

GMP Dashboard

Table M-1	SEP 2022	OCT 2022	2022-23 YTD	Var. from Last YTD
Western Canadian GHTS Performance (Days)				
Total Time in System	38.7	34.1	39.7	-17.3%
Average Days In Store – Country	24.6	20.4	23.9	-17.3%
Loaded Transit Time	5.3	4.8	5.2	-11.2%
Average Days In Store – Terminal	8.8	8.9	10.6	-20.3%
Total Traffic ('000 tonnes)				
Primary Elevator Shipments	5,403.7	25,476.1	12,775.8	18.3%
Railway Shipments (all Western Canada traffic)	5,317.0	6,470.9	14,199.8	19.2%
Western Port Terminal Shipments	3,055.9	4,118.2	8,743.6	9.0%
Railway Performance				
Avg. Loads on Wheels (Cars)	8,948	11,092	8,104	3.2%
Total Western Port Car Cycle (days)	15.0	11.8	14.0	-12.1%
Port Performance				
Western Port Unloads (Number of Cars)	37,081	45,221	99,894	12.1%
Vessel Time in Port (days)	7.7	7.6	7.3	-6.6%
<i>Periodic revisions and corrections to the data received by the Monitor may result in the restatement of previously calculated measurement values. Where such differences arise, the values presented here should be considered to supersede those found in previous reports.</i>				

Overview

Western Canadian railway grain shipments rose by 21.7% in October 2022, to a record of almost 6.5 MMT from 5.3 MMT in September. The continuing traffic surge more than compensated for lower-than-expected August volumes and lifted the year-to-date tonnage to 14.2 MMT, 19.2% more than in the previous crop year's first quarter. Port shipments for October totaled 4.1 MMT, a 34.7% increase from September volumes, and a 24.9 increase from those in October 2021. The year-to-date growth in shipments registered 9.0% at the end of October. A month-over-month decrease was seen in the average amount of time vessels spent in port, which fell to 7.6 days in October from 7.7 in September. The overall first quarter-average vessel time in port measures 7.3 days.

Highlights for October 2022 and First Quarter 2022-23 CY

Traffic and Movement (page 2)

- Primary-elevator shipments were 12.8 MMT in the first quarter of the 2022-23 crop year, 18.3% more than the previous year.
- Total Western Canadian rail shipments (from all primary/process elevators and producer-car sites) in the first three months of the 2022-23 crop year totaled 14.2 MMT, up 19.2% from the same period a year earlier.
- Bulk shipments from Western Canadian ports totaled 8.7 MMT in the first quarter of the 2022-23 crop year, up 9.0% from last crop year.

System Efficiency and Performance (page 4)

- Average weekly primary-elevator stocks were equal to those last crop year-to-date. The average days-in-store declined by 17.3%.
- Average weekly port-terminal stocks decreased 11.0% from the same period last year, while average days-in-store fell 20.3%.
- The sharp upturn in traffic spurred movement velocity, with the preliminary average car cycle for hopper-car movements to Western Canadian ports decreasing by 21.3%, to 11.8 days in October from 15.0 days in September. This reduced the first-quarter average to 14.0 days, 12.1% below the 15.9 days posted in the same period a year earlier. Movements into the US saw a 4.7% decrease, with the YTD average falling to 23.2 days, while movements into Eastern Canada rose 7.7%, to 28.0 days.
- The average vessel time in port for the first quarter of the 2022-23 crop year is 7.3 days, a 6.6% decline from that observed in the same period the previous crop year.
- Port-terminal out-of-car time fell to 11.3% at Vancouver in October from 14.8% in September and to 4.0% at Prince Rupert from 11.6% the previous month. At Thunder Bay, the out-of-car time declined to 8.5% in October, down from September's 9.6%.

Commercial Relations (page 6)

- Average primary-elevation charges are unchanged thus far in the 2022-23 crop year.
- Both CN and CP raised their single-car freight rates significantly in the first quarter. CN posted the largest increases, with overall rates in the Vancouver corridor rising by an average of 27.5%; Prince Rupert by 23.6%; and Thunder Bay by 22.3%. CP's pricing action lifted rates by a moderately lesser amount, with average rates into Vancouver rising by 13.1%, and by 18.8% into Thunder Bay.
- Average terminal-elevation charges are unchanged thus far in the 2022-23 crop year.

Infrastructure (page 6)

- At the close of the first quarter the country-elevator network consisted of 411 facilities with 9.4 MMT of storage. The retrofitting of several facilities increased the number of loop-track-equipped elevators to 46.
- Railway infrastructure remained unchanged at 17,265.7 route-miles.
- The terminal elevator network stood at 17 facilities with 2.8 MMT of storage.
- Owing to increased traffic volumes, the overall hopper-car fleet increased, growing to a first-quarter average of 21,597 cars from

the crop-year average of 21,226 cars the previous year. Proportionally, for the first quarter, less of the fleet was held in storage, 23.9% against 32.2% the previous year.

