain into the jointly served ports of Vancouver and Thunder Bay have increased by moderately different amounts: 27.3% and 34.9% respectively. The overall gain for Churchill marginally trailed that of Thunder Bay, with an increase of 34.6%. However, Prince Rupert, which benefited from a change to the rate structure more than a decade ago, posted an overall increase of 8.8%. Taken together, these larger values are consistent with the 29.0% maximum allowed by the Canadian Transportation Agency when it set the Volume-Related Composite Price Index for the 2012-13 crop year.<sup>26</sup> Moreover, they also suggest that the railways are more favourably disposed towards the handling of westbound grain, and continue to use price in an effort to influence that movement.

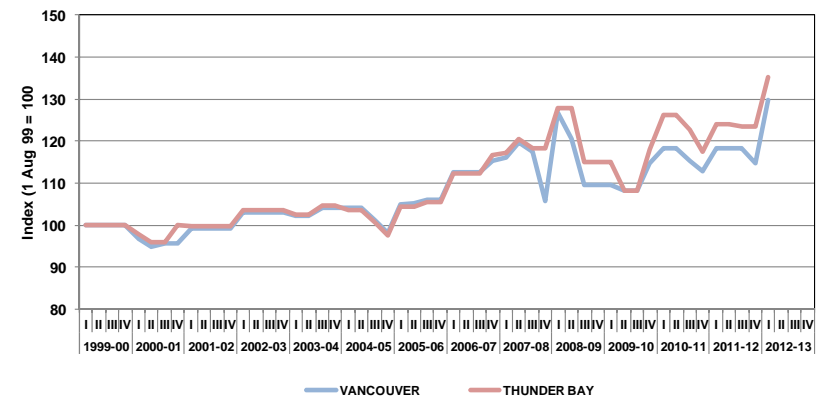
### Multiple-Car-Block Discounts

There have been equally significant changes to the structure of the freight discounts both carriers use to promote the movement of grain in multiple car blocks. The most noteworthy aspect of this evolution was

25 CN's single-car rates to Churchill are published in accordance with the port's shipping season. The 1.5% reduction cited here relates to the rates that were in place at the close of the 2011-12 crop year.

26 See Canadian Transportation Agency Decision Number 149-R-2012 dated 30 April 2012.

Figure 26: CP Single-Car Freight Rates - Primary Corridors



the gradual elimination of the discounts applicable on movements in blocks of less than 50 cars, along with a progressive escalation in the discounts tied to blocks of 50 or more cars. Over the course of the GMP, the discount applicable on the largest of these has risen by a factor of 60%, to \$8.00 per tonne from \$5.00 per tonne. More importantly, there can be little doubt that this has been a central force in the rationalization of the western Canadian elevator system and in the expansion of high-throughput facilities.

These freight discounts remained unchanged in the first quarter of the 2012-13 crop year. CN continued to offer discounts on movements in blocks of 50-99 cars that equated to \$4.00 per tonne, and to \$8.00 per tonne on movements of 100 or more cars. The corresponding discounts for CP remained at \$4.00 per tonne for shipments in blocks of 56-111 cars, and at \$8.00 per tonne for shipments in blocks of 112 cars. [Table 4C-2]

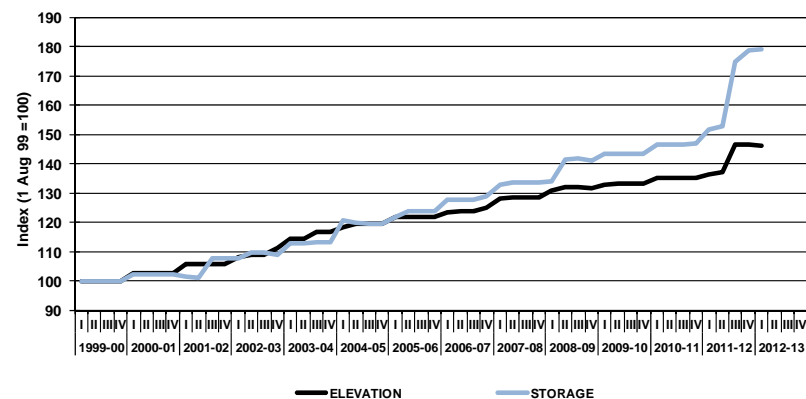
## TERMINAL ELEVATOR HANDLING CHARGES

The rates posted for the receiving, elevating and loading out of grain nominally represent the most substantive charged by the terminal elevator operators. As with other measures, an examination of price movement is best performed using a composite index, given the myriad of different tariff rates. At the end of the 2011-12 crop year these ranged from a low of about \$9.77 per tonne on wheat delivered at Vancouver, to a high of \$16.50 per tonne on oats shipped to Churchill.

Little change to these rates were noted in the first three months of the 2012-13 crop year, with modest decreases being more common. Still, Vancouver posted a fairly broad mix of changes in its tariff rates, with a 3.5% reduction on barley giving way to increases of 0.7% on wheat and durum. The story was much the same at Prince Rupert, where a rate reduction of 13.3% on canola stood against a 4.0% increase on wheat and durum. In comparison, Thunder Bay's adjustments proved more modest, and ranged from a 2.7% reduction on barley to a 0.4% increase on wheat and durum, while Churchill reported no change in any of its tariff rates. Together, these actions reduced the composite price index by 0.4%, to 145.9 from 146.5. [Table 4D-1]

As with the cost of elevation, the daily charge for storage also varied widely, ranging from a common low of about \$0.08 per tonne on most wheat held at port to a high of \$0.16 per tonne on oats maintained in inventory at Churchill. Here again, rate adjustments in the first quarter of the 2012-13 crop year proved comparatively modest. Vancouver posted the largest increase, with the overall average rising by 1.6%. Neither Prince Rupert nor Churchill posted any changes at all. Running counter to all of this was Thunder Bay, which owing to reductions in the rates for wheat, barley and oats, saw its overall average decline by 1.2%. Together, these actions served to raise the composite price index on storage by 0.1% in the first quarter of the 2012-13 crop year, to 178.9 from 178.7.

Figure 27: Change in Terminal Elevator Handling Charges



## COMMERCIAL DEVELOPMENTS

### Loss of CWB Monopoly Heralds New Era of Marketing Freedom

Following passage of *The Marketing Freedom for Grain Farmers Act* in December 2011, the Canadian Wheat Board (CWB) lost its long-held monopoly over the sale of western Canadian wheat and barley with the commencement of the 2012-13 crop year. This meant that producers were no longer obligated to sell wheat and barley intended for domestic consumption and export solely to the CWB. In fact, the right to forward contract for the delivery of their grain, on or after 1 August 2012, to any grain company a producer chose had already been in place since the Act received Royal Assent.

Repeal of the CWB's monopoly marked the most significant change to the functioning of the GHTS in three generations. Although the Act provided for the transformation of the CWB into a voluntary marketing entity, with interim support from the federal government while the organization

transitioned to full private ownership, pockets of opposition still remained within the producer community.<sup>27</sup> Nevertheless, the grain industry had long argued for such a transformation and had been preparing for open-market operations.

All available indications suggest that the GHTS performed well in the first three months of the 2012-13 crop year. The new marketing environment brought increased competition between grain companies, with price often being the key consideration in the producers' delivery choice. Much of this was visible in their response to the merchandizing efforts of the grain companies themselves, which were actively pursuing farmer deliveries. The new environment appeared to have given farmers better flexibility in terms of grades, delivery options and predictable cash flow.

In comparison to the grain companies, the revamped CWB appeared to face a number of transitional challenges. Since it possessed no grain-handling assets of its own, the CWB signed a variety of agreements with individual grain companies that would see these firms handling grain on its behalf.<sup>28</sup> Although the details surrounding these agreements remain confidential, producers who contract with the CWB are not locked into

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27 Opposition to the government's actions was not only manifest in producer sentiment, but in the launching of various legal challenges as well. At the close of the first quarter of the 2012-13 crop year many of these had yet to make their way fully through the justice system.

