

Grain Monitoring Program Report for: January 2023 / Q2 2022-23 CY

Release Date: March 3, 2023

GMP Dashboard

Table M-1	DEC 2022	JAN 2023	2022-23 YTD	Var. from Last YTD
Western Canadia	n GHTS Perf	ormance (Da	ys)	
Total Time in System	42.1	40.3	39.2	-31.1%
Average Days In Store – Country	25.9	25.1	23.8	-33.7%
Loaded Transit Time	6.1	7.1	5.7	-20.2%
Average Days In Store – Terminal	10.1	8.1	9.7	-29.7%
Total Traffic ('000	tonnes)			
Primary Elevator Shipments	3,865.2	4,124.5	26,839.0	41.4%
Railway Shipments (all Western Canada traffic)	5,082.1	4,985.8	30,069.4	45.8%
Western Port Terminal Shipments	3,708.3	3,488.8	21,170.8	45.4%
Railway Performa	ance			
Avg. Loads on Wheels (Cars)	11,512	11,439	9,602	19.1%
Total Western Port Car Cycle (days)	13.3	15.2	13.7	-22.6%
Port Performance	9			
Western Port Unloads (Number of Cars)	31,852	34,148	220,805	44.0%
Vessel Time in Port (days) Periodic revision	8.6	16.1	9.7	-1.8%

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.

Overview

Western Canadian railway grain shipments slipped 1.9% in January 2023, to 5.0 MMT from 5.1 MMT in December 2022. Even so, the decline builds on much stronger current-year shipments, which helped lift the year-to-date tonnage to 30.1 MMT, 45.8% more than in the same six-month period a year earlier. Port shipments for January totaled 3.5 MMT, a 5.9% decrease from December volumes, but a whopping 112.9% increase from those in January 2022 when the system was still recovering from November storm-related outages. The year-to-date growth in shipments registered 45.4% at the end of January. A month-over-month increase was seen in the average amount of time vessels spent in port, which jumped to 16.1 days in January from 8.6 in December. The overall first-half-average vessel time in port measures 9.7 days.

Highlights for January 2023 and Second Quarter 2022-23 CY

Traffic and Movement (page 2)

- Primary-elevator shipments were 26.8 MMT in the first half of the 2022-23 crop year, 41.4% more than the previous year.
- Total Western Canadian rail shipments to all destinations (from all primary/process elevators and producer-car sites) in the first six months of the 2022-23 crop year totaled 30.1 MMT, up 45.8% from the same period a year earlier.
- Bulk shipments from Western Canadian ports totaled 21.2 MMT in the first half of the 2022-23 crop year, up 45.4% from last crop year.

System Efficiency and Performance (page 4)

- Average weekly primary-elevator stocks decreased 2.1% from the same period last year, while average days-in-store fell 33.7%.
- Average weekly port-terminal stocks increased 3.1% from the same period last year, while average days-in-store fell 29.7%.
- The preliminary average car cycle for hopper-car movements to Western Canadian ports increased by 14.3%, to 15.2 days in January from 13.3 days in December. Higher velocities helped reduce the YTD average to 13.7 days, 22.6% below the 17.7 days posted a year earlier. Movements into Eastern Canada also decreased, with the YTD average falling by 6.9% to 24.5 days, while movements into the US witnessed a 1.7% decrease, to an average of 25.0 days.
- The average vessel time in port for the first half of the 2022-23 crop year is 9.7 days, a 1.8% decline from that observed in the same period the previous crop year.
- Port-terminal out-of-car time fell to 7.1% at Vancouver in January from 21.2% in December and to 14.6% at Prince Rupert from 18.0% the previous month. At Thunder Bay, the out-of-car time declined to 9.5% in January, down from December's 14.5%.

Commercial Relations (page 6)

- Average primary-elevation charges increased by 0.3% in the first half of 2022-23 crop year.
- Both CN and CP raised their single-car freight rates significantly in the first quarter, only to reduce them in January 2023. CN posted the largest increases, with overall rates in the Vancouver corridor rising by an average of 17.4%; Prince Rupert by 15.4%; and Thunder Bay by 16.2%. CP's pricing action lifted rates by a lesser amount, with average rates into Vancouver rising by 3.5%, and by 9.9% into Thunder Bay.
- Average terminal-elevation charges increased by 1.5% in the first half of the 2022-23 crop year.