Production and Supply

Statistics Canada's August model-based estimate for 2022 field-crop production in Western Canada stands at 75.2 MMT, a 53.5% increase from 2021's 49.0 MMT harvest. This dramatic increase reflects a solid rebound from the prairie-wide drought that severely reduced production the previous growing season. This estimate is consistent with the model-based estimate from the previous month. An update based on the October-November producer survey will be included in the Monitor's November Report.

When coupled with July's 3.8 MMT of carry-forward stocks, some 49.3% less than in 2021, the overall grain supply is estimated at 79.1 MMT. This stands 39.8% above the 2021-22 crop year's 56.6-MMT level, marking the return of an abundant grain supply following the drought-reduced shortfall of the previous year.

Table M-2	2022*	2021	Var. from Last Yr.
Production & Carry Forward (000's tonnes)			
* Western Canada Total Production – Preliminary	75,242.2	49,016.9	53.5%
Western Canada On Farm & Primary Elevator Carry Forward Stock	3,820.8	7,542.1	-49.3%
Total Grain Supply	79,063.0	56,559.0	39.8%

Traffic and Movement

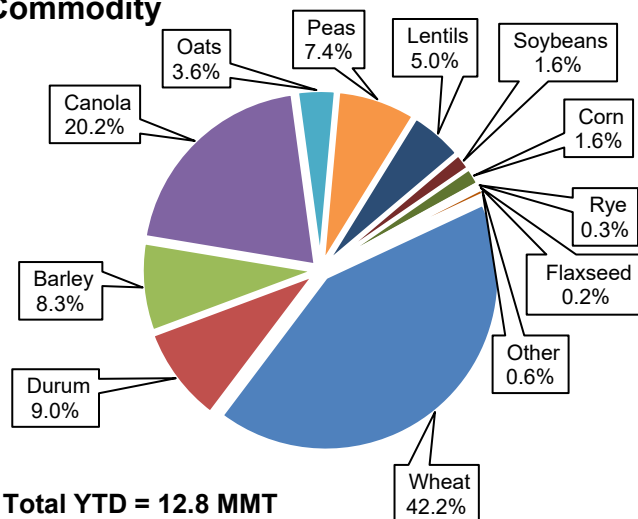
As harvest drew to a close, October deliveries fell to average just over 1.2 MMT per week. Weekly primary-elevator stocks fell marginally from the previous month to average 4.1 MMT, with good space available in elevator facilities across the prairies.

Table M-3	OCT 2022	2022-23 YTD	Var. from Last YTD
Primary Elevator Shipments (000's tonnes)			
Manitoba	957.4	2,235.7	-8.2%
Saskatchewan	2,811.7	6,523.8	28.3%
Alberta	1,672.7	3,926.7	23.3%
British Columbia	34.3	89.6	-2.1%
Total	5,476.1	12,775.8	18.3%
Western Canada Railway Traffic (000's tonnes)			
Shipments to Western Ports	5,425.4	11,531.6	24.4%
Shipments to Eastern Canada	215.7	594.3	-4.8%
Shipments to US & Mexico	750.5	1,871.9	6.1%
Shipments Western Domestic	79.3	202.1	-22.5%
Total	6,470.9	14,199.8	19.2%

Table M-3	OCT 2022	2022-23 YTD	Var. from Last YTD
Western Port Unloads (Number of Cars)			
Vancouver	31,016	69,820	12.4%
Prince Rupert	5,596	9,293	60.0%
Churchill	0	0	n/a
Thunder Bay	8,609	20,781	-2.0%
Total	45,221	99,894	12.1%

Terminal Elevator Shipments (000's tonnes)			
Vancouver	2,890.7	6,122.9	9.1%
Prince Rupert	549.0	824.7	76.5%
Churchill	0.0	0.0	n/a
Thunder Bay	678.5	1,796.0	-7.6%
Total	4,118.2	8,743.6	9.0%

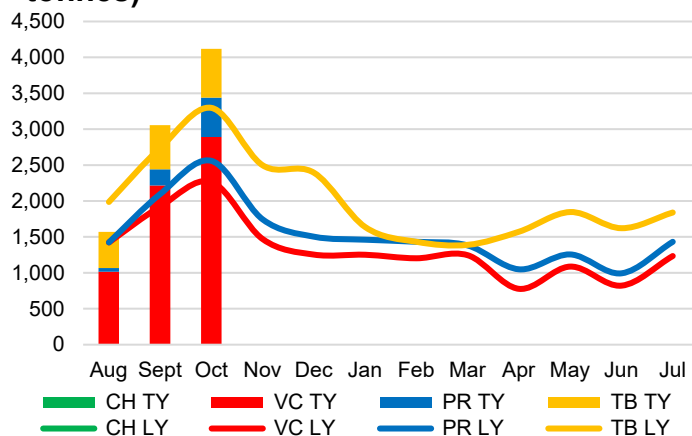
Primary Elevator Shipments by Commodity



GMP Data Table 2A-1

Grain shipments from primary elevators grew in the first quarter of the 2022-23 crop year, registering 18.3% more than in the previous year. Wheat, including durum, and canola continue to constitute the largest proportion of the movement at 71.4%. Movement of peas and lentils contributed 12.3% of the balance.