28 The first grain-handling agreements were signed in March 2012 with Cargill Limited and South West Terminal Ltd. Six additional agreements were struck in June 2012 with Viterro Inc., Mission Terminal Inc., West Central Road and Rail Ltd., Delmar Commodities Ltd., Linear Grain Inc. and Agro Source Ltd. A further eleven were finalized at the close of the 2011-12 crop year with Richardson International Limited, Louis Dreyfus Canada Ltd., Parrish and Heimbecker Limited, Paterson Grain, Weyburn Inland Terminal Ltd., Prairie West Terminal Ltd., Providence Grain Group Inc., Great Sandhills Terminal Ltd., North West Terminal Ltd., Lethbridge Inland Terminal Ltd., Westlock Terminals (NGC) Ltd., Great Northern Grain Terminals Ltd. and Alliance Grain Terminal Ltd.

delivering their grain to a specific location or grain company.<sup>29</sup> Rather, they retain the right to seek the best option open to them for trucking, elevator handling and rail freight. In addition, the CWB no longer issues delivery calls, with the grain companies now obligated to provide producers with practical delivery opportunities in accordance with their handling agreements. Even so, there were reported instances where elevator managers were reluctant to accept farmer deliveries on behalf of the CWB without a clear plan for outward shipping.

Concerns that Canada's grain pipeline would initially struggle in the wake of the ending of the CWB's monopoly subsided as record or near-record volumes were moved by the system. Part of this was due to almost ideal conditions: an early, dry harvest; good grain yields and quality; and higher grain prices in the face of tighter global supplies.

Yet concerns remained about the system's ability to accept grain according to pricing signals alone. The surge in volume underscored the need to balance the influx of grain with the system's available capacity. Early indications were that storage capacity was being strained and that farmers were unable to deliver all of the grain they may have wanted.

#### Richardson International Plans Expansion of Vancouver Terminal

The 2011-12 crop year saw the first significant changes in the makeup of the terminal elevator network in several years. Although no further changes were reported in the first quarter of the 2012-13 crop year, there were indications that others were pending. The most noteworthy of these involved an expansion of the Richardson International facility in North Vancouver. In August 2012 the company applied to Port Metro Vancouver for permitting approval to increase the storage capacity of this facility through the addition of an 80,000-tonne concrete annex.

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29 In accordance with the Act, the CWB is now able to market canola and other commodities, with deliveries accepted at selected locations across the prairies.

The \$120-million investment would increase the facility's storage capacity by 64.8%, to 178,000 tonnes from its current 108,000 tonnes.<sup>30</sup> Already handling some 3 million tonnes of grain and oilseeds annually, this expansion would enable the company to boost its yearly throughput to over 5 million tonnes. The proposal came on the heels of a \$20-million investment that Richardson International had already made in the facility's railcar receiving abilities, which along with other operational improvements, was aimed at doubling its unloading capacity, from 150 cars per day to 300 cars per day.

While the company had already taken into consideration such factors as noise and the obstruction of existing harbour-area sightlines, the proposal still faced a number of other hurdles, not the least of which involved an environmental impact assessment. Still others involved a public consultation and consent from various First-Nations groups as well as the City of North Vancouver. Even with these various approvals the project is expected to take about three years to complete.

This proposal came atop other anticipated changes in the makeup of Richardson International's terminal-elevator network. Much of this related to the expected approval of the Glencore takeover of Viterra, which included a provision that would see certain commercial interests and assets sold to Richardson International. Beyond some 19 primary Viterra elevators situated across the prairies, this included a 25% ownership interest in Viterra's Cascadia Terminal, which is located across the Burrard Inlet from the Richardson International facility, on Vancouver's south shore. In addition, the company was also slated to take possession of a Viterra terminal elevator in Thunder Bay.

Assuming the closure of these transactions, Richardson International will have obtained control over three terminal elevators, and a commercial interest in two others. These assets will significantly enhance the

company's grain-handling abilities in both the Canadian and international marketplace.

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<sup>30</sup> Although its plans call for the construction of an 80,000-tonne annex, the net increase in storage capacity will be a somewhat lesser 70,000 tonnes owing to the elimination of 10,000 tonnes in existing steel-bin storage.



## Section 5: System Efficiency and Performance

Indicator Description	Table	2012-13								
		1999-00	2010-11	2011-12	Q1	Q2	Q3	Q4	YTD	% VAR
<b>Country Elevator Operations</b>										
Average Elevator Capacity Turnover Ratio	5A-1	4.8	5.7	6.0	1.7	-	-	-	1.7	13.3%
Average Weekly Elevator Stock Level (000 tonnes)	5A-2	3,699.3	2,722.9	2,660.8	2,678.3	-	-	-	2,678.3	-3.5%
Average Days-in-Store (days)	5A-3	41.7	30.8	27.6	26.0	-	-	-	26.0	-7.5%
Average Weekly Stock-to-Shipment Ratio - Grain	5A-4	6.2	4.5	4.1	3.5	-	-	-	3.5	-18.6%
<b>Railway Operations</b>										
Railway Car Cycle (days) - Empty Movement	5B-1	10.7	7.2	7.2	7.5	-	-	-	7.5	7.4%
Railway Car Cycle (days) - Loaded Movement	5B-1	9.2	7.1	6.7	5.9	-	-	-	5.9	-10.2%
Railway Car Cycle (days) - Total Movement	5B-1	19.9	14.3	13.9	13.4	-	-	-	13.4	-1.1%
Railway Car Cycle (days) - Non-Special Crops	5B-2	19.3	14.2	13.8	13.2	-	-	-	13.2	-1.3%
Railway Car Cycle (days) - Special Crops	5B-3	25.8	15.3	16.3	15.4	-	-	-	15.4	-1.3%
Railway Transit Times (days)	5B-4	7.8	6.0	5.6	4.8	-	-	-	4.8	-10.1%
Hopper Car Grain Volumes (000 tonnes) - Non-Incentive	5B-5	12,718.7	5,500.2	5,427.9	2,110.9	-	-	-	2,110.9	21.4%
Hopper Car Grain Volumes (000 tonnes) - Incentive	5B-5	12,945.9	21,596.5	22,725.0	6,336.8	-	-	-	6,336.8	2.7%
Hopper Car Grain Volumes (\$ millions) - Incentive Discount Value	5B-6	\$31.1	\$145.5	\$154.6	\$45.0	-	-	-	\$45.0	8.4%
Traffic Density (tonnes per route mile) - Grain-Dependent Network	5B-7	442.5	534.8	592.1	738.8	-	-	-	738.8	12.3%
Traffic Density (tonnes per route mile) - Non-Grain-Dependent Network	5B-7	292.5	340.9	345.1	416.1	-	-	-	416.1	6.8%
Traffic Density (tonnes per route mile) - Total Network	5B-7	330.4	379.9	394.7	479.5	-	-	-	479.5	8.1%
<b>Terminal Elevator Operations</b>										
Average Terminal Elevator Capacity Turnover Ratio	5C-1	9.1	9.9	11.1	n/a	-	-	-	n/a	n/a
Average Weekly Terminal Elevator Stock Level (000 tonnes)	5C-2	1,216.2	1,197.8	1,091.6	1,106.5	-	-	-	1,106.5	-8.6%
Average Days-in-Store - Operating Season (days)	5C-3	18.6	15.5	13.9	14.3	-	-	-	14.3	-8.9%
<b>Port Operations</b>										
Average Vessel Time in Port (days)	5D-1	4.3	9.9	6.6	6.2	-	-	-	6.2	19.2%
Annual Demurrage Costs (\$millions)	5D-4	\$7.6	\$50.1	n/a	n/a	-	-	-	n/a	n/a
Annual Dispatch Earnings (\$millions)	5D-4	\$14.5	\$9.4	n/a	n/a	-	-	-	n/a	n/a
Avg. Weekly Stock-to-Shipment Ratio - VCR - Wheat, Durum and Barley	5D-7	3.5	3.7	3.5	3.5	-	-	-	3.5	7.8%
Avg. Weekly Stock-to-Shipment Ratio - VCR - Other Grains	5D-7	3.6	1.0	1.7	1.7	-	-	-	1.7	-10.2%
Avg. Weekly Stock-to-Shipment Ratio - TBY - Wheat, Durum and Barley	5D-7	4.6	4.6	3.1	4.9	-	-	-	4.9	51.9%
Avg. Weekly Stock-to-Shipment Ratio - TBY - Other Grains	5D-7	3.3	5.1	4.5	1.7	-	-	-	1.7	-59.5%
Terminal Handling Revenue (\$millions)	5D-8	\$274.8	\$416.2	\$458.6	n/a	-	-	-	n/a	n/a
<b>System Performance</b>										
Total Time in Supply Chain (days)	5E-1	68.1	52.3	47.1	45.1	-	-	-	45.1	-8.3%