Infrastructure (page 6)

- At the close of the second 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 44.
- Railway infrastructure was unchanged at 17,265.7 route-miles.
- The terminal elevator network stood at 17 facilities with 2.8 MMT of storage.
- The overall hopper-car fleet fell modestly to a first-half average of 22,001 cars, 2.0% less than was the case in the first half of the previous year.

Production and Supply

Statistics Canada's November-survey estimate for 2022 field-crop production in Western Canada stands at 73.8 MMT, a 50.6% 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 represents a 1.4 MMT reduction from the previous model-based estimate recorded at the end of August.

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 77.6 MMT. This stands 37.3% above the 2021-22 crop year's 56.6-MMT level, marking the return of an abundant grain supply to meet domestic and export demands.

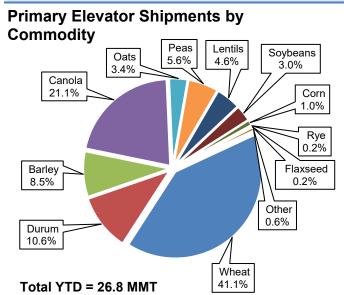
Table M-2	2022	2021	Var. from Last Yr.
Production & Carry Forward	(000's tonnes	s)	
Western Canada Total Production	73,807.4	49,016.9	50.6%
Western Canada On Farm & Primary Elevator Carry Forward Stock	3,820.8	7,542.1	-49.3%
Total Grain Supply	77,628.2	56,559.0	37.3%

Traffic and Movement

With mild weather, January deliveries rose to average just over 1.15 MMT per week. Weekly primary-elevator stocks also rose marginally from the previous month to average 3.8 MMT, with good space available in elevator facilities across the prairies.

Table M-3	JAN 2023	2022-23 YTD	Var. from Last YTD	
Primary Elevator Shipments (000's tonnes)				
Manitoba	466.4	4,550.0	12.7%	
Saskatchewan	2,172.8	13,800.3	58.1%	
Alberta	1,455.5	8,303.9	37.4%	
British Columbia	29.8	184.8	12.0%	
Total	4,124.5	26,839.0	41.4%	
Western Canada Railway Tra	affic (000's tor	nnes)		
Shipments to Western Ports	3,769.1	24,161.7	54.0%	
Shipments to Eastern Canada	338.5	1,306.3	20.2%	
Shipments to US & Mexico	779.1	4,087.2	22.2%	
Shipments Western Domestic	99.1	514.2	3.5%	
Total	4,985.8	30,069.4	45.8%	
Western Port Unloads (Num	ber of Cars)			
Vancouver	28,194	156,753	54.3%	
Prince Rupert	4,722	24,547	77.7%	
Churchill	0	0	n/a	
Thunder Bay	1,232	39,505	4.2%	
Total	34,148	220,805	44.0%	

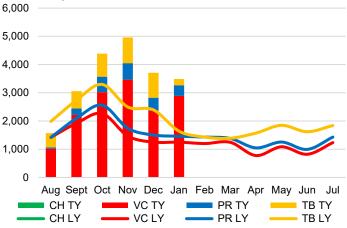
Table M-3	JAN 2023	2022-23 YTD	Var. from Last YTD
Terminal Elevator Shipments	(000's tonne	es)	
Vancouver	2,888.9	14,968.6	56.1%
Prince Rupert	377.5	2,248.8	87.5%
Churchill	0.0	0.0	n/a
Thunder Bay	222.4	3,953.4	5.0%
Total	3,488.8	21,170.8	45.4%



GMP Data Table 2A-1

Grain shipments from primary elevators grew in the first half of the 2022-23 crop year, registering 41.4% more than in the previous year. Wheat, including durum, and canola continue to constitute the largest proportion of the movement at 72.8%. Movement of peas and lentils contributed 10.2% of the balance.

