

Grain Monitoring Program Report for: January 2022 / Q2 2021-22 CY

Release Date: February 22, 2022

GMP Dashboard

Table M-1	DEC 2021	JAN 2022	2021-22 YTD	Var. from Last YTD	
Western Canadia	Western Canadian GHTS Performance (Days)				
Total Time in System	75.8	76.3	56.9	38.7%	
Average Days In Store – Country	50.0	54.6	35.9	48.0%	
Loaded Transit Time	11.0	12.2	7.1	1.6%	
Average Days In Store – Terminal	14.8	9.5	13.8	42.3%	
Total Traffic ('000) tonnes)				
Primary Elevator Shipments	3,037.5	2,072.3	18,976.5	-35.9%	
Railway Shipments (all Western Canada traffic)	2,970.2	2,414.0	20,602.0	-39.0%	
Western Port Terminal Shipments	2,379.2	1,621.5	14,523.4	-40.0%	
Railway Performa	эпсе				
Avg. Loads on Wheels (Cars)	8,721	7,564	8,063	-37.2%	
Total Western Port Car Cycle (days)	22.0	23.6	17.3	15.5%	
Port Performance					
Western Port Unloads (Number of Cars)	24,174	16,762	152,655	-39.9%	
Vessel Time in Port (days) Periodic revision	11.5	19.9	9.9	-16.2%	

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

Railway grain shipments from Western Canada fell by 18.7% in January 2022, to 2.4 MMT from December's 3.0 MMT. The decline reflected a smaller crop along with the lingering effects from washouts and landslides that severed key road and rail routes into Vancouver in mid-November. YTD shipments were similarly impacted, falling by 39.0%, to 20.6 MMT. Port shipments for January totaled 1.6 MMT, a 31.8% decrease from December volumes. The overall first-half demand for shipping at both the West Coast and Thunder Bay lagged that seen in the previous crop year, with year-to-date bulk shipments from the western ports registering a decline of 40.0%. Accompanying the decrease in shipments, is a 19.9-day average in the amount of time vessels spent in port in January, with the first-half average measuring 9.9 days.

Highlights for January 2022 and Second Quarter 2021-22 CY

Traffic and Movement (page 2)

- Primary-elevator shipments were 19.0 MMT in the first half of the 2021-22 crop year, 35.9% less than the previous year.
- Total Western Canadian rail shipments (from all primary/process elevators and producer-car sites) totaled 20.6 MMT in the first half of the 2021-22 crop year, 39.0% below the previous crop year's 33.8-MMT record.
- Bulk shipments from Western Canadian ports totaled 14.5 MMT in the first half of the 2021-22 crop year, down 40.0% from last crop year.

System Efficiency and Performance (page 4)

- Average weekly primary-elevator stocks declined by 7.7% from last year-to-date. The average days-in-store was up 48.0%.
- Average weekly port-terminal stocks decreased 14.7% from the same period last year, while average days-in-store grew 42.3%.
- Railcar cycle times rose in January, with the preliminary average for Western Canadian movements increasing by 7.3%, to 23.6 days from 22.0 days in December. The year-to-date average rose by 15.5%, to 17.3 days from 15.0 days a year earlier.
- The first-half 2021-22 crop-year average for vessel time in port is 9.9 days, a 16.2% decrease from that observed in the previous crop year.
- Port-terminal out-of-car time fell to 31.5% at Vancouver in January from 48.1% in December, while growing to 55.6% at Prince Rupert from 30.0% the month before. At Thunder Bay, the January out-ofcar time dipped to 5.0% in January, down from December's 7.2%.

Commercial Relations (page 6)

- Average primary-elevation charges declined 0.4% in the first half of the 2021-22 crop year.
- Both CN and CP increased their single-car freight rates in the first quarter of the 2021-22 crop year. CN applied an initial 10% increase in August, which was followed by 5% increases in both September and October, effectively lifting its rates in all corridors during the first quarter by 21%. In comparison, CP initially maintained its rates in the Vancouver corridor while reducing those in the Thunder Bay corridor by 4%. These were then escalated by 4%-6% in both September and October, producing net increases of nearly 10% and 5% respectively. Neither carrier posted changes to these rates in the second quarter.
- Average terminal-elevation charges held steady in the first half of the 2021-22 crop year.