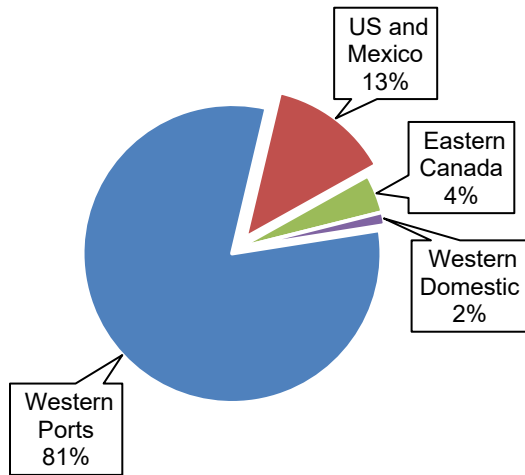
Terminal Elevator Shipments (000's tonnes)



GMP Data Table 2C-1

Bulk shipments from western ports grew in the first quarter of the 2022-23 crop year, registering a 9.0% increase on a year-over-year basis. West Coast shipments were up with a 76.5% increase at Prince Rupert and 9.1% at Vancouver, while Thunder Bay was down by 7.6%.

Western Canadian Grain Destinations

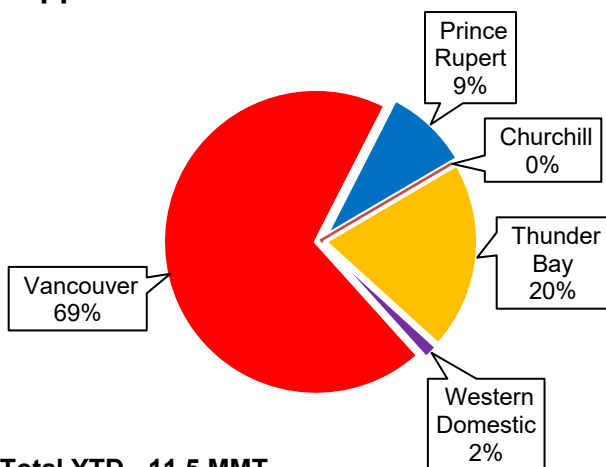


Total YTD = 14.2 MMT

GMP Data Tables 2B-1, 2B-8 & 2B-15

Railway grain shipments from Western Canada totaled 14.2 MMT in the first quarter of the 2022-23 crop year, 19.2% more than the 11.9 MMT handled in the same period a year earlier. The majority, about 11.5 MMT, or 81%, was directed to Western Canadian ports in support of offshore sales; 24.4% more than what had been handled a year earlier. This surge was broadened by a 6.1% increase in shipments to the US and Mexico. Running counter to these gains were declines of 4.8% in movements to Eastern Canada and 22.5% to Western Domestic destinations.

Western Canadian Destined Hopper Car Traffic

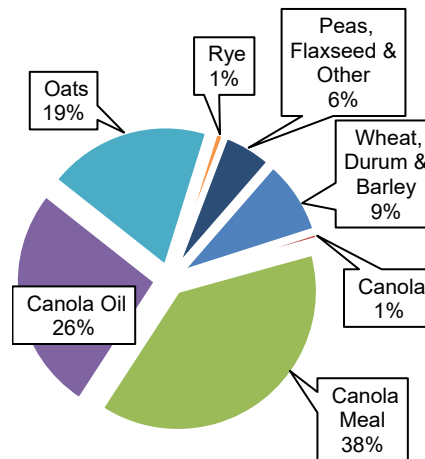


Total YTD - 11.5 MMT

GMP Data Tables 2B-3 to 2B-7

Over 95% of the tonnage directed to destinations within Western Canada moves in covered hopper cars. During the first quarter of the 2022-23 crop year this amounted to about 11.5 MMT, up 24.1% from the 9.3 MMT handled a year earlier. Sixty-nine percent of these hopper cars were destined to Vancouver, which remains the port of choice for exporting grain, given its ready access to Asia-Pacific markets and the concentration of export terminal facilities. A 28.2% increase in hopper-car shipments to Vancouver was largely responsible for shaping the broader traffic gain. This was supported by substantive increases in shipments to Prince Rupert and Thunder Bay, which rose by 47.7% and 9.9% respectively. Running counter to these increases, however, was a decline in shipments to Western Domestic destinations, which fell by 23.9%.