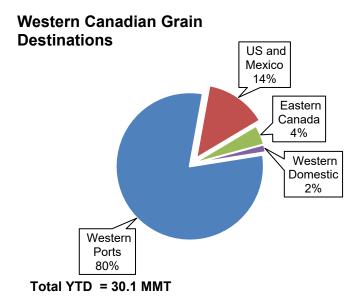
Terminal Elevator Shipments (000's tonnes)



GMP Data Table 2C-1

Bulk shipments from western ports grew in the first half of the 2022-23 crop year, registering a 45.4% increase on a year-over-year basis. West Coast shipments were up substantially with a 56.1% increase at Vancouver and an 87.5% increase at Prince Rupert, while Thunder Bay was up a modest 5.0%.

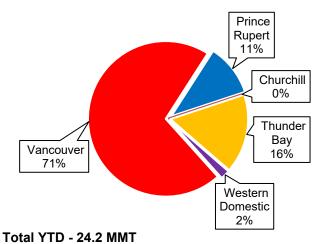




GMP Data Tables 2B-1, 2B-8 & 2B-15

Railway grain shipments from Western Canada totaled 30.1 MMT in the first half of the 2022-23 crop year, 45.8% more than the 20.6 MMT handled in the same period a year earlier. The majority, about 24.2 MMT, or 80%, was directed to Western Canadian ports in support of offshore sales; 54.0% more than what had been handled a year earlier. This surge was broadened by increases of 22.2% in shipments to the US and Mexico, 20.2% for movements into Eastern Canada, and 3.5% to Western Domestic destinations.

Western Canadian Destined Hopper Car Traffic

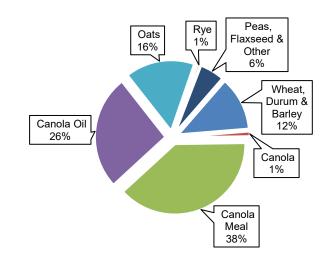


GMP Data Tables 2B-3 to 2B-7

Over 95% of the tonnage directed to destinations within Western Canada moves in covered hopper cars. During the first half of the 2022-23 crop year this amounted to about 24.2 MMT, up 53.9% from the 15.7 MMT handled a year earlier. Seventy-one 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 67.4% 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 77.0% and 12.0% respectively. Western Domestic destinations saw a much smaller gain of 3.2%.

US Destined Grain by Commodity

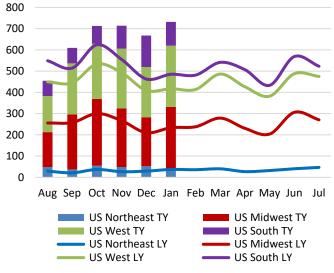


Total YTD - 3.9 MMT

GMP Data Table 2B-18

Total railway shipments into the US reached almost 3.9 MMT in the first six months of the 2022-23 crop year, up 21.9% from the nearly 3.2 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

With relatively mild winter-operating conditions, primary-elevator stocks grew to 3.8 MMT in January from 3.7 MMT in December. The overall first half average is 3.6 MMT. Country space was good throughout the period. Country stocks utilized 69% of the working capacity of the network in January. Stocks ranged from 64% and 69% in Manitoba and Saskatchewan respectively to 73% in Alberta and 88% in British Columbia.

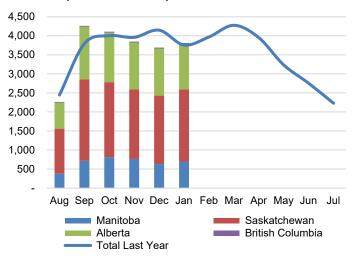
The average days-in-store in the primary-elevator system for the year to date decreased from last year, falling 33.7% to 23.8 days.

Table M-4	JAN 2023	2022-23 YTD	Var. from Last YTD
Primary Elevator			
Average Weekly Stocks (000's tonnes)	3,811.4	3,613.7	-2.1%
Average Days in Store	25.1	23.8	-33.7%
Railway Operations (days)			
Cycle Time to Western Ports	15.2	13.7	-22.6%
Cycle Time to Eastern Canada	19.6	24.5	-6.9%
Cycle Time to US	26.9	25.0	-1.7%
Loaded Transit to Western Ports	7.1	5.7	-20.2%
Loaded Transit to Eastern Canada	8.9	11.4	-6.6%
Loaded Transit to US	11.1	10.0	-4.7%
Rail Fleet in Grain Service	19,824	18,767	16.6%
Western Canada Terminal Elevator			
Average Weekly Stocks (000's tonnes)	1,199.7	1,143.7	3.1%
Average Days in Store	8.1	9.7	-29.7%
Port Unloads (hopper cars)	34,148	220,805	44.0%
Terminal Out-of-Car Time	8.1%	11.9%	-47.8%
Western Canada Port Operations			
Average Vessel Time in Port (days)	16.1	9.7	-1.8%

Car order and order fulfillment data is not complete from both railways and will not be reported until further notice.