## COUNTRY ELEVATOR OPERATIONS

The net effect of changes in primary elevator throughput and storage capacity is reflected in the system's capacity-turnover ratio. Owing in large measure to a 9.9% increase in throughput, the turnover ratio for the first three months of the 2012-13 crop year rose by 13.3%, to 1.7 turns from 1.5 turns a year earlier. [Table 5A-1]

This gain was built on the comparatively stronger showings of three producing provinces: British Columbia, Manitoba and Alberta. British Columbia reported the most substantive gain, with its ratio climbing by 177.8%, to 2.5 turns from 0.9 turns. This was followed by Manitoba, which posted an increase of 23.1%, with its ratio rising to 1.6 turns from 1.3 turns a year earlier. In support was Alberta, where the ratio rose by 11.1%, to 2.0 from 1.8. Saskatchewan's ratio remained unchanged at 1.5 turns.

### Elevator Inventories

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

Notwithstanding periodic fluctuations, approximately half of the GHTS's primary elevator storage capacity is actively employed in maintaining its grain inventories. What is more, with the system's associated storage capacity having contracted by some 6.3%, today's stocks typically stand well below the 3.7-million-tonne average benchmarked at the beginning of the GMP. Even with the contemporary expansion in storage capacity the system's average has seldom exceeded 3.0 million tonnes. Primary elevator inventories in the first quarter of the 2012-13 crop year were again reported well beneath threshold, remaining effectively unchanged at 2.7 million tonnes. [Table 5A-2]

Figure 28: Primary Elevator Capacity Turnover Ratio

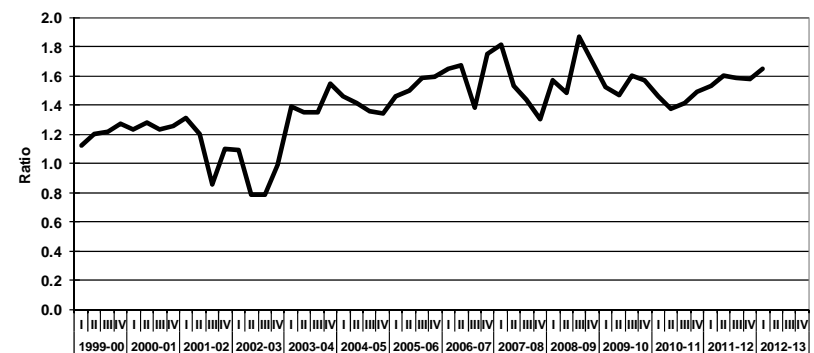
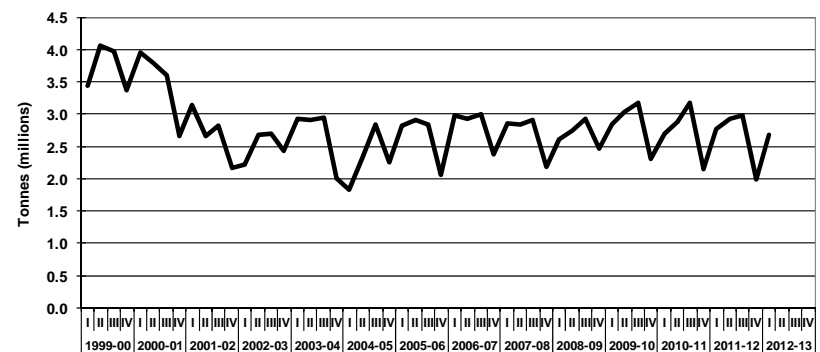


Figure 29: Average Weekly Stocks



Just as the average stock level has moved generally lower, so too has the average amount of time spent by grain in inventory. While seasonality remains a factor, the quarterly average has continued to fluctuate around the 30-day mark for several years. Still, these values stand about ten days below the GMP's base-year average of 41.7 days, contributing significantly to the improved speed with which grain moves through the GHTS. The 26.0-day average posted for the first quarter of the 2012-13 crop year proved once again consistent with this, falling 7.5% below the 28.1-day average reported in the same period a year earlier. This result was largely driven by reduced storage times for wheat, durum and barley. [Table 5A-3]

### Stock-to-Shipment Ratios

The adequacy of country elevator inventories can be gauged by comparing their level at the end of any given shipping week, with the truck and railway shipments actually made in the next seven days. In recent years the quarterly average stock-to-shipment ratio has generally fluctuated around a value of 4.0. As such, the inventory on hand at the close of any given week typically exceeded that required for shipment in the next by a factor of at least four.<sup>31</sup> These ratios are, however, heavily influenced by the amount of time that grain spends in inventory, and mimic their movement rather closely. [Table 5A-4]

The overall stock-to-shipment ratio fell by 18.6% in the first three months of the 2012-13 crop year, to 3.5 from 4.3 a year earlier. This reduced coverage was mainly attributable to increased shipments of wheat, durum, barley and canola, which were under pressure as a result of heightened export sales.

31 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.

Figure 30: Average Days in Store

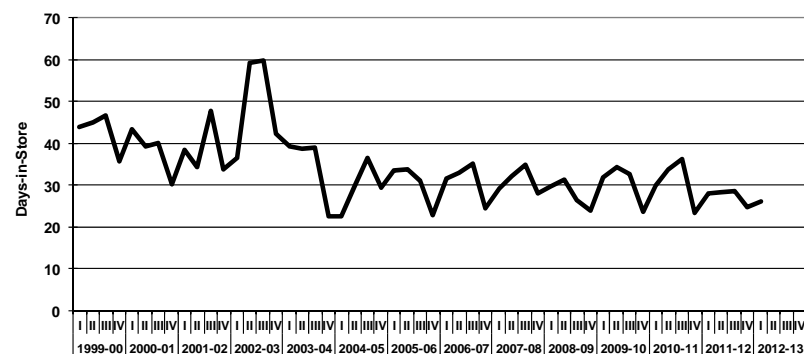
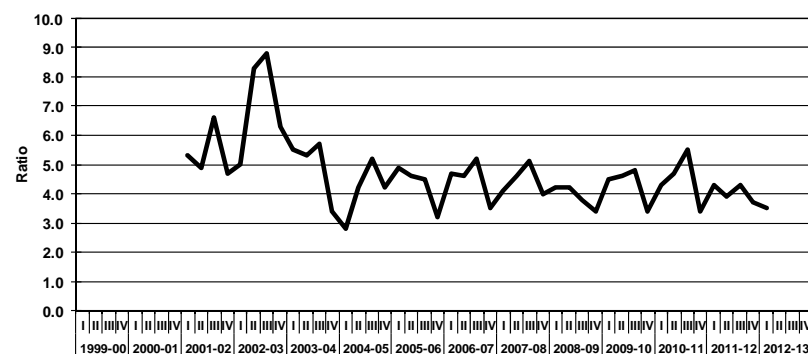


Figure 31: Primary Elevators - Stock-to-Shipment Ratio



## RAILWAY OPERATIONS

In the context of the GHTS, the car cycle measures the average amount of time taken by the railways in delivering a load of grain to a designated port in western Canada, and then returning the empty railcar back to the prairies for reloading. During the first three months of the 2012-13 crop year this task required an average of 13.4 days to complete, a modest 1.1% improvement over the 13.5-day average recorded in the same period a year earlier.