US Destined Grain by Commodity

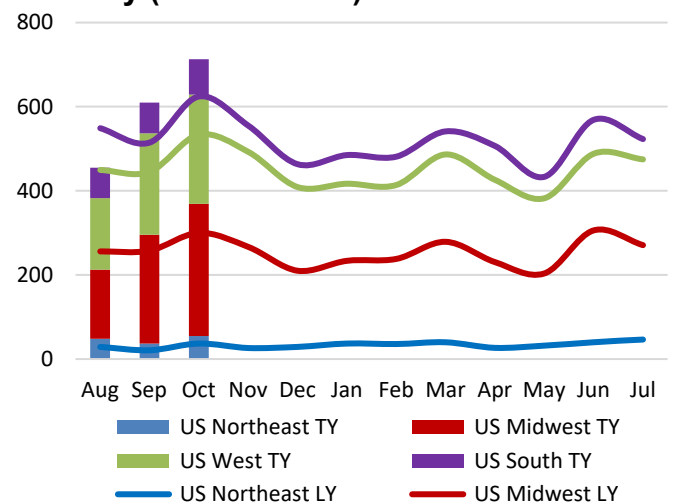


Total YTD - 1.8 MMT

GMP Data Table 2B-18

Total railway shipments into the US reached almost 1.8 MMT in the first three months of the 2022-23 crop year, up 5.3% from the nearly 1.7 MMT handled a year earlier. About 80% of these shipments were directed into the Midwestern and Western US, with canola and canola products dominating.

US Destined Grain by Destination Territory (000's tonnes)



GMP Data Table 2B-18

System Efficiency and Performance

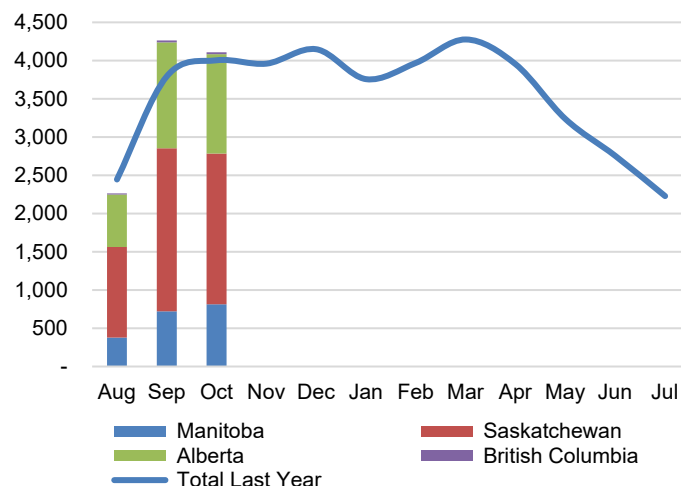
As the harvest delivery pressure subsided, primary-elevator stocks fell to 4.1 MMT in October from 4.3 MMT in September. The overall first quarter average is 3.4 MMT. Country space was good throughout the period. Country stocks utilized 75% of the working capacity of the network in October. Stocks ranged from 72% and 75% in Saskatchewan and Manitoba respectively to 80% in Alberta and 88% in British Columbia.

The average days-in-store in the primary-elevator system for the year to date decreased from last year, falling 17.3% to 23.9 days.

Table M-4	OCT 2022	2022-23 YTD	Var. from Last YTD
Primary Elevator			
Average Weekly Stocks (000's tonnes)	4,107.3	3,445.5	0.0%
Average Days in Store	20.4	23.9	-17.3%
Railway Operations (days)			
Cycle Time to Western Ports	11.8	14.0	-12.1%
Cycle Time to Eastern Canada	21.8	28.0	7.7%
Cycle Time to US	20.1	23.2	-4.7%
Loaded Transit to Western Ports	4.8	5.2	-11.2%
Loaded Transit to Eastern Canada	10.6	13.0	5.1%
Loaded Transit to US	7.9	9.1	-9.6%
Rail Fleet in Grain Service	20,754	16,256	2.9%
Western Canada Terminal Elevator			
Average Weekly Stocks (000's tonnes)	1,338.6	997.3	-11.0%
Average Days in Store	8.9	10.6	-20.3%
Port Unloads (hopper cars)	45,221	99,894	12.1%
Terminal Out-of-Car Time	10.0%	11.4%	-11.6%
Western Canada Port Operations			
Average Vessel Time in Port (days)	7.6	7.3	-6.6%
<i>Car order and order fulfillment data is not complete from both railways and will not be reported until further notice.</i>			



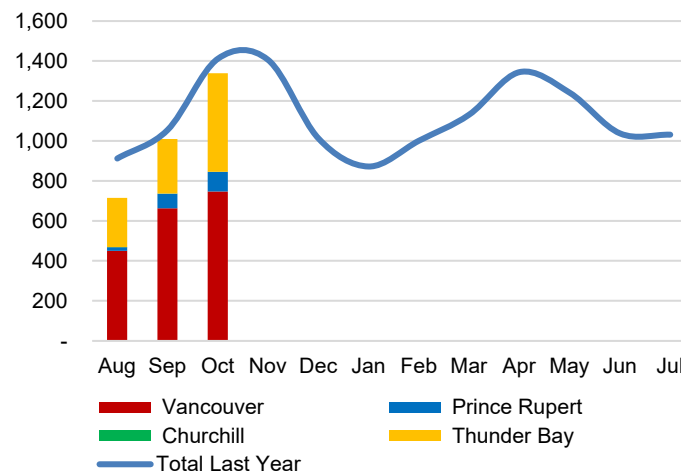
Average Weekly Primary Elevator Stocks (000's tonnes)



GMP Data Table 5A-2

Primary elevator stocks ended the last crop year averaging 2.2 MMT in store. In August, they grew marginally to average 2.3 MMT before jumping to average 4.3 MMT in September. In October they retreated to average just 4.1 MMT. Wheat, including durum, and canola, comprise 71% of the total stock. At 17% of the stock, barley, oats and peas made up much of the balance.