Infrastructure (page 6)

- Offsetting changes to the country-elevator network in the second quarter left the total number of facilities unchanged at 411 but with a record 9.4 MMT of storage. One newly constructed, and two retrofitted, elevators lifted the total count of loop-track facilities to 37 from 34.
- Railway infrastructure remained unchanged at 17,265.7 routemiles.
- The terminal elevator network was reduced to 17 facilities with 2.8 MMT of storage following closure of the former Parrish & Heimbecker facility in Surrey BC.

Production and Supply

Statistics Canada's November survey for 2021 field-crop production in Western Canada stands at 47.0 MMT, a 40.2% decrease from 2020's record 78.5 MMT harvest. This dramatic decline reflects the impact of the prairie-wide drought during the growing season. The survey of producers' harvested acreage and yield was conducted between 8 October and 12 November 2021. It resulted in a decrease in the overall production estimate of 0.6 MMT from the model-based estimate published in September.

When coupled with July's 7.2 MMT of carry-forward stocks, some 14.7% less than in 2020, the overall grain supply is estimated at 54.1 MMT. This stands 37.7% below the 2020-21 crop year's 86.9-MMT record, ranking as the smallest grain supply since the drought-reduced shortfalls of 2001 to 2003.

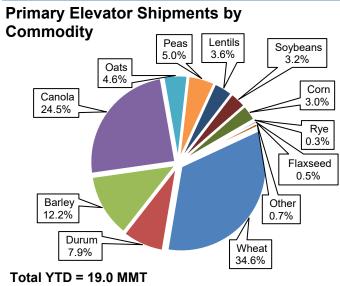
Table M-2:	2021	2020	Var. from Last Yr.	
Production & Carry Over (000's tonnes)				
Western Canada Total Production	46,967.2	78,527.7	-40.2%	
Western Canada On Farm & Primary Elevator Carry Forward Stock	7,150.1	8,383.6	-14.7%	
Total Grain Supply	54,117.3	86,911.3	-37.7%	

Traffic and Movement

With prolonged periods of severe cold and stormy conditions, January deliveries fell to average 0.6 MMT per week. Weekly primary-elevator stock levels declined to average 3.8 MMT, with good space available in elevator facilities across the prairies.

Table M-3	JAN 2022	2021-22 YTD	Var. from Last YTD	
Primary Elevator Shipments	(000's tonnes	s)		
Manitoba	324.4	4,037.1	-26.1%	
Saskatchewan	886.2	8,728.9	-46.0%	
Alberta	837.9	6,045.5	-22.7%	
British Columbia	23.8	165.0	9.9%	
Total	2,072.3	18,976.5	-35.9%	
Western Canada Railway Tra	affic (000's tor	nnes)		
Shipments to Western Ports	1,641.5	15,690.1	-43.1%	
Shipments to Eastern Canada	163.8	1,069.2	-51.4%	
Shipments to US & Mexico	509.2	3,345.8	-6.4%	
Shipments Western Domestic	99.5	496.9	17.5%	
Total	2,414.0	20,602.0	-39.0%	
Western Port Unloads (Number of Cars)				
Vancouver	12,842	100,928	-40.2%	
Prince Rupert	2,245	13,815	-55.4%	
Churchill	0	0	-100.0%	
Thunder Bay	1,675	37,912	-28.4%	
Total	16,762	152,655	-39.9%	

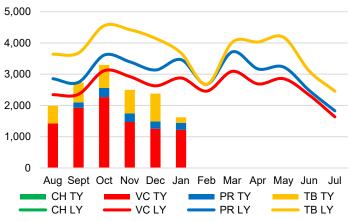
Table M-3	JAN 2022	2021-22 YTD	Var. from Last YTD	
Terminal Elevator Shipments (000's tonnes)				
Vancouver	1,218.7	9,557.8	-41.2%	
Prince Rupert	225.8	1,199.3	-59.5%	
Churchill	0.0	0.0	-100.0%	
Thunder Bay	177.0	3,766.3	-23.4%	
Total	1,621.5	14,523.4	-40.0%	



GMP Data Table 2A-1

Grain shipments from primary elevators fell in the first half of the 2021-22 crop year, registering 35.9% less than in the same period the previous year. Wheat, including durum, and canola continue to constitute the largest proportion of the movement at 67.0%. Movement of peas and lentils contributed 8.6% of the balance.

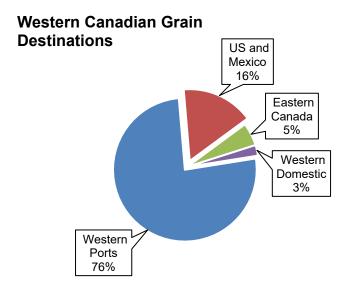
Terminal Elevator Shipments (000's tonnes)



GMP Data Table 2C-1

Bulk shipments from western ports fell in the first half of the 2021-22 crop year, registering a 40.0% decline on a year-over-year basis. Shipments were off at all ports. Prince Rupert recorded the largest decrease at 59.5%, while Vancouver and Thunder Bay were down 41.2% and 23.4% respectively.