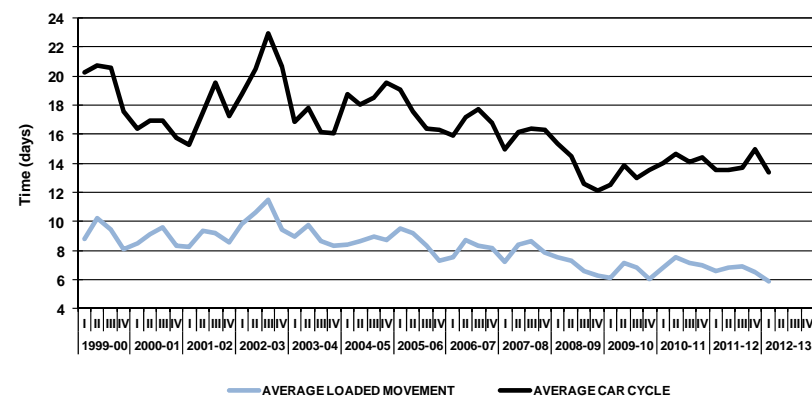
With a 4.0% reduction, movements in the Prince Rupert corridor posted the greatest overall decline, with the average cycle falling to 10.5 days from 11.0 days a year earlier. This was followed by a 1.9% reduction in the Thunder Bay corridor, which saw its average fall to 13.3 days from 13.6 days. Detracting from these advances was a 1.5% increase in the Vancouver cycle, where the average rose to 14.5 days from 14.3 days twelve months earlier. [Table 5B-1]

These reductions were largely manifest in the loaded portion of the car cycle, with the average time under load falling by 10.2%, to 5.9 days from 6.6 days a year earlier. The empty portion of the movement, however, increased by 7.4%, rising to an average of 7.5 days from 7.0 days.

The results for CN and CP proved more mixed, with CN reporting a 5.5% reduction in its average cycle versus a 2.7% increase in CP's. These differences extended to the loaded and empty portions of each carrier's car cycle. There was greater consistency in CN's results, with the carrier posting a decrease of 7.9% in its loaded movement and a 2.6% reduction in its empty movement. The shifts for CP proved much different, with a 12.8% reduction in its loaded movement and a 15.3% increase in its empty movement.

A reduction in the car cycle for the movement of non-special crops was also observed, with the average falling 1.3%, to 13.2 days from 13.4 days a year earlier. The same was true of special crops, with its average falling 1.3% as well, to 15.4 days from 15.6 days. Even so, the average

Figure 32: Average Railway Car Cycle



for special crops proved to be 16.7% greater than that of non-special crops. On the whole, these results continued to point to a structural disadvantage being given to the movement of special crops. In large measure, this appears to be linked to the character of special-crop shipments, which generally move as small-block shipments in regular freight service rather than in the unit-train lots typical of non-special crops. [Tables 5B-2 and 5B-3]

### Loaded Transit Time

More important than the railways' average car cycle, is the average loaded transit time. This measure focuses on the amount of time taken in moving grain from a country elevator to a port terminal for unloading. As with the overall car cycle, the average loaded transit time has moved gradually lower. Despite quarterly fluctuations, by the close of the 2011-12 crop year, 2.2 days had been shed from the 7.8-day average reported at the beginning of the GMP. The railways' average loaded transit time declined again in the first quarter of the 2012-13 crop year, falling by

10.1%, to a record-setting low of 4.8 days from 5.4 days a year earlier. The variability in the underlying distributions also decreased, albeit by a lesser 4.4%, with the coefficient of variation falling to 29.9% from 31.2%.<sup>32</sup> This, however, continues to indicate that the average loaded transit time between any two points remains highly variable. [Table 5B-4]

**Multiple-Car Blocks**

In the first three months of the 2012-13 crop year, 6.3 million tonnes of grain moved in the multiple-car blocks that offered discounted freight rates. This represented an increase of 2.7% over the 6.2 million tonnes handled a year earlier, and established a new record for the period under the GMP.

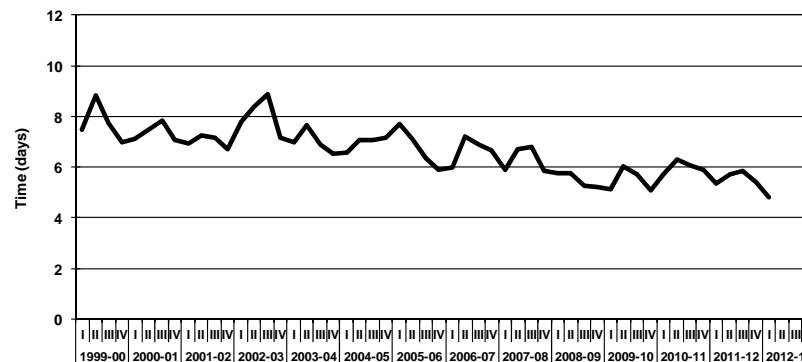
From the beginning of the GMP, it has been clear that the largest block sizes were the most popular with grain shippers. This stems simply from the fact that they provide the deepest monetary discounts, allowing the grain companies to realize the greatest financial returns. Moreover, both railways promoted these larger block sizes by systematically increasing the discounts on shipments in blocks of 50 or more cars. At the same time, they also moved to reduce, and ultimately eliminate, the discounts on movements in blocks of 25-49 cars.<sup>33</sup> [Table 5B-5]

As a result, the proportion of railway traffic moving in multiple-car blocks climbed quite rapidly. By the close of the 2011-12 crop year,

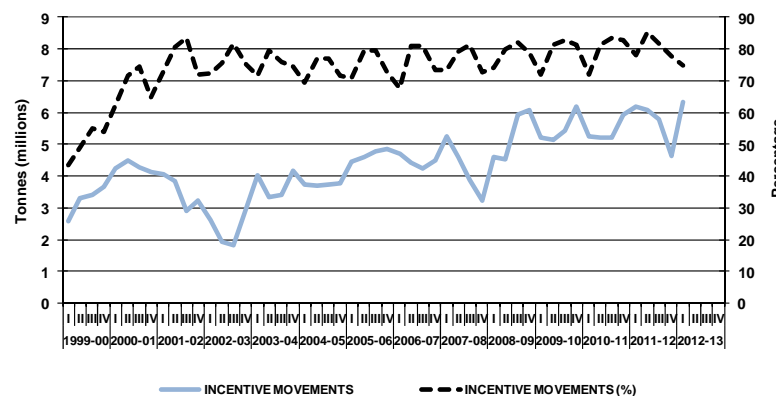
<sup>32</sup> The coefficient of variation effectively removes the distortions that arise from measuring the transit times tied to individual movements in a diverse population set by focusing on the underlying variability in the distributions tied to each origin-destination pair. As a ratio, smaller values depict tighter distributions than larger ones. To this end, a lower ratio can be deemed indicative of better consistency around the average loaded transit time presented.

<sup>33</sup> CN eliminated its \$1.00-per-tonne discount on shipments in blocks of 25-49 railcars at the beginning of the 2003-04 crop year. Although CP reduced its discount to \$0.50 per tonne at that time, the carrier only did away with them at the commencement of the 2006-07 crop year.