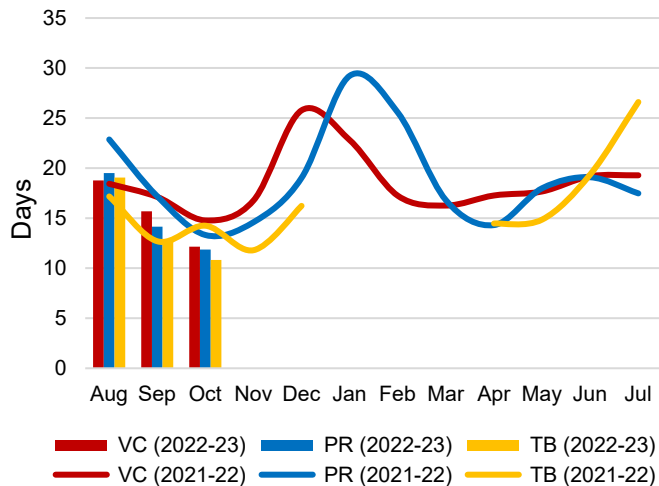
Average Weekly Terminal Elevator Stocks (000's tonnes)



GMP Data Table 5C-2

Overall terminal-elevator stocks averaged 1.0 MMT in the first quarter of the 2022-23 crop year, 11.0% less than the previous year. October stocks grew swiftly to just over 1.3 MMT from September's 1.0 MMT level. Wheat, including durum, and canola, comprise nearly 80% of the total stock. In October, western ports utilized just 69% of their overall working capacity.

Railway Cycle Times to Western Ports (days)

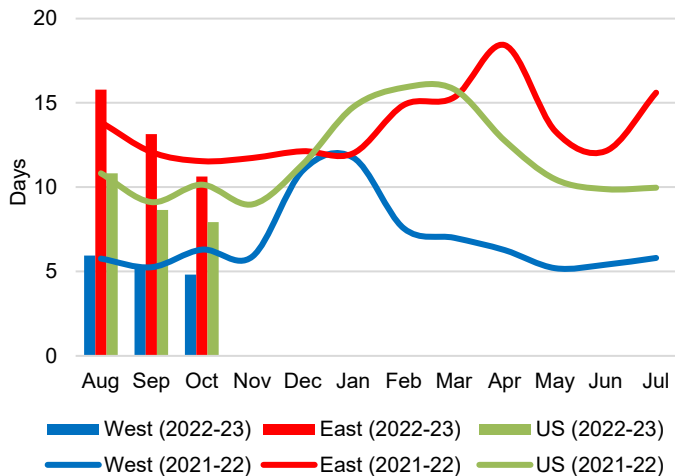


GMP Data Table 5B-1

The preliminary railway car cycle to Western Canadian ports averaged 14.0 days in the first quarter of the 2022-23 crop year, down 12.1% from the 15.9-day average posted in the previous crop year. This result reflected decreases in all three corridors: with Vancouver down by 12.1%; Prince Rupert, 18.1%; and Thunder Bay, 11.1%.

The average car cycle on movements into the United States also declined, falling 4.7%, to 23.2 days from 24.3 days a year earlier. However, the car cycle for movements into Eastern Canada rose by 7.7%, to an average of 28.0 days from the 26.0-day average posted in the previous crop year.

Average Loaded Transit Times (days)

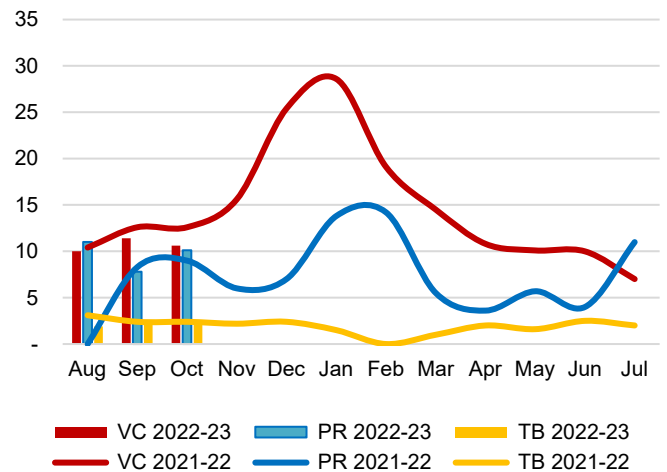


GMP Data Tables 5B-4, 5B-8, 5B-12

The loaded transit time for traffic destined to Western Canadian ports averaged 5.2 days in the first three months of the 2022-23 crop year, down 11.2% from the 5.8-day average posted a year earlier. This was the product of decreases in all three primary corridors, with the Vancouver average falling by 10.1%, Prince

Rupert's by 15.9%, and Thunder Bay's by 13.0%. A 5.1% increase was observed on movements into Eastern Canada, with the average loaded transit time rising to 13.0 days from 12.4 days twelve months earlier. The average on movements into the United States decreased by 9.6%, to 9.1 days from 10.1 days.