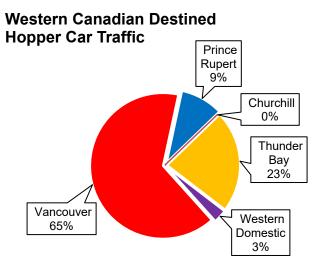




Total YTD = 20.6 MMT

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

Railway grain shipments from Western Canada fell to 20.6 MMT in the first six months of the 2021-22 crop year, 39.0% less than the 33.8 MMT handled in the same period a year earlier. The majority, about 15.7 MMT, or 76%, was directed to Western Canadian ports in support of offshore sales; 43.1% less than what had been handled a year earlier. This decline was broadened by a 51.4% decrease in shipments to Eastern Canada as well as a 6.4% reduction for shipments into the US and Mexico. Running counter to these losses was a 17.5% gain in movements to Western Domestic destinations.



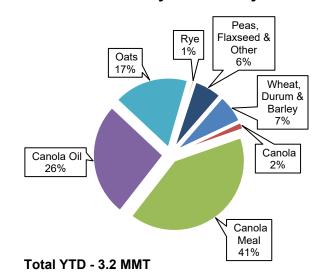
Total YTD - 15.7 MMT

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 six months of the 2021-22 crop year this amounted to just over 15.7 MMT, down 41.3% from a year earlier. Sixty-five 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 43.7% decline in hopper-car shipments to Vancouver was largely responsible for shaping the broader traffic reduction. This was supported by equally substantive decreases in shipments to Prince Rupert, Thunder Bay, and Churchill, which fell by 54.1%, 28.1%, and 100.0% respectively. Running counter to these decreases, however, was a gain in shipments to Western Domestic destinations, which rose by 20.4%.

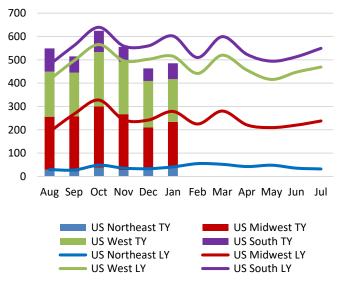
US Destined Grain by Commodity



GMP Data Table 2B-18

Total railway shipments into the US reached slightly under 3.2 MMT in the first half of the 2021-22 crop year, down 6.2% from that handled a year earlier. About 80% of these shipments are 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

Primary-elevator stocks grew through the first half of the crop year, climbing from 2.4 MMT in August to 3.8 MMT in January. The overall first-half average is 3.7 MMT. Space in the country system was good throughout the period. Country stocks utilized 69% of the working capacity of the network in January. By province, stocks ranged from 57% and 67% in Manitoba and Saskatchewan respectively, to 79% in Alberta and 91% in British Columbia.

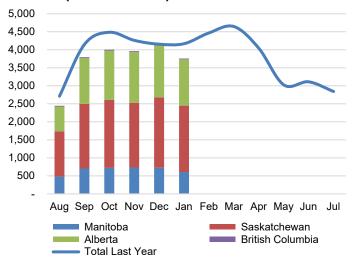
The average days-in-store in the primary-elevator system for the first half increased from last year, rising 48.0% to 35.9 days.

Table M-4	JAN 2022	2021-22 YTD	Var. from Last YTD
Primary Elevator			
Average Weekly Stocks (000's tonnes)	3,757.8	3,689.6	-7.7%
Average Days in Store	54.6	35.9	48.0%
Railway Operations (days)			
Cycle Time to Western Ports	23.6	17.3	15.5%
Cycle Time to Eastern Canada	28.3	25.8	21.4%
Cycle Time to US	29.2	25.1	1.9%
Loaded Transit to Western Ports	12.2	7.1	1.6%
Loaded Transit to Eastern Canada	12.0	12.2	13.4%
Loaded Transit to US	15.0	10.4	1.0%
Rail Fleet in Grain Service	14,967	16,097	-31.9%
Western Canada Terminal Elevator			
Average Weekly Stocks (000's tonnes)	872.3	1,108.8	-14.7%
Average Days in Store	9.5	13.8	42.3%
Port Unloads (hopper cars)	16,762	152,655	-39.9%
Terminal Out-of-Car Time	31.2%	22.9%	65.9%
Western Canada Port Operations			
Average Vessel Time in Port (days)	19.9	9.9	-16.2%