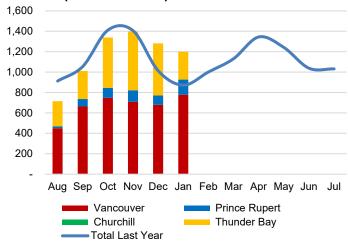
Average Weekly Primary Elevator Stocks (000's tonnes)



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. By January they had retreated to average just 3.8 MMT. Wheat, including durum, and canola, comprise 68% of the total stock. At 21% of the stock, barley, oats and peas made up much of the balance.

Average Weekly Terminal Elevator Stocks (000's tonnes)

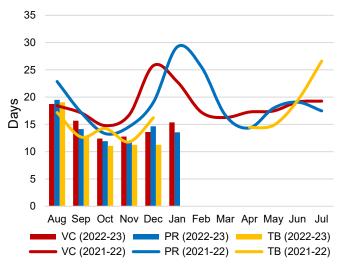


GMP Data Table 5C-2

Overall terminal-elevator stocks averaged 1.1 MMT in the first half of the 2022-23 crop year, 3.1% more than in the previous half-year average. January stocks tapered to 1.2 MMT from November's high of 1.4 MMT. Wheat, including durum, and canola, comprise nearly 79% of the total stock. In January, western ports utilized just 62% of their overall working capacity.



Railway Cycle Times to Western Ports (days)

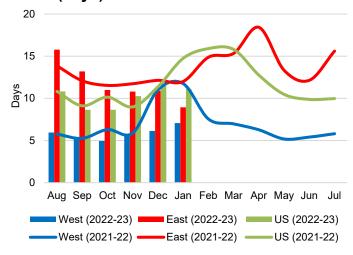


GMP Data Table 5B-1

The preliminary railway car cycle to Western Canadian ports averaged 13.7 days in the first half of the 2022-23 crop year, down 22.6% from the 17.7-day average posted in the previous crop year. This result reflected decreases in all three corridors: with Vancouver down by 23.7%; Prince Rupert, 28.2%; and Thunder Bay, 20.0%.

The average car cycle on movements into Eastern Canada also declined, albeit by a lesser 6.9%, to 24.5 days from 26.3 days a year earlier. Similarly, the car cycle on movements into the United States fell by a more marginal 1.7%, to an average of 25.0 days from 25.4 days the previous crop year.

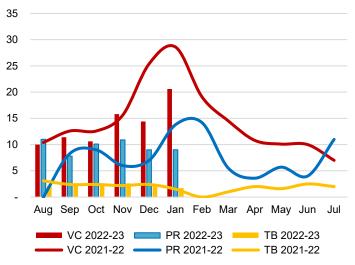
Average Loaded Transit Times (days)



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

The loaded transit time for traffic destined to Western Canadian ports averaged 5.7 days in the first six months of the 2022-23 crop year, down 20.2% from the 7.1-day average posted a year earlier. This was the product of decreases in all three primary corridors, with the Vancouver average falling by 21.4%, Prince Rupert's by 32.7%, and Thunder Bay's by 14.7%. A 6.6% decrease was observed on movements into Eastern Canada, with the average loaded transit time falling to 11.4 days from 12.2 days twelve months earlier. The average on movements into the United States decreased by 4.7%, to 10.0 days from 10.5 days.