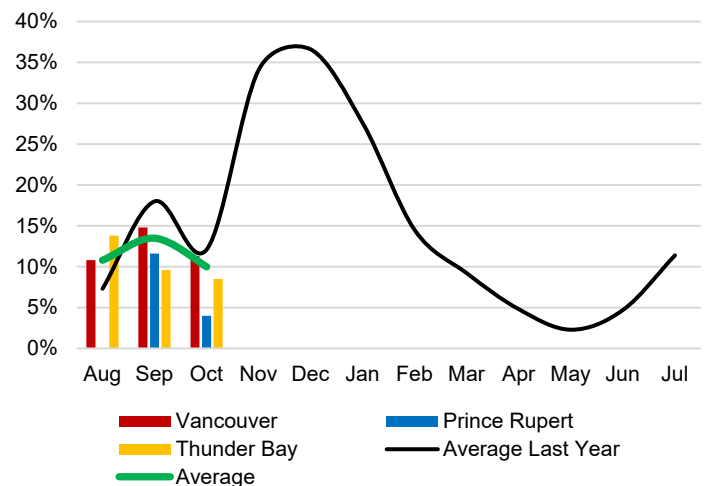
Average Days in Port per Vessel



GMP Data Table 5D-1

In October, the overall average time vessels were in port waiting and loading grain fell to 7.6 days from 7.7 days the month before. The crop-year-to-date average stands at 7.3 days, 6.6% lower than that registered in the previous crop year. While Vancouver experienced a slim month-over-month decline, Prince Rupert and Thunder Bay saw increases from September levels. For the month of October, days in port stood at 10.6 for Vancouver, 10.1 for Prince Rupert and 2.5 for Thunder Bay.

Port Terminal Out-of-Car Time (% of total operating hours)



GMP Data Table 5C-5

The port terminal out-of-car time measure represents the total number of hours terminal elevator facilities are open and staffed (including overtime hours) and the corresponding number of hours that terminals have no rail cars available to unload. The

measure is expressed as a percentage (hours without cars to the total number of hours working).

The aggregate measure for all ports fell to 10.0% in October, with a crop-year-to-date average of 11.4%. Terminal out-of-car time at Vancouver declined to 11.3% in October and to 8.5% at Thunder Bay, while at Prince Rupert it fell to just 4.0%.

Commercial Relations

Table M-5 Rates: \$CDN per tonne	Q1 2022-23	Index (1999=100)	% Change YTD
Avg. Primary Elevation	16.51	137.7	0.0%
Rail to Vancouver			
CN	71.47	194.7	27.5%
CP	73.58	199.8	13.1%
Rail to Pr. Rupert			
CN	69.25	166.6	23.6%
Rail to Thunder Bay			
CN	60.81	188.1	22.3%
CP	56.46	187.8	18.8%
Average Terminal Elevation	15.40	168.9	0.0%

Note: Commercial rates are measured on a quarterly basis, the above table refers to rates at the close of the first quarter of the 2022-23 crop year (as at 31 October 2023). Railway freight rates reflect average published single-car rates, and do not include multi-car incentives (\$8/tonne for 100+ car blocks).

Both CN and CP increased their single-car freight rates substantially in the first quarter of the 2022-23 crop year. At the outset of August 2022, CN escalated its rates on westbound movements into Vancouver and Prince Rupert by an average of 12.1%, with its Thunder Bay rates remaining unchanged. This was followed by additional increases ranging anywhere from 5.0% to 16.5% in September, and from 5.0% to 8.4% in October. These compound actions resulted in a quarterly increase of 27.5% on movements into Vancouver; of 23.6% for Prince Rupert; and of 22.3% for Thunder Bay. In comparison, CP left its year-end rates unchanged until September, when it applied an average increase of 5.5% on movements into Vancouver, and 14.2% on movements into Thunder Bay. This was followed in October with additional increases averaging 7.2% and 4.1% respectively. The net effect of this pricing actions was to raise its Vancouver rates by 13.1%, and its Thunder Bay rates by 18.8%.

Commercial Developments

New funding for Churchill: On 3 August 2022 the governments of Canada and Manitoba announced that they would be providing \$133 million in new funding to the Arctic Gateway Group (AGG) to aid in the upgrading of its rail line between The Pas and Churchill. The federal government pledged a further \$60 million while the Manitoba government promised to contribute \$73 million to the project. This new investment comes in addition to the \$40 million provided by Ottawa just a year earlier, as well as a \$117 million commitment made in 2018 that allowed First Nations and northern Manitoba communities to purchase AGG, which owns the Hudson Bay Railway, the Port of Churchill, the Churchill Marine Tank Farm

and other assets. In the fall of 2021, AGG announced that it was closing the port and suspending grain shipments until at least 2023 to effect heavy repairs on the rail line, especially the stretch between Gillam and Churchill, that largely sits atop muskeg.

