

Shipments of Grain by Rail in South Dakota

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This summary of grain shipments by rail in South Dakota is drawn from *State Grain Rail Statistical Summary*,¹ a report that describes the grain and oilseed shipped by rail in the United States from 2006 to 2010. The full report collects information on rail shipments from each State and to each State and examines some of the factors that influence the amount of grain grown and used. It examines rail shipments, rail receipts, grain and oilseed production, animal and poultry production, grain and oilseed exports, and grain and oilseed rail rates per ton-mile to explain the variations between States in shipments of these commodities.

South Dakota ranks seventh among the grain and oilseed producing States, with a 2006–2010 average yearly production of 838.7 million bushels (mbu).

On average, from 2006 to 2010, 65 percent of South Dakota crops were corn, 18 percent were soybeans, 16 percent wheat, 1 percent sorghum, and 1 percent oats.

Nationally, South Dakota is ranked 20th in animal and poultry production, averaging 8.7 million Grain Consuming Animal Units (GCAU)² from 2006 to 2010.

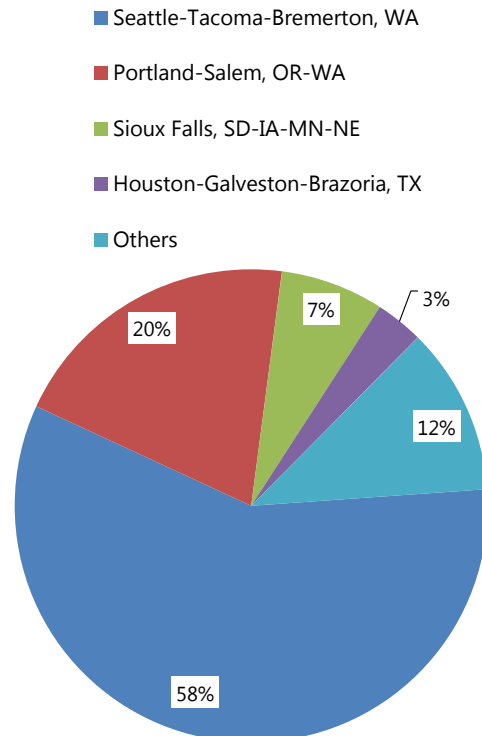
During the crop marketing years from 2007 to 2010, railroad originations of grain and oilseeds had an average market share of 43.6 percent, an increase from the average of 40.4 percent during the period 2001–2004.

During the period 2006–2010, South Dakota shipped 19 million tons of corn by rail, up 13.7 percent from 16.7 million tons from 1996 to 2000. (fig. 1)

1 Available at <http://dx.doi.org/10.9752/TS066.06-2013>

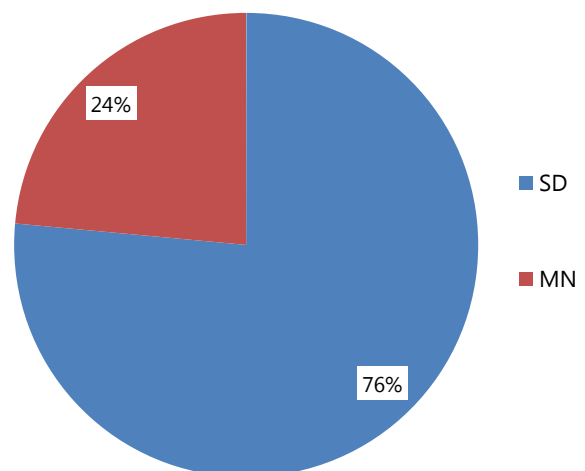
2 A standard unit used to compare feed needs of different livestock and poultry.

Figure 1. Business Economic Areas Receiving South Dakota Corn by Rail, 2006–2010



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 2. Sources of South Dakota Rail Corn Receipts, 2006–2010



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

South Dakota received a total of 1.8 million tons of corn by rail during the 2006–2010 marketing years. (fig. 2)

From 2006 to 2010, South Dakota shipped 14.6 million tons of soybeans by rail, up 78.1 percent from 8.2 million tons shipped in the period 1996–2000. (fig. 3)

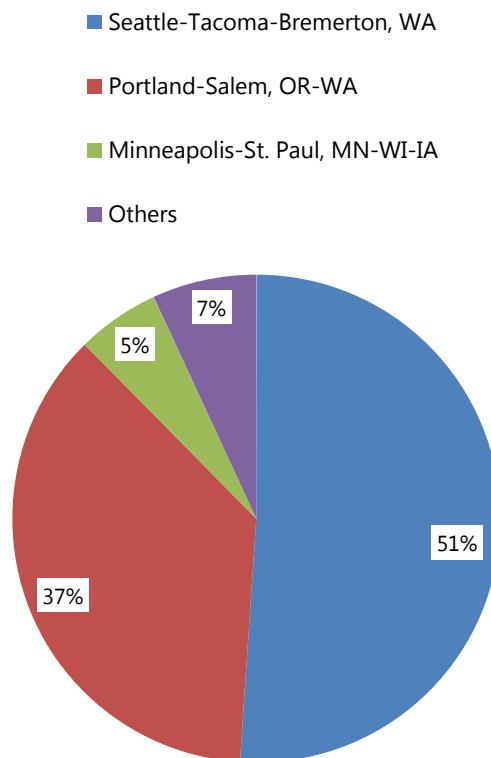
South Dakota received a total of 72,000 tons of soybeans by rail during the 2006–2010 marketing years. (fig. 4)