**Figure 33: Average Loaded Transit Time**



**Figure 34: Railway Traffic Moving Under Incentive**



80.7% of the regulated grain moving to the four ports in western Canada was earning a discount, against 50.4% in the GMP's base year. By extension, the proportion of grain moving in smaller, non-discounted car blocks declined steadily, to 19.3% from 49.6%. At the same time, the annual value of the discounts earned by grain shippers - estimated as a gross savings in railway freight charges - increased fivefold, climbing to an estimated \$154.6 million from \$31.1 million. However, this savings expansion was largely the product of a more substantive increase in the per-tonne discounts than it was of the traffic base.

Still, the increased tonnage moving under discounted freight rates in the first three months of the 2012-13 crop year precipitated an 8.4% rise in the earned value of these discounts, which reached an estimated \$45.0 million against \$41.6 million a year earlier. This was also reflected in a greater average earned discount, which is estimated to have risen to \$7.11 per tonne from \$6.74 per tonne. [Table 5B-6]

### TERMINAL ELEVATOR OPERATIONS

Over the course of the GMP, the amount of grain held in inventory at terminal elevators has had a fairly consistent relationship with the system's overall handlings, typically encompassing from 20% to 25% of the quarterly throughput. Despite a 6.6% gain in terminal throughput, the average weekly stock level declined by 8.6% in the first three months of the 2012-13 crop year, falling to 1.1 million tonnes from 1.2 million tonnes a year earlier. This suggests that the ports were maintaining inventories at tighter-than-normal levels. Moreover, all four ports reported reduced inventory levels in the first quarter.

Over half of the 104,600-tonne reduction was attributable to Vancouver, which saw its average inventory fall by 55,600 tonnes, or 10.8%. Adding to this was a 14,300-tonne, or 9.5%, decline in Prince Rupert's stocks. Together, the west-coast ports accounted for two-third of the overall reduction in inventory. Although Thunder Bay and Churchill also saw reduced inventories, the most significant decline was posted by the latter, where stocks were drawn down by 24.3%, or 18,600 tonnes. In

Figure 35: Composition of Multiple-Car-Block Movements

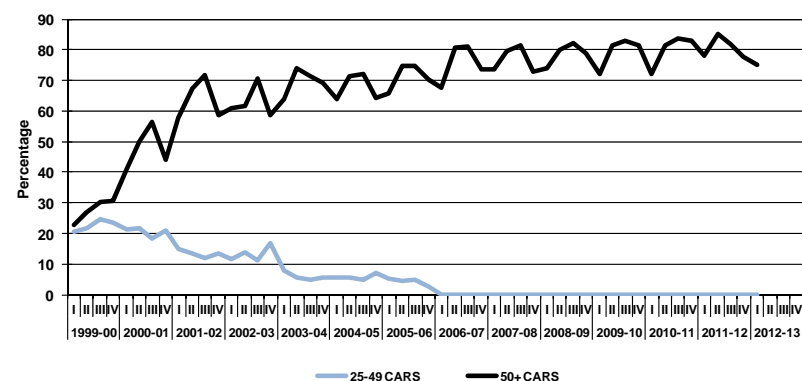
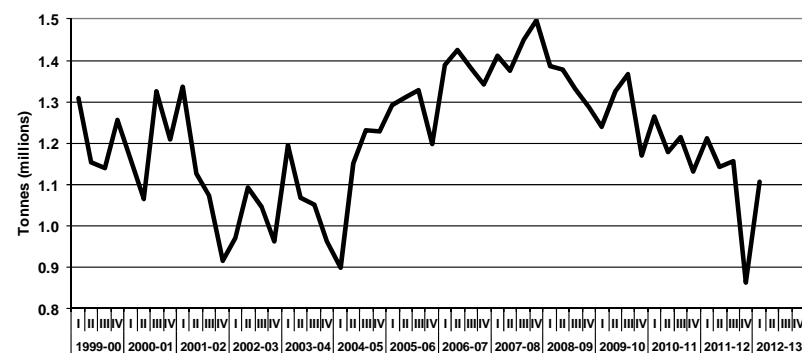


Figure 36: Terminal Elevators - Average Weekly Stocks



relative terms, the 16,100-tonne reduction posted by Thunder Bay proved more modest, amounting to a decline of 3.5%.

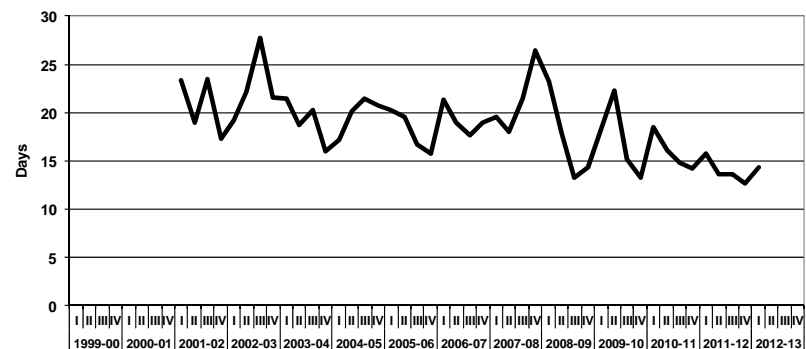
As in past years, wheat stocks again constituted the largest single commodity held in inventory. Total wheat inventories declined by just 0.9% in the first quarter, to an average of 481,800 tonnes from 486,000 tonnes a year earlier. However, this loss was more than offset by increases in durum and barley stocks. In reality, the most significant factor in the overall inventory reduction came from a drawdown in oilseed stocks as well as that of other commodities. Canola inventories alone fell by 102,300 tonnes, or 35.6%. Equally significant declines were noted for oats, peas, rye and flaxseed. [Table 5C-2]

### Days in Store

Alongside the decline in terminal stocks came an 8.9% reduction in the amount of time grain spent in inventory, with the overall average number of days-in-store falling to a first-quarter low of 14.3 days from 15.7 days a year earlier. Although reductions in the averages of all four ports contributed to this overall achievement, much of the result was shaped by an 18.0% reduction at Prince Rupert, which saw its average fall to 12.3 days from 15.0 days a year earlier. This was supported by a near-record low average of 11.1 days at Vancouver, which fell by 10.5% from the 12.4-day average posted in the same period the previous year. A 9.6% improvement at Churchill along with a more moderate 4.3% reduction at Thunder Bay did much to further these gains. [Table 5C-3]

While the ports saw a reduction in their respective storage times, this was not true of all commodities. In fact, the field was evenly divided, with half posting increased storage times while the remainder reported declines. For the gainers, these included increases of 1.5% on flaxseed, 2.0% on wheat, 8.2% on oats, and 9.1% on barley. The reductions posted by the decliners proved somewhat steeper, amounting to 8.3% on durum, 30.0% on peas, 37.4% on canola, and 48.9% on rye.

Figure 37: Terminal Elevators - Average Days-in-Store



### Stock-to-Shipment Ratios

Whether sufficient stocks were on hand to meet demand can best be gauged by the average weekly stock-to-shipment ratios. This measure provides an indication of how terminal stock levels related to the volume of grain loaded onto ships during the course of any particular week.<sup>34</sup>

For Vancouver, the average ratio on most grains stood comfortably above a value of 2.0. The exceptions to this proved to be wheat, canola and peas, which posted average ratios of 1.6, 1.2 and 1.1 respectively. Moreover, the ratios for these commodities all moved lower. Although

<sup>34</sup> 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.