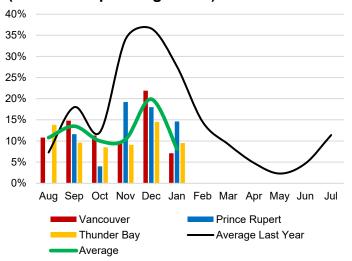
Average Days in Port per Vessel



GMP Data Table 5D-1

In January, the overall average time vessels were in port waiting and loading grain jumped to 16.1 days from 8.6 days the month before. The crop-year-to-date average stands at 9.7 days, 1.8% lower than that registered in the previous crop year. While Vancouver experienced a month-over-month increase, Prince Rupert held constant, and Thunder Bay declined from December levels. For the month of January, days in port stood at 20.6 for Vancouver, 9.0 for Prince Rupert and 1.7 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 8.1% in January, with a crop-year-to-date average of 11.9%. Terminal out-of-car time at Vancouver declined to 7.1% in January and to 14.6% at Prince Rupert, while at Thunder Bay it fell to 9.5%.

Commercial Relations

Table M-5 Rates: \$CDN per tonne	Q2 2022-23	Index (1999=100)	% Change YTD
Avg. Primary Elevation	16.56	138.0	0.3%
Rail to Vancouver			
CN	65.79	179.2	17.4%
СР	67.27	182.8	3.5%
Rail to Pr. Rupert			
CN	64.68	155.6	15.4%
Rail to Thunder Bay			
CN	57.77	178.7	16.2%
СР	52.27	173.7	9.9%
Average Terminal Elevation	15.64	171.5	1.5%

Note: Commercial rates are measured on a quarterly basis, the above table refers to rates at the close of the second quarter of the 2022-23 crop year (as at 31 January 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. Increases ranging from 5.0% to 16.5% followed in September, as did increases of 5.0% to 8.4% in October. The rates remained unchanged until January 2023, when CN initiated reductions of between 5.0% to 9.0%. These compound actions resulted in net increases of 17.4% on movements into Vancouver; of 15.4% for Prince Rupert; and of 16.2% 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. These rates also remained unchanged until January 2023 when CP put forward reductions ranging anywhere from 3.0% to 18.0%. The net effect was a raising of its Vancouver rates by 3.5%, and its Thunder Bay rates by 9.9%.

Commercial Developments

Competition Tribunal rejects call for elevator sale: In a decision dated 31 October 2022, the Competition Tribunal (Tribunal) — the quasi-judicial body with the power of approval over any antitrust actions proposed by the federal Competition Bureau (Bureau) — dismissed an application from the Bureau that would have ordered Parrish & Heimbecker (P&H) to sell either the former Louis Dreyfus (Dreyfus) elevator at Virden, Manitoba, or its

own facility at Moosomin, Saskatchewan, about 60 km to the northwest. The Bureau proposed the order following P&H's September 2019 deal to purchase all 10 of the primary grain elevators operated by Dreyfus in Western Canada. P&H had challenged the proposed order shortly after closing its deal with Dreyfus in December 2019, claiming that there was no evidence of any imminent harm to farmers as alleged by the Bureau. The Tribunal sided with P&H, ruling that the Bureau had not established that the acquisition had lessened competition substantially in any relevant market, or that it was likely to do so in the future.

Government invests in supply-chain improvements: The federal Minister of Transport announced two new investments under the National Trade Corridors Fund (NTCF) intended to increase supply chain capacity for Canada's grain sector. The first project, announced in October 2022, includes \$8 million in federal funding towards an \$18-million investment in new equipment and processing improvements at the CanEst Transit grain-handling terminal in Montreal. The second project, announced in January 2023, will provide up to \$22.7 million in funding towards a \$45.3 million dollar project to rebuild and rehabilitate three currently out-of-service wharves located along the Welland Canal in Port Colbourne. The final report of the National Supply Chain Task Force, released late last year, called on the federal government to address capacity and infrastructure pressures.