Agreement reached between CP and TCRC: On 15 August 2022 the Canadian Pacific Railway (CP) announced that it had concluded a new two-year collective agreement with the Teamsters Canada Rail Conference (TCRC), which represents some 3,000 CP locomotive engineers, conductors, and yard workers across Canada. The agreement, which came after the binding arbitration of several outstanding issues, will run through to the end of 2023, and provides for wage increases of 3.5% in 2022 and 2023 along with other benefits. Failed negotiations between CP and the TCRC had led to a brief work stoppage in March 2022, which was ended following their concurrence to enter binding arbitration.

Bridge fire interrupts rail service: In the early morning of 5 October 2022 a fire damaged a 600-foot-long railway bridge near Latonnell, Alberta, severing CN's only rail link in and out of the Grande Prairie area. Although repairs were effected and the bridge returned to service about a week later, the incident left area producers largely unable to deliver grain into the system at the height of harvest. With area grain deliveries approaching 2.0 MMT annually in that region, the incident again heightened industry concerns over the vulnerability of the rail system and the need to provide for greater supply-chain resiliency.

Task Force report released: On 6 October 2022, the National Supply Chain Task Force – established earlier in the year by the federal transport minister – released its final report into the congestion and fluidity issues that had been plaguing the domestic and international movement of goods since the onset of the COVID-19 pandemic. The report, which built on extensive consultations with industry stakeholders, claimed that Canada's transportation supply chain was approaching a "breaking point" and that urgent action from both government and industry was needed to keep goods flowing. The Task Force advanced 21 immediate and longer-term recommendations. Among the higher priority items were the need for measures to ease container congestion at ports; expand the existing railway interswitching distance; and a pervasive labour shortage. Longer-term recommendations included the creation of a governmental Supply Chain Office to address issues reaching across federal departments; the development of a digital data structure to increase supply chain visibility; revising the mandate and structure of the Canadian Transportation Agency; actions to protect transportation corridors and border crossings from disruptions, be they from natural disasters, or human actions such as blockades or labor disputes; and working with the provinces and the US government for reciprocal recognition of regulations and policies across provincial boundaries and international borders.

Infrastructure

Apart from the railways' car fleet, GMP measures relating to infrastructure are reported on a quarterly basis. The 2022-23 crop year has thus far produced several modest, although noteworthy, changes in the GHTS's physical infrastructure.

The licensing and delicensing of several country elevators shaved the total network down to 411 facilities from 413, with storage capacity increasing by 8,000 tonnes to 9.4 MMT. The total number of loop-track facilities rose to 46 from 39 owing largely to the retrofitting of several existing high-throughput elevators.

There were no changes recorded against the railway network in the first quarter of the 2022-23 crop year. Total mileage remained unaltered at 17,265.7 route-miles, with 84.5% of this being operated by CN and CP.

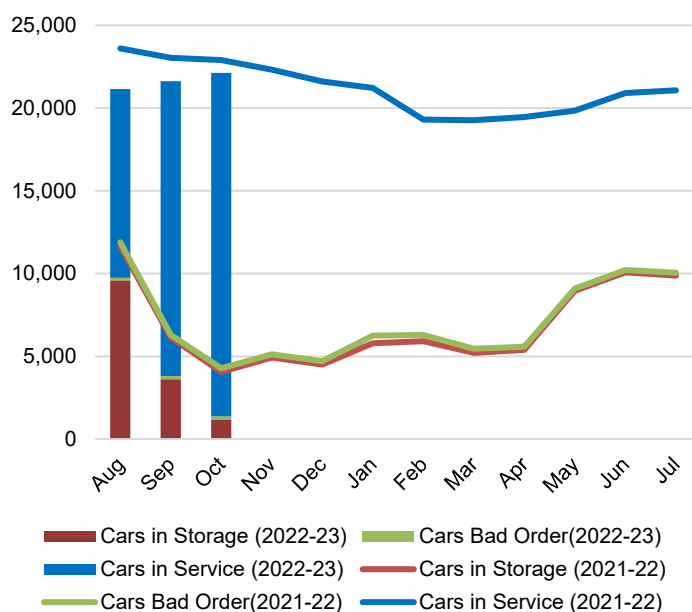
There were no changes recorded against the terminal elevator network in the first quarter of the 2022-23 crop year. The network comprises 17 facilities with 2.8 MMT of storage capacity.

Table M-6	Q1 2022-23	Index (1999=100)	% Change YTD
Country Elevator			
Primary and Process Elevators (Count)	411	40.9	0.5%
Storage Capacity (000's tonnes)	9,415.0	134.0	0.1%
Railway			
Route Miles - Major Carriers	14,596.1	98.4	0.0%
Route Miles - Shortline Carriers	2,669.6	57.5	0.0%
Route Miles - Total	17,265.7	88.7	0.0%
Average Weekly Total Hopper Car Fleet Size*	16,256	n/a	2.9%
Terminal Elevator			
Terminal Facilities (Count)	17	121.4	0.0%
Storage Capacity (000's tonnes)	2,752.5	107.6	0.0%

* Hopper Car Fleet Size represents all cars in all statuses for the first quarter of the 2022-23 crop year.