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



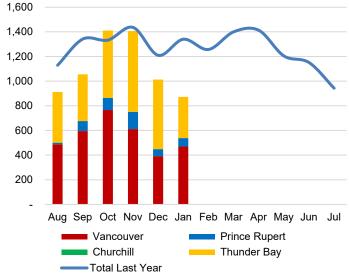
Average Weekly Primary Elevator Stocks (000's tonnes)



GMP Data Table 5A-2

Primary elevator stocks ended the last crop year averaging 2.8 MMT in store. In August, they pulled back further to average 2.4 MMT before reversing direction and rising to average 4.1 MMT in December. In January they retreated to 3.8 MMT. Wheat, including durum, and canola, comprise 72% of the total stock. At 20% of the stock, barley, oats and peas made up much of the balance.

Average Weekly Terminal Elevator Stocks (000's tonnes)

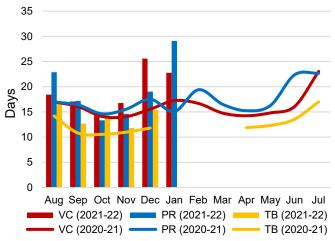


GMP Data Table 5C-2

Overall terminal-elevator stocks averaged 1.1 MMT in the first half of the 2021-22 crop year, 14.7% less than the previous year. Consistent with the overall decline, January stocks fell from that seen in December 2021, posting a 13.9% month-over-month loss. Wheat, including durum, and canola, comprise over 82% of the total stock. In January, western ports utilized just 45% of their overall working capacity.



Railway Cycle Times to Western Ports (days)

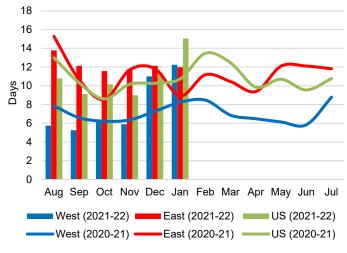


GMP Data Table 5B-1

Railway car cycles to Western Canadian ports averaged 17.3 days in the first six months of the 2021-22 crop year, up 15.5% from the 14.9-day average posted in the previous crop year. This result reflected increases in all three corridors; with Vancouver up by 18.3%; Prince Rupert, 10.7%; and Thunder Bay, 14.4%.

The average car cycle on movements into Eastern Canada also rose, increasing 21.4%, to 25.8 days from 21.3 days a year earlier. The car cycle for movements into the United States rose by a much lesser 1.9%, to an average of 25.1 days from the 24.6day average posted in the same period of the previous crop year.

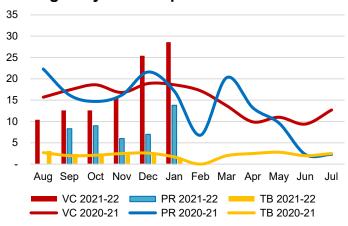
Average Loaded Transit Times (days)



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

The loaded transit time for traffic destined to Western Canadian ports averaged 7.1 days in the first half of the 2021-22 crop year, up 1.6% from the 7.0-day average posted a year earlier. This was largely the product of increases in the Vancouver and Thunder Bay averages, which rose by 2.6% and 7.4% respectively, while the Prince Rupert average fell 3.1%. A 13.4% increase was observed on movements into Eastern Canada, with the average loaded transit time rising to 12.2 days from 10.8 days twelve months before. The average on movements into the United States increased by 1.0%, to 10.4 days from 10.3 days.

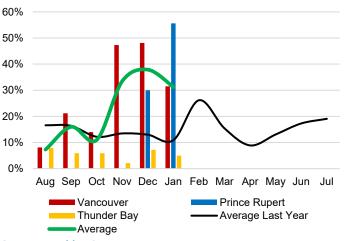
Average Days in Port per Vessel



GMP Data Table 5D-1

In January, the overall average time vessels were in port waiting and loading grain rose to 19.9 days from 11.5 days the month before. The crop-year-to-date average stands at 9.9 days, 16.2% lower than that registered in the previous crop year. While Vancouver and Prince Rupert experienced month-over-month increases, Thunder Bay saw a small decrease from December levels. For the month of January, days in port stood at 28.6 for Vancouver, 13.8 for Prince Rupert and 1.5 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 31.2% in January, with a crop-year-to-date average of 22.9%. Terminal out-of-car time at Vancouver fell to 31.5% in January, and to 5.0% at Thunder Bay, while growing to 55.6% at Prince Rupert.

