

GRAIN HANDLING & TRANSPORTATION SYSTEM

Western Canadian Grain is most attractive to the world market in the fall, when other world suppliers are not providing product to the market. In order to maximize their profits, grain companies therefore **prioritize sales** from *September through December* causing the export supply chain to run at **peak** capacity.

1. GRAIN MOVEMENTS BEGIN WITH A SALE

Grain companies enter into contracts to sell Western Canadian grain, at an agreed time in the future, to their customers in many countries around the world.



2. GRAIN IS DELIVERED TO A COUNTRY GRAIN ELEVATOR

Grain companies gather grain in to prairie grain elevators from many producers who have the type and grade required to fulfill the sales contract - **all grain starts in a truck from the farm-gate.**



3. GRAIN COMPANIES ORDER RAIL CARS

As the sales contract date approaches, the grain companies order railcars from the railway and **instruct the railway where to place the car** (i.e. to which prairie grain elevators).



4. PIPELINE MANAGEMENT

CN works closely with grain companies and terminal operators to ensure the fluidity of each corridor. For instance, when a waterfront terminal is encountering weather challenges and cannot offload railcars, the **grain companies will cancel some of their car orders into that pipeline to avoid worsening terminal congestion.**



5. CAR SPOTTING

The railway delivers the empty railcars to the particular prairie grain elevators for that week, as determined by the grain companies.



6. CAR LOADING

Prairie grain elevators load railcars with the type and grade of grain specified by the grain company to meet their sales contract. **The more rapidly the railcar is loaded and released to the railroad, the quicker it can be delivered to port, emptied and sent back to the country.** Prairie grain elevator infrastructure varies resulting in different levels of efficiency (i.e. *single car loading; block loading; unit train loading; loop track*).



7. LOADED CARS ONLINE

Once the loaded railcars are released from the prairie grain elevator, the railcars begin their journey to destination. In most cases, this is a four to five day journey to the West Coast. However, there can be occasional rail network disruptions, or staging of trains enroute at shippers' request to manage inbound pipelines and terminal capacity.



8. UNLOADING CARS AT PORT TERMINAL

Railways place the railcars at an export terminal, and the terminal unloads the grain to the storage silos or directly loads a vessel. **The more rapidly the railcar is unloaded and released empty back to the railroad, the quicker the empty car can be sent back to the country.** Availability of labour, weekend and holiday down time, and planned and unplanned maintenance shutdowns can all affect the speed with which railcars are unloaded.



9. LOADING OCEAN-GOING VESSELS

Port terminals load grain into ocean-going vessels, either from storage silos or directly from arriving grain hoppers. Poor weather can delay vessel loading which will slow or stop railcar unloading.

