



United States  
Department of  
Agriculture

Agricultural  
Marketing  
Service

July 1998

## *Agricultural Transportation Challenges for the 21<sup>st</sup> Century*

# Short-term Adequacy of Rail Capacity for Grain Shipping

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### Issue

Short-term shortages of rail cars to move grain have been a persistent problem over the years. Such shortages, however, are not in themselves an indication of the adequacy or inadequacy of the nation's railroads to move grain. Railcar shortages often reflect the shortcomings of the mechanisms used to allocate rail grain capacity. Under car allocation systems in which capacity is allocated on a first-come-first-served basis, with little or no adjustment in price, no amount of capacity can ensure that every shipper wanting railcars during peak demand periods will get them.

### Background

The 1980's began at the close of one grain-car-fleet expansion cycle and ended on the brink of another. In 1989, the USDA estimated that the U.S. grain car fleet consisted of 98,600 covered-hoppers with capacities from 4,000 to 5,000 cubic feet. Similar estimates during the early 1990's suggested that additions to the fleet did little more than offset normal attrition during that period. An estimate done in March 1994, as part of the Interstate Commerce Commission's *National Grain Car Supply—Conference of Interested Parties*, put the U.S. grain car fleet at just over 99,900 cars. Since that time, substantial expansion has occurred.

Recent estimates by the National Grain Car Council's Measurement Task Force put the fleet of rail cars dedicated to the movement of whole grains and oilseeds and grain and oilseed products at 156,000 cars as of December 1997. Based on this number, the fleet of cars used for whole grain and oilseed shipments would be 123,900 cars. This represents an increase in the grain car fleet of 25,300 cars since the USDA's estimate in 1989. Nearly all of these additional cars have been built for loading to the 286,000 pound interchange limit — more than 90 percent have been the larger 5,150- and 5,160-cubic-foot capacity cars.

Despite this substantial investment in fleet capacity by railroads and private car owners, shortages of equipment continue to occur during peak shipping times. Railcar shortages occur any time orders for grain cars exceed the number of cars available for loading. This situation does not occur in the barge and truck freight markets where prices move up and down with changes in demand and supply. While the inability of prices in the market for rail grain freight to adjust quickly to changes in demand for rail transportation results in both surpluses and shortages of rail

capacity throughout the year, the shortages get the most attention.

Rail freight guarantee programs, pioneered by the Burlington Northern Santa Fe with its Certificate of Transportation program and now being used by the Union Pacific with its Car Supply Voucher program and Canadian Pacific Railway with its PERX program, offer the marketplace alternative systems for allocating rail cars, especially during periods of peak demand. Under these guaranteed car placement programs, prices for guaranteed service are set through an auction that allows fleet capacity to be allocated based on shipper demand. These programs, however, have been limited to a portion of each railroad's grain car fleet. The remaining fleet capacity is allocated to dedicated shuttle or cycle train service and to general tariff/distribution service. General tariff/distribution cars are allocated, for the most part, on a first-come-first-served basis. Typically it is these cars, or the lack of them, that lead to railcar shortages for shippers.

The cost of freight under general tariff/distribution allocation is relatively fixed with little short-term movement in the level of rates. Because rates for this type of freight cannot adjust quickly to market demand, this capacity quickly becomes unavailable during periods of high demand. Any shipper getting general tariff/distribution cars during such periods can capture substantial margins because of weak basis prices at their shipping points relative to prices in destination markets. Shortages caused by these conditions overstate real market demand for grain transportation capacity. The real demand to move grain is driven by demand for grain in consuming markets. Shortages of general tariff/distribution cars are often a reflection of many grain shippers chasing the same bushels of grain demand. As history has shown, these short-term shortages can be resolved with the movement of only a fraction of the volume of grain indicated by aggregate shipper car demand.

Rail freight guarantee programs, which allow for the allocation of grain transportation capacity through price, offer shippers a mechanism for dealing with the risks associated with car service under first-come-first-served car ordering systems. In theory, these new allocation and pricing systems should transfer the risk associated with equipment availability to those shippers who continue to use general tariff/distribution car ordering systems. In practice, this has not always been the case. In 1997, shippers with guaranteed freight experienced lengthy delays in car placements, and railroads paid out large amounts in penalties for failure to place cars within guaranteed loading periods.

Peak period shortages of general tariff/distribution cars may not be a true indication of capacity problems that can limit the ability of the market to meet demand for grain consumption. The inability of railroads to meet their obligations under guaranteed freight programs, however, is a very real indicator of capacity problems — short-term or otherwise. For shippers needing to meet contractual sales obligations or for receivers needing grain to meet export, feeding, or processing demand, rail service breakdowns that delay guaranteed car placements are very serious problems.

## **Implications**

Meeting the transportation needs of the U.S. grain industry is of critical importance to the

nation's farmers and the consumers who rely on their production. Despite substantial expansion in the U.S. grain car fleet during the past few years, grain shippers continue to experience shortages of rail cars during peak shipping periods. Some of these shortages are, in reality, a reflection of the inabilities of existing pricing and allocation systems to adjust to changes in demand for rail freight service. Guaranteed freight service programs implemented by the nation's largest grain-hauling railroads over the past few years have allowed some portion of fleet capacity to be allocated based on price. These programs better reflect true car service demand. They also transfer the risk associated with car availability to shippers relying on general tariff/distribution car order programs.

Adequate rail service does not necessarily mean that every shipper wanting rail service through general tariff/distribution systems will get that service during peak shipping periods. Adequate rail service, however, does mean that railroads must meet their guaranteed service commitments to shippers who have come to depend upon these types of programs as a part of their business operations.

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