Commercial Relations

Table M-5 Rates: \$CDN per tonne	Q2 2021-22	Index (1999=100)	% Change YTD
Avg. Primary Elevation	16.51	137.7	-0.4%
Rail to Vancouver			
CN	62.03	169.0	21.1%
СР	67.83	184.2	10.3%
Rail to Pr. Rupert			
CN	62.03	149.3	21.1%
Rail to Thunder Bay			
CN	57.16	176.9	20.8%
СР	55.64	184.9	5.0%
Average Terminal Elevation	15.12	165.8	0.0%

Note: Commercial rates are measured on a quarterly basis, the above table refers to rates at the close of the first half of the 2021-22 crop year (as at 31 January 2022). 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 in the first quarter of the 2021-22 crop year. In the case of the former, this amounted to an initial across-the-board increase of 10.0% in August, followed by consecutive increases of 5.0% in both September and October. This meant that by the close of the first quarter CN had lifted its rates on movements to Vancouver, Prince Rupert, and Thunder Bay by approximately 21.0%. In comparison, CP left its year-end rates to Vancouver unchanged until September, when it applied a 4.0% increase, and followed it with another 6.0% increase in October, effectively escalating rates by 10.3% for the quarter. Conversely, the carrier reduced its rates to Thunder Bay by 4.0% at the beginning of August before then applying increases of 4.0% in September and 5.0% in October, which resulted in a net 5.0% increase for the quarter. Neither carrier posted changes to these rates in the second quarter.

Commercial Developments

Rail service in British Columbia halted by flooding: In mid-November 2021 a series of atmospheric rivers smashed rainfall records throughout the Lower British Columbia Mainland and the interior of the province. The deluge triggered rivers and streams to overflow, washing away dikes, roads, bridges, and railway lines throughout the Fraser River Valley. At its height, some 15,000 people were forced from their homes by floodwaters that reached up to two metres in depth. The scope of the damage wrought was unprecedented, and severed the crucial transportation arteries leading into, and out of, Vancouver in several places. This included the CN and CP mainlines that thread their way through the affected area, which ranks among the busiest corridors in their networks. Both carriers mobilized to effect repairs as quickly as possible, but the damage extended over some 150 miles and 80 separate locations. Despite 30 sites having sustained flood damage, with 20 incurring significant infrastructure losses, CP was able to reopen its line after an eight-day outage. This allowed for the resumption of limited rail service between Kamloops and Vancouver while CN pressed on with its own repairs, which were completed some 10 days later. These line outages left an extensive traffic backlog, which would require weeks – if not months – to fully clear. Even at the close of January 2022, the commercial reverberations from this outage were still being felt.

Federated, AGT plan to build canola crush plant: On 17 January 2022 Federated Co-operatives Limited (FCL) and AGT Food and Ingredients Inc. (AGT) announced their plan to build a \$360 million canola-crushing facility in Regina, the third major crush project announced for that city in less than a year. The project will be part of a broader \$2 billion integrated agriculture complex investment by FCL that includes construction of a renewable diesel plant capable of producing 15,000 barrels per day, which it revealed in November 2021. The crush plant will be 51 percent owned by FCL and 49 percent owned by AGT. It will be capable of processing 1.1 million tonnes of canola seed and producing 450,000 tonnes of oil annually. It is expected that the crush plant will produce enough oil to meet half of the renewable diesel plant's needs. The renewable diesel plant is expected to be operational by 2027. AGT will focus on grain origination, operating the crush plant, logistics and transportation and sale of the meal and the other value-added products.

CP-KCS merger advances: Following a favourable vote by shareholders of Canadian Pacific Railway Ltd. (CP) and Kansas City Southern (KCS) in early December 2021, CP formally acquired KCS under a voting trust subject to final approval by the US Surface Transportation Board (STB). STB's approval would create Canadian Pacific Kansas City Limited, the only single-line railroad linking the United States, Mexico, and Canada. The STB's decision is expected in the fourth quarter of 2022.

Infrastructure

Apart from the railways' car fleet, GMP measures relating to infrastructure are reported on a quarterly basis. The first half of the 2021-22 crop year saw several changes in the GHTS's physical infrastructure.

Although the licensing and delicencing of several country elevators left the network unchanged at 411 facilities, storage capacity increased to almost 9.4 MMT. Included within this were three loop-track facilities: a newly built Richardson facility at Huallen AB; and two retrofitted Viterra facilities at Grenfell and Strongfield SK.