Prince Rupert reported lower ratio values than did Vancouver, the change in these ratios proved comparatively modest. Here the ratios for wheat increased by 1.3% while that of barley decreased by 2.7%. Canola, which posted an increase of 23.2% in its ratio, showed a more substantive gain. [Table 5C-4]

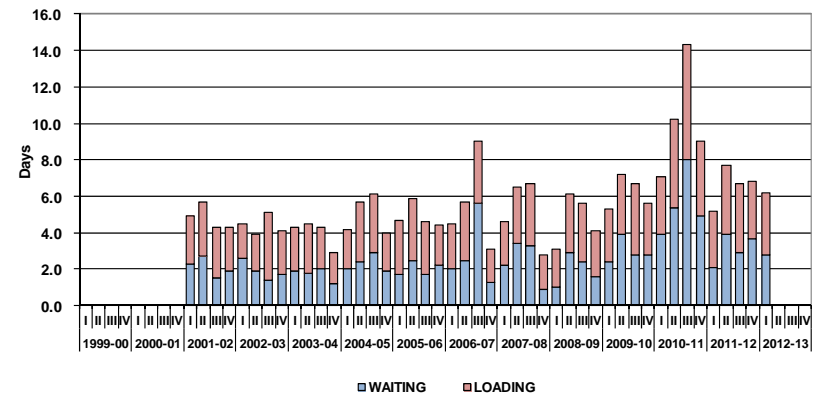
For the most part, the ratios posted by Thunder Bay stood well above a value of 2.0. The chief exception here was canola, which saw its ratio cut by 63.1%, to 1.6 from 4.4. Still, most of these ratios showed reductions from those posted a year earlier: durum, 4.0%; oats, 48.6%; and barley, 100.0%. The only noteworthy increase was associated with wheat, which saw its ratio rise by 90.2%, to 7.2 from 3.8. Churchill reported comparatively lower ratio values than did Thunder Bay, with its ratio for wheat and durum falling by 10.9% and 17.1% respectively.

On the whole, these measures suggest that while terminal stocks may have tightened in the face of increased shipments, they also remained largely adequate in relation to the prevailing demand for specific commodities. Nevertheless, periodic stock shortages continued to arise. While grade-based stock-to-shipment ratios showed a greater degree of variability, they suggest much the same. [Table 5C-5]

## PORT OPERATIONS

A total of 225 vessels called for grain at western Canadian ports during the first quarter of the 2012-13 crop year. This represented an increase of 1.8% over the 221 ships that arrived for loading during the same period a year earlier. Much of this gain was attributable to an 8.6% increase in the number of vessels calling at Vancouver, which rose to 101 from 93. An additional ship also called at Prince Rupert, which received 20 vessels against 19 a year earlier. In fact, these gains more than compensated for the five fewer calls made at Thunder Bay and Churchill, which received 89 and 15 vessels respectively.

Figure 38: Average Vessel Time in Port



## Average Vessel Time in Port

The amount of time spent by vessels in port increased by 19.2% in the first quarter of the 2012-13 crop year, climbing to an average of 6.2 days from the 5.2-day average reported for the same period a year earlier. This increase was largely shaped by a 33.3% increase in the amount of time vessels spent waiting to load, which rose to an average of 2.8 days from 2.1 days a year earlier.<sup>35</sup> This was compounded by a 9.7% increase in the amount of time vessels spent loading, which rose to an average of 3.4 days from 3.1 days.

All ports except Vancouver reported significant decreases in the first three months of the 2012-13 crop year. The most substantive of these

<sup>35</sup> 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.

was posted by Churchill, where the average fell by 34.6%, to 3.4 days from 5.2 days a year earlier. Prince Rupert reported the second largest reduction, with its average falling by 31.3%, to 5.7 days from 8.3 days. Thunder Bay trailed with a 4.8% decrease, which lowered its average to 2.0 days from 2.1 days.<sup>36</sup> Vancouver reported the longest stays in port, with its first-quarter average rising by 36.4%, to 10.5 days from 7.7 days. [Table 5D-1]

### Distribution of Vessel Time in Port

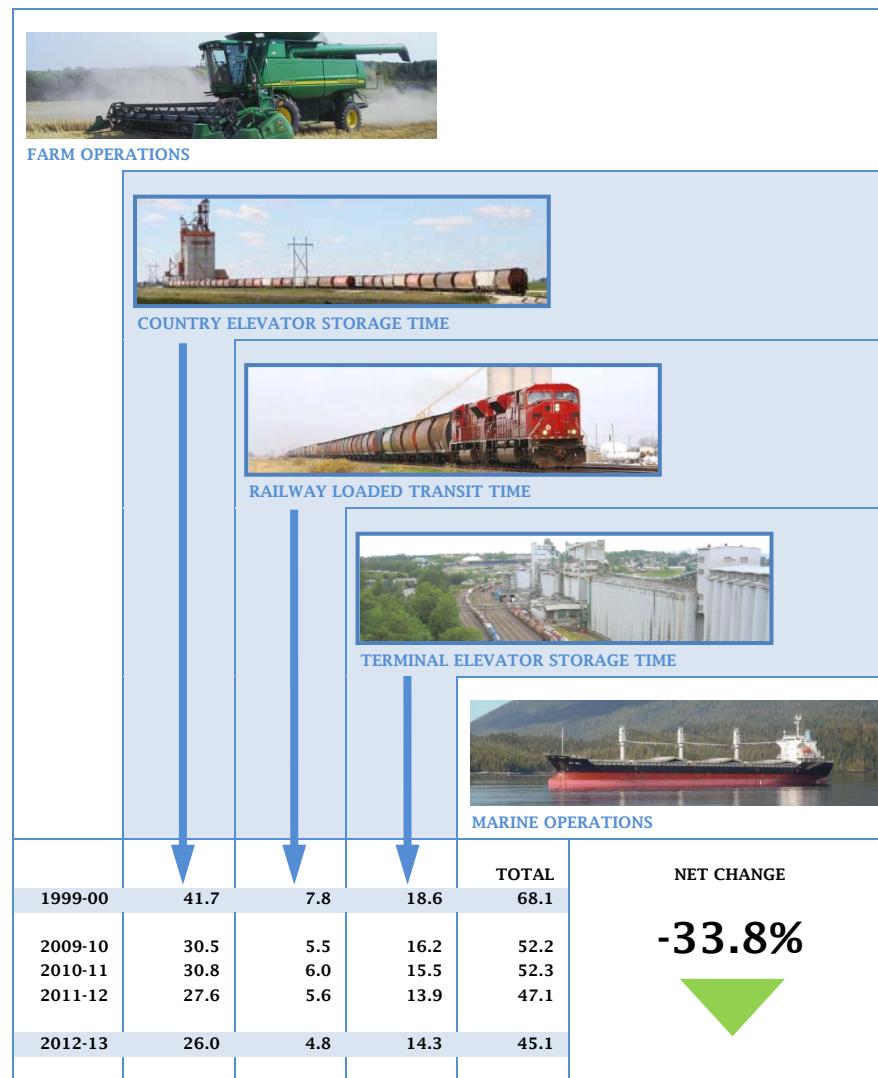
In keeping with the added time taken by ships in port, the proportion of ships spending more than five days in port also rose, to 43.7% from 39.4% a year earlier. Similarly, there was a significant rise in the number of ships that remained in port for an unusually long period of time, with the proportion of vessels spending 16 or more days in port more than doubling to 10.1% from 5.0% a year earlier. Virtually all of this delay was associated with ships calling at Vancouver.

These statistics suggest that, while the GHTS was moving record or near-record volumes in the first quarter, this movement was not keeping pace with the demand for carrying capacity. This was especially evident at Vancouver, where the proportion of time ships spent waiting grew from an average of 42.0% in August to 48.2% in October. [Table 5D-2]

### SYSTEM PERFORMANCE

The supply chain model provides a useful framework by which to examine the speed with which grain moves through the GHTS. For the 2011-12 crop year, it was observed that this process required an average of 47.1 days; the lowest annualized value yet observed under the GMP. Reductions in the supply chain’s principal components – time in storage at a country elevator, time in transit as a railway shipment, and time in

Figure 39: Days Spent Moving Through the GHTS Supply Chain



<sup>36</sup> Thunder Bay’s lower averages stem chiefly from the greater regularity with which vessels move through the St. Lawrence Seaway, the port’s ample storage capacity, and the limited delays incurred by vessels waiting to berth.



inventory at a terminal elevator - were all instrumental in shaping this 21.0-day improvement over the base-year average of 68.1 days.