Vancouver gateway fee faces legal challenge: With the start of 2023, the Vancouver Fraser Port Authority began collecting a second Gateway Infrastructure Fee, which ranges widely by commodity and trade area, on goods moving through the port. According to the Authority, the new fee is intended to help defray the \$1.1-billion cost associated with some 13 infrastructureimprovement projects, some of which are already completed, while others are either in progress or still under consideration. The federal government has already committed \$350 million in funding through the NTCF, with industry contributing another \$380 million through the assessment of these fees over the next 30 years. Funding for the remainder is supposed to come from railways, municipalities, and other stakeholders. However, some terminal owners on the south shore, including Viterra Canada and Parrish & Heimbecker, are contesting these fees in Federal Court, with the Western Grain Elevator Association (WGEA) along with the provinces of Saskatchewan and Manitoba seeking intervenor status. They contend that these fees will significantly increase the cost of moving goods, favour containerized shipments over bulk grain shipments on a per-tonne basis, and vary too significantly between north and south shore grain terminals. Similarly, it questions the differential between grain terminals situated on the north shore, which are now required to pay \$0.08 per tonne, and those on the south shore and the Fraser River, which must pay a higher \$0.25 per tonne, and \$0.40 per tonne, respectively. Furthermore, the WGEA has also Called into question the intrinsic conflict of interest it sees in the Authority's role as both a developer and a regulator.



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 delicencing of several country elevators shaved the total network down to 411 facilities from 413, with storage capacity increasing by 42,900 tonnes to 9.4 MMT. The total number of loop-track facilities rose to 44 from 37 owing largely to the retrofitting of several existing high-throughput elevators.

There were no changes recorded against the railway network in the first six months 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 half of the 2022-23 crop year. The network comprises 17 facilities with 2.8 MMT of storage capacity.

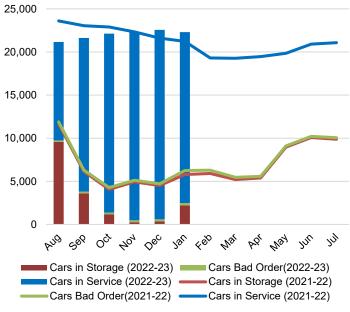
Table M-6	Q2 2022-23	Index (1999=100)	% Change YTD
Country Elevator			
Primary and Process Elevators (Count)	411	40.9	-0.5%
Storage Capacity (000's tonnes)	9,449.3	134.5	0.4%
Railway			
Route Miles - Major Carriers	14,596.1	98.4	0.0%
Route Miles - Shortline Carriers	2,669.6	57.5	0.0%
Route Miles - Total	17,265.7	88.7	0.0%
Average Weekly Total Hopper Car Fleet Size*	21,277	n/a	16.6%
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 half 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 declined 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 21,968 by December. In January, the cars in service retracted to average 19,824. It January, 89% of the overall fleet was in service to address the continuous shipping demands for western

grain, with only a modest number of cars being reported in either storage or bad order status.

Railway Grain Fleet Size and Utilization



GMP Data Table 3B-2

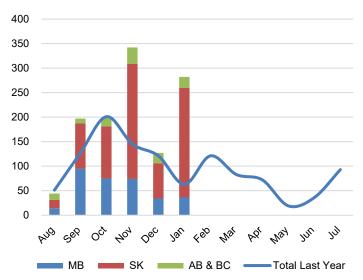
Producer Cars

No change was registered in the number of producer-car loading sites through the first half 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 Producer Car Loading Sites	Q2 2022-23	Index (1999=100)	% Change YTD
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	Q2 2022-23	2021-22 YTD	Var. from Last YTD
Producer Cars Scheduled	2022-23	YTD	Last YTD
Producer Cars Scheduled Manitoba	2022-23	YTD 328	32.8%

Producer cars scheduled for January 2023 were 347.6% more than in January 2022. Although not as pronounced, the overall crop year saw an upturn of 68.2% from the previous year. The previous crop year saw oats shipments comprising 54% of overall producer cars scheduled, while the first half of the 2022-23 crop year registered oats at only 48% of the aggregate producer-car number. Wheat and durum constitute a lesser 36% of the year-to-date total.

Producer Cars Scheduled by Province

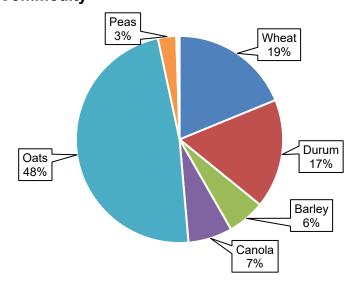


GMP Data Table 6B-2

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 48% of the total, while wheat, durum and barley combined comprise only 42%. Canola contributed 7%, while peas rounded out the final 3% of the total volume.

Producer Cars Scheduled by Commodity



GMP Data Table 6B-2





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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