There were no changes recorded against the railway network in the first half of the 2021-22 crop year. Total mileage remained unaltered at 17,265.7 route-miles, with 84.5% of it being operated by CN and CP.

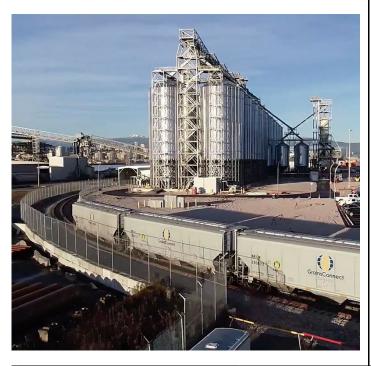
The second-quarter delicensing of the of the former Parrish & Heimbecker facility in Surrey BC reduced the terminal elevator network to 17 facilities with 2.8 MMT of storage capacity.



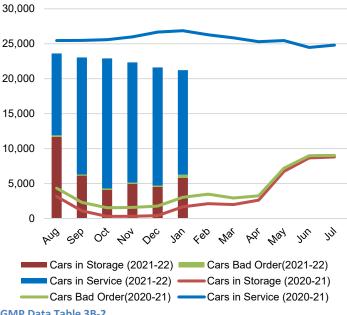
Table M-6	Q2 2021-22	Index (1999=100)	% Change YTD
Country Elevator			
Primary and Process Elevators (Count)	411	40.9	0.0%
Storage Capacity (000's tonnes)	9,355.3	133.1	0.9%
Railway			
Route Miles - Major Carriers	14,596.1	98.4	0.0%
Route Miles - Shortline Carriers	2,669.6	57.5	0.0%
Route Miles - Total	17,265.7	88.7	0.0%
Average Weekly Total Hopper Car Fleet Size*	21,705	n/a	-13.7%
Terminal Elevator			
Terminal Facilities (Count)	17	121.4	-5.6%
Storage Capacity (000's tonnes)	2,752.5	107.6	-5.4%

^{*} Hopper Car Fleet Size represents all cars in all statuses for the first half of the 2021-22 crop year.

During times of heavy demand for grain hopper cars, nearly all of the hopper-car fleet is placed in 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 2020-21 crop year as in July 2021, a weekly average of 15,781 cars, representing 64% of the fleet, was in active service. Cars in service fell further in August, to an average of just 11,713 per week before reversing directions and climbing to 18,617 in October. By January, they again retreated to 14,967. The average cars in service for the first half of this crop year represents 72% of the total fleet. The balance of the fleet, comprising 28% of the rail cars, was in storage or repair status (bad order).



Railway Grain Fleet Size and Utilization



GMP Data Table 3B-2

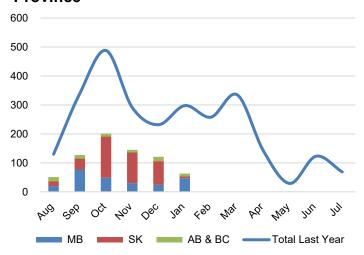
Producer Cars

No change was registered in the number of producer-car loading sites in the first half of the 2021-22 crop year. The total number of available producer-car loading locations at the end of January stands at 272.

Table M-7 Producer Car Loading Sites	Q2 2021-22	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 2021-22	2021-22 YTD	Var. from Last YTD
Manitoba	101	247	-26.9%
Saskatchewan	194	391	-70.3%
Alberta & B.C.	34	70	-43.1%
Total	329	708	-60.2%

Producer cars scheduled for January 2022 were 78.9% less that in January 2021, marking an overall crop-year downturn of 60.2% from the previous year. The 2021-22 crop year reverses the trend of increasing producer-car numbers seen early in the previous two crop years. The drought-reduced production of 2021 will no doubt negatively impact producer cars scheduled throughout the balance of this crop year.

Producer Cars Scheduled by Province

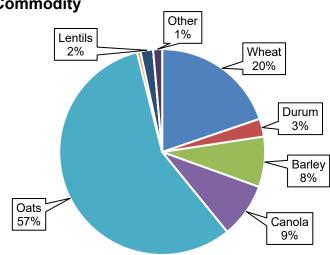


GMP Data Table 6B-2

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 through the first half of the 2021-22 crop year continue to reflect this trend,

with oats comprising 57% of the total, while wheat, durum and barley combined comprise only 31%. Canola contributed 9%, while special crops such as peas and lentils 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