The overall average fell to 45.1 days in the first quarter of the 2012-13 crop year. The result was largely shaped by a 1.6-day reduction in the amount of time spent by grain in storage in the country elevator system, which decreased to an average of 26.0 days from 27.6 days. A further 0.8 days was gained from a reduction in the railways' loaded transit time, which fell to an average of 4.8 days from 5.6 days. Detracting from these gains was a 0.4-day increase in the amount of time grain spent in inventory at a terminal elevator, which climbed to an average of 14.3 days from 13.9 days. [Table 5E-1]

These forces served to reduce the overall average to one of the lowest observed under the GMP. In spite of this, a few observations concerning the system's overall performance appear warranted:

- First, despite a modest decrease in the grain supply, which fell to 61.7 million tonnes from the previous crop year's 62.2 million tonnes, total railway grain shipments for the first quarter of the 2012-13 crop year grew by 7.2%, reaching a GMP record of 8.7 million tonnes. As such, the demand pressures brought to bear on the GHTS as a whole proved to be the maximum yet observed for an opening quarter under the GMP.
- Second, while the measures gathered under the GMP suggest that the GHTS bore these pressures reasonably well, there were signs that the system might also have begun to bend under the stress. These indications, which largely began to manifest themselves towards the end of October 2012, centred on some emergent problems with railcar supply in the country. Although shippers were comparatively pleased with the service they were receiving from the railways, these problems suggested that the demand for carrying capacity might have begun to exceed what the railways were capable of providing. Even so, grain was moving to export position more effectively and efficiently than it did a year earlier.

- Finally, and as demonstrated during other highly productive periods in the GMP's history, the GHTS's performance in the first quarter of the 2012-13 crop year revealed once again how effective the system can be when all of its elements are working in close harmony. While the grain industry could point with justifiable pride to what had been accomplished, it also knew that the supply chain's very complexity still rendered it highly vulnerable to a failure in one or more of its components, be it with respect to the timely gathering of grain in the country, its movement to port by rail, or its loading onto ships.

## Section 6: Producer Impact

Indicator Description	Table	2012-13								YTD	% VAR
		1999-00	2010-11	2011-12	Q1	Q2	Q3	Q4			
<b>Export Basis</b>											
1CWRS Wheat (\$ per tonne)	6A-10A	\$54.58	\$73.35	\$74.75							
1CWA Durum (\$ per tonne)	6A-10B	\$67.63	\$89.36	\$97.24							
1 Canada Canola (\$ per tonne)	6A-10C	\$52.51	\$53.14	\$54.16							
Canadian Large Yellow Peas - No. 2 or Better (\$ per tonne)	6A-10D	\$54.76	\$84.86	\$92.64							
<b>Producer Cars</b>											
Producer-Car-Loading Sites (number) - Class 1 Carriers	6B-1	415	250	234	231	-	-	-	231	-1.3%	
Producer-Car-Loading Sites (number) - Class 2 and 3 Carriers	6B-1	122	115	132	134	-	-	-	134	1.5%	
Producer-Car-Loading Sites (number) - All Carriers	6B-1	537	365	366	365	-	-	-	365	-0.3%	
Producer-Car Shipments (number) - Covered Hopper Cars	6B-2	3,441	13,041	14,341	2,053	-	-	-	2,053	14.2%	

## PRODUCER NETBACK

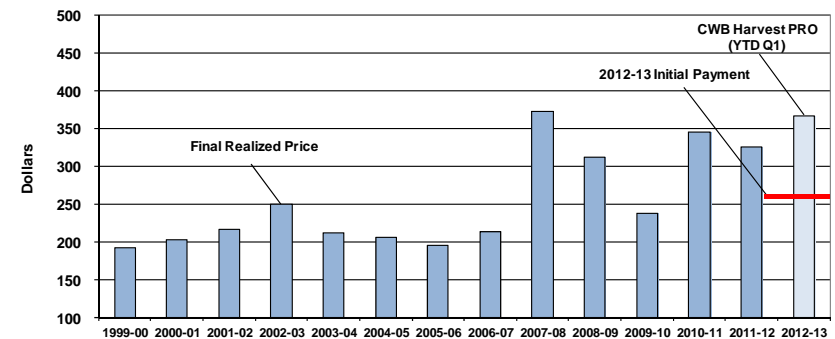
One of the GMP's key objectives is to determine the financial impact on producers arising from changes in the GHTS. The principal measure in this regard is the producer netback, an estimation of the per-tonne financial return to producers after the various logistics costs, collectively known as the export basis, are deducted from the actual price realized in a grain sale.

In its earlier reports, the Monitor described how increased commodity prices had largely been responsible for the improvement in the per-tonne returns accruing to producers of wheat, durum, canola, and yellow peas. Even in those years when the export basis fell, the financial gain derived from the reduction proved far less than that gained from better grain prices. But the escalation in grain prices has been highly erratic.

In the first four years of the GMP, grain prices moved steadily higher. This, however, was followed by a three-year decline beginning in the 2003-04 crop year. But prices began to rally yet again in the 2006-07 crop year, with the ensuing appreciation lifting producer returns to their highest levels the following year. This age-old rise and fall in prices would be repeated yet again, although with greater severity owing to the financial crisis that gripped the world, over the course of the next four years. Nevertheless, by the close of the 2011-12 crop year, grain prices had rebounded substantially.

The GMP only includes the producer netback in the Monitor's annual reports since certain elements integral to the calculation are not available until after the close of the crop year itself. Nevertheless, current price and input-cost data is collected for both wheat and canola as a means of providing some insight into their probable impact on the per-tonne financial return arising to producers. Some of the changes observed during the first three months of the 2012-13 crop year are presented here.

Figure 40: Price Changes - 1CWRS Wheat (dollars per tonne)



## Wheat

The GMP has adopted the CWB's Harvest Pool Return Outlook (Harvest PRO) for 1 CWRS wheat (13.5% protein) as an interim barometer of changing prices.<sup>37</sup> Through the first three months of the 2012-13 crop year the CWB's Harvest PRO for 1 CWRS wheat moved steadily higher, ultimately reaching an average of \$366.00 per tonne. This proved 12.3% greater than the 2011-12 crop year's final realized price of \$326.04 per tonne. In equal measure, the Harvest PRO was set substantially above the farmer's initial payment, which was set at \$261.20 per tonne.

<sup>37</sup> Prior to the change in the mandate of the Canadian Wheat Board, the GMP used the Pool Return Outlook as its primary price indicator for 1 CWRS wheat. In the face of the mandate change that became effective 1 August 2012, the GMP has adopted the CWB's Harvest Pool Return Outlook on an interim basis. While not perfectly aligned with the measure that preceded it, the Harvest PRO still provides a reasonable bridge for the comparison of wheat prices in an open market environment. Even so, the Monitor intends to develop new pricing measures for GMP.

To a large extent this rise in price reflected an expected tightening in international supplies, with global wheat production anticipated to decline by about 6%. Much of this was tied to weather-related production problems in the Black Sea region but was also fuelled by the broader impact on commodity prices arising from a severe drought in the American Midwest. Dryness in parts of Australia, coupled with a smaller seeded area in Argentina, also proved supportive of prices. As a result of this price rise, the financial returns accruing to producers are largely expected to increase in the 2012-13 crop year, perhaps reaching its best showing yet under the GMP.