During times of heavy demand, nearly the entire hopper-car fleet is placed into service. It is normal practice for railways to move cars into storage as traffic volumes decrease in the latter months of the crop year. This was the case in the 2021-22 crop year as the weekly number of cars in service declining to a low of 10,693 in June 2022, with roughly half the fleet then having been placed in storage. A modest increase in the serviceable-car count was seen by August 2022, rising to 11,413 followed by a jump to 20,754 in October. It is worth noting that there are significant differences in the serviceable fleets of CN and CP in October, with the former storing 9% of its fleet while CP was storing a lesser 1%.

Railway Grain Fleet Size and Utilization



GMP Data Table 3B-2

Producer Cars

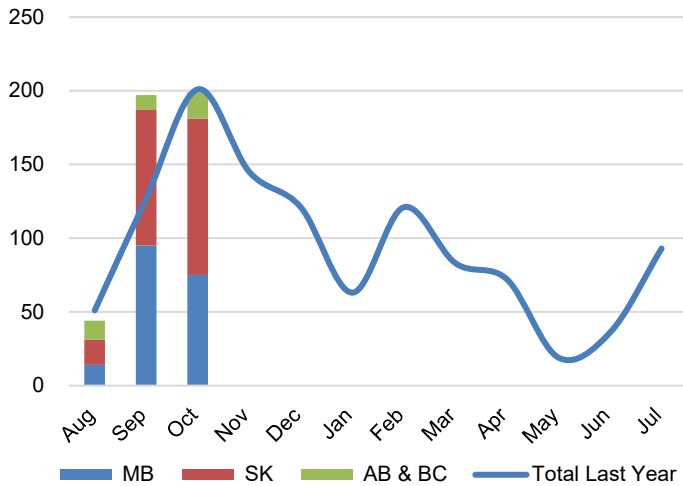
No change was registered in the number of producer-car loading sites through the first quarter of the 2022-23 crop year. The total number of available producer-car loading locations at the end of October stands at 272.

Table M-7	Q1 2022-23	Index (1999=100)	% Change YTD
Producer Car Loading Sites			
Class 1 Carriers	142	22.2	0.0%
Shortline Carriers	130	200.0	0.0%
All Carriers	272	38.3	0.0%
Table M-8			
Producer Cars Scheduled	Q1 2022-23	2021-22 YTD	Var. from Last YTD
Manitoba	184	184	26.0%
Saskatchewan	215	215	9.1%
Alberta & B.C.	41	41	13.9%
Total	440	440	16.1%

Producer cars scheduled for October 2022 were 1.0% less than in October 2021. Despite the modest decline, the overall crop year saw an upturn of 16.1% from the previous year. The previous crop year saw oats shipments comprising 54% of overall producer cars scheduled, while the first quarter of the 2022-23 crop year registered oats at only 51% of the overall producer-car number. Wheat and durum constitute a lesser 38% of the year-to-date total.



Producer Cars Scheduled by Province

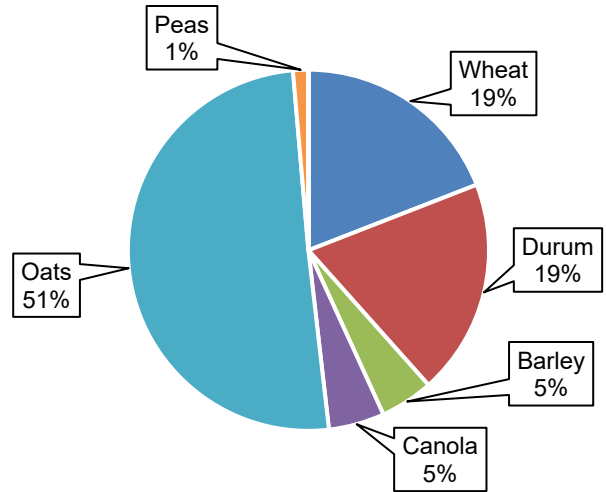


GMP Data Table 6B-2

Recent years has seen the proportion of producer-car shipments devoted to oats grow while a decrease has been registered in the number of cars carrying other cereal grains. Shipments throughout the 2022-23 crop year continue to reflect this trend, with oats

comprising 51% of the total, while wheat, durum and barley combined comprise only 43%. Canola contributed 5%, while special crops and other rounded out the final 1% of the total volume.

Producer Cars Scheduled by Commodity



GMP Data Table 6B-2



Quorum Corporation
 Suite 701, 9707 – 110 Street
 Edmonton, AB T5K 2L9
 Email: info@quorumcorp.net
 Web: www.grainmonitor.ca
 Phone: (780) 447-2111

This report provides a summary of the data developed under the Grain Monitoring Program. Detailed monthly Data Tables can be found in Excel format on Quorum's website at: www.grainmonitor.ca

Quorum welcomes questions and comments on the reports and data. Please contact us at our address by either phone or email