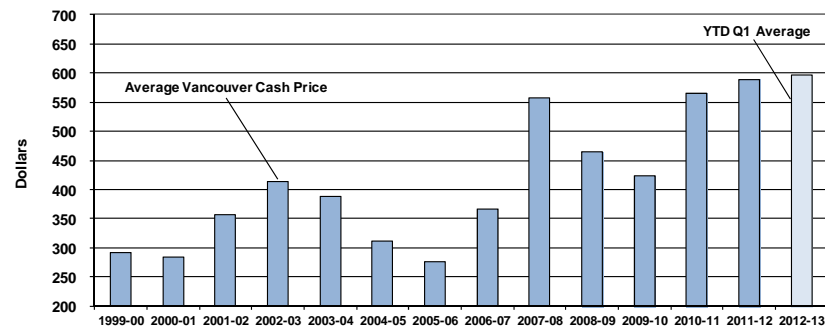
### Canola

As with wheat, the Vancouver cash price for 1 Canada canola also moved higher during the initial months of the 2012-13 crop year, albeit to a much lesser degree. Here too, the expected tightening of oilseed supplies in the face of strong demand did much to sustain prices. A key driver in this was the drought-induced impact on American soybean production, which left the marketplace looking to other producing countries to cover the shortfall. Similarly, Canadian canola production fell by almost 9% as a result of disappointing yields. These forces led to a 1.3% gain in the average Vancouver cash price for 1 Canada canola during the first quarter, to \$597.00 per tonne from the previous crop year's final average of \$589.21 per tonne.

The increase in price noted thus far into the 2012-13 crop year suggests that producers of 1 Canada canola will witness only a marginal improvement in their per-tonne financial returns. Still, these returns are likely to rank among the better values posted under the GMP.

Although the gains derived from rising prices boded well for a further increase in the producer's financial returns, rising input costs also suggested that these would be tempered. The largest of these were tied to increased railway freight rates, particularly on movements to the west coast, which at the close of the first quarter had risen by as much as 13%. Lesser impacts arose from the handling charges for various elevator

Figure 41: Price Changes - 1 Canada Canola (dollars per tonne)



activities. In the case of country elevators, these ranged from no change in the rates they assessed for the removal of dockage or storage, to a 0.1% increase in those tied to the receiving, elevating and loading out of grain. Changes in the rates for terminal elevator activities also proved modest, with selective reductions leading the way to a 0.4% decline in those associated with the receiving, elevating and loading out of grain, and a 0.1% increase in storage charges.

### PRODUCER CARS

Producer-car loading has increased substantially since the beginning of the GMP. This has come about as a result of many factors, not the least of which has been the formation of producer-car loading groups. These range from small groups loading cars with mobile augers on a designated siding, to more sophisticated organizations with significant investments

in fixed trackside storage and carloading facilities.<sup>38</sup> Some have gone so far as to purchase the branch lines being abandoned by CN or CP, establishing shortline railways that then became an integral element in their broader grain-handling operations. Although the majority of these producer groups are situated in Saskatchewan, a number can also be found in Manitoba and Alberta.

### Loading Sites

The number of producer-car loading sites situated throughout western Canada has been reduced by almost a half since the beginning of the GMP. With the close of the 2011-12 crop year, only 366 out of 709 remained. Much of the overall decline can be traced back to the closures made by the larger Class 1 carriers, which reduced its serviced sites by 63.7%, to 234 from 644. Conversely, those operated by the smaller Class 2 and 3 carriers increased by 103.1%, to 132 from 65. [Table 6B-1]

The first three months of the 2012-13 crop year saw a further shift in this balance, with the Class 1 carriers' count diminishing by three sites while that of the Class 2 and 3 carriers rose by two. The latter gain was tied to the creation of the Lake Line Railroad, which assumed operation of the CP sites at Gimli and Beausejour, Manitoba. By the end of the period, the number of sites operated by the major railways had fallen to 231 while those tied to the shortlines had increased to 134.

### Producer Car Shipments

Despite the general reduction in loading sites, producer-car shipments have risen significantly. Through the first decade of the GMP these shipments almost quadrupled, increasing to a high of 13,243 carloads in the 2008-09 crop year from 3,441 carloads in the base year. However, this growth proved somewhat sluggish in the face of periodic downturns

in volume. Even so, the 2011-12 crop year saw the setting of yet another GMP record, with 14,341 carloads being shipped.

Although the loss of the CWB's monopoly in the marketing of wheat and barley had many in the industry wondering what would become of producer-car loading, shipments in the first quarter increased by 14.2%, rising to 2,053 carloads from 1,798 carloads in the same period a year earlier. This represented 2.2% of all covered hopper car movements, up from the 2.0% share garnered twelve months before. With an upturn in the movement of other commodities, producer-car shipments took a 3.1% share of the wheat, durum and barley movement, down from the 3.4% accorded to them a year earlier. [Table 6B-2]

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<sup>38</sup> Regardless of the approach employed, the economic rationale for producer-car loading remains rooted in the farmer's ability to avoid the comparatively higher cost of turning his grain over to a commercial grain company for movement.

## Appendix 1: Program Background

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

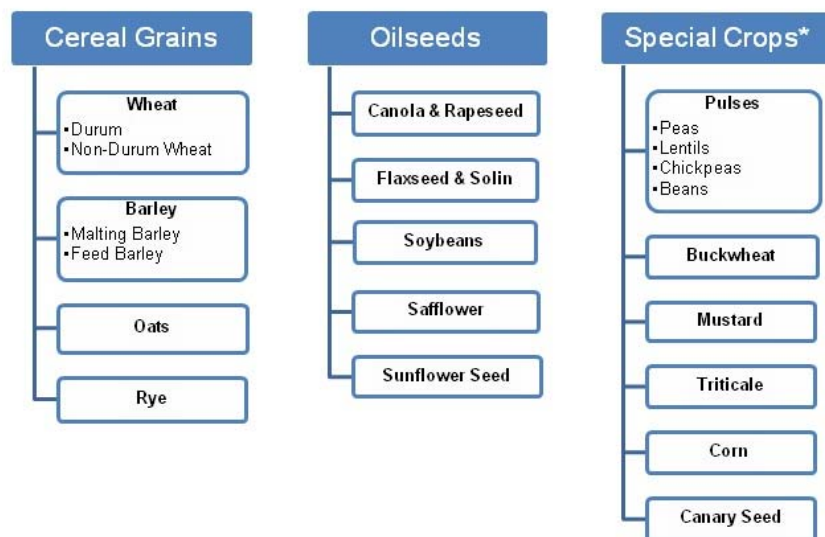
In a larger sense, these reforms were expected to alter the commercial relations that have traditionally existed between the primary participants in the GHTS: producers; the Canadian Wheat Board; grain companies; railway companies; and port terminal operators. Using a broad series of indicators, the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

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

- Series 1 - Production and Supply: Measurements relating to grain production in western Canada. In addition to the major cereal grains, this also includes oilseeds and special crops.
- Series 2 - Traffic and Movement: Measurements focusing on the amount of grain moved by the western Canadian GHTS. This includes shipments from country elevators; by rail to the four western ports; and by vessel from terminal elevators at the ports.
- Series 3 - Infrastructure: Measurements illustrating the makeup of the GHTS. These statistics include both the number and capacity of the country as well as terminal elevator systems, and the composition of the western Canadian railway network.
- Series 4 - Commercial Relations: Measurements relating to the rates applicable on various grain-handling and transportation services, as well as the activities of the Canadian Wheat Board in the adoption of more commercially oriented policies and practices.
- Series 5 - System Efficiency and Performance: Measurements aimed at gauging the operational efficiency with which grain moves through the logistics chain.
- Series 6 - Producer Impact: Measurements designed to capture the value to producers from changes in the GHTS, and which are focused largely on the calculation of the "producers' netback."

## Appendix 2: Commodity Guide

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



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

**Cereal Grains:** Cereal grains are any grain or edible seed of the grass family which may be used as food.

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

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

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

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

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

## Appendix 3: Acknowledgements

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

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