In the years 2006–2010, 18.7 million tons of wheat were shipped by rail from South Dakota, a 113-percent increase from 8.8 million tons from 1996 to 2000. (fig. 5)

Three percent of the grain car shipments originating in South Dakota from 2006 to 2010 were 1–5 cars in size, 29 percent were 6–49 cars, 6 percent were 50–74 cars, and the remaining 62 percent of shipments were 75 cars or greater. (fig. 6)

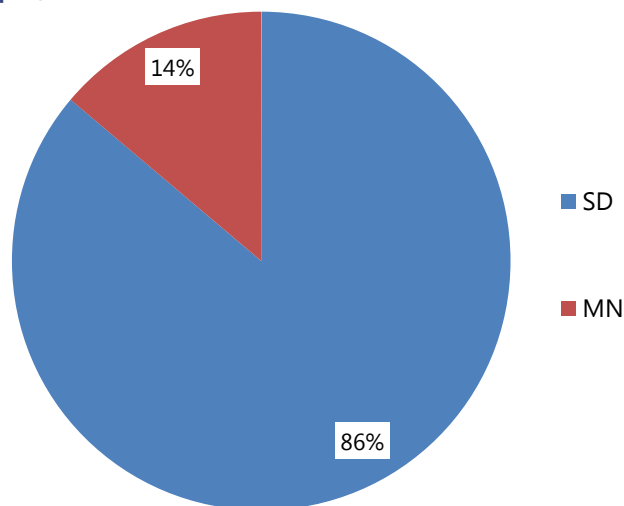
Average tariff rail rates for shipments originating in South Dakota were 2.5 cents per ton-mile from 2006 to 2010. Rates ranged from 2.13 cents per ton-mile in 2001 and 2004 to 3.02 cents in 2010. Rates increased 40 percent from 2005 to 2010. (fig. 7)

Figure 3. Business Economic Areas Receiving South Dakota Soybeans by Rail, 2006–2010



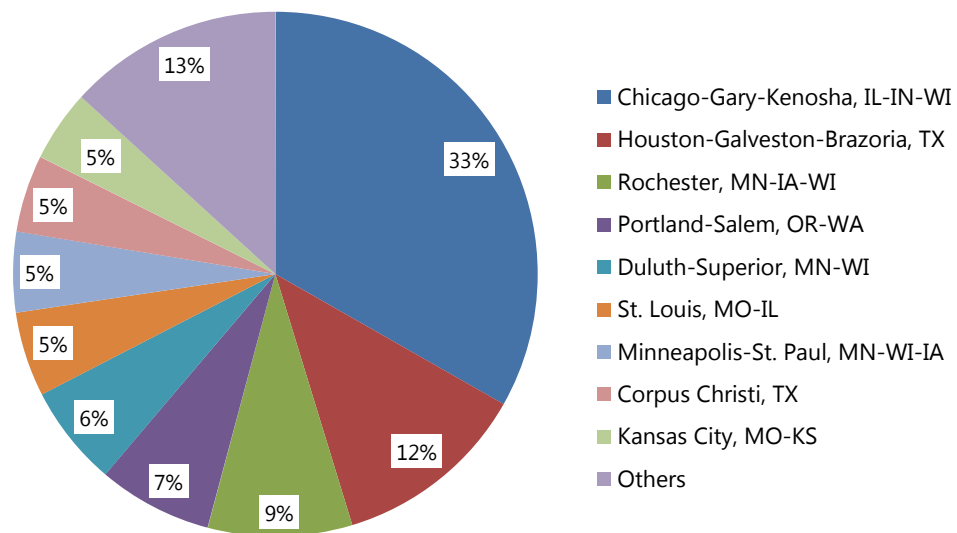
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 4. Sources of South Dakota Rail Soybean Receipts, 2006–2010



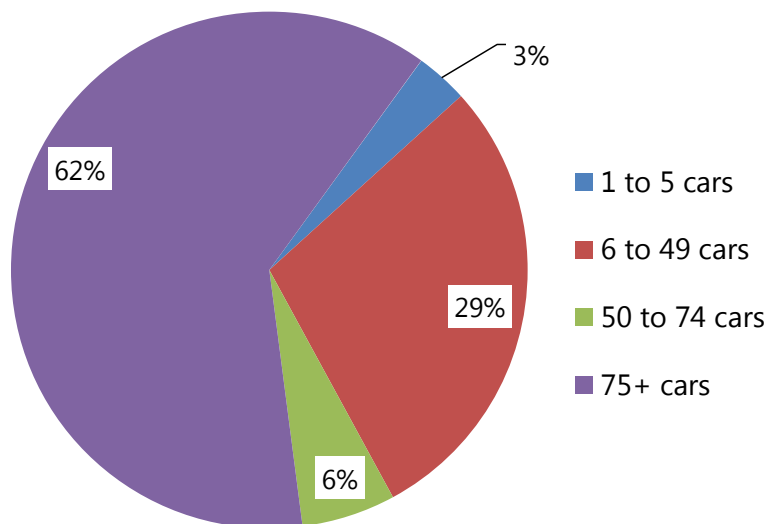
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 5. Business Economic Areas Receiving South Dakota Wheat by Rail, 2006–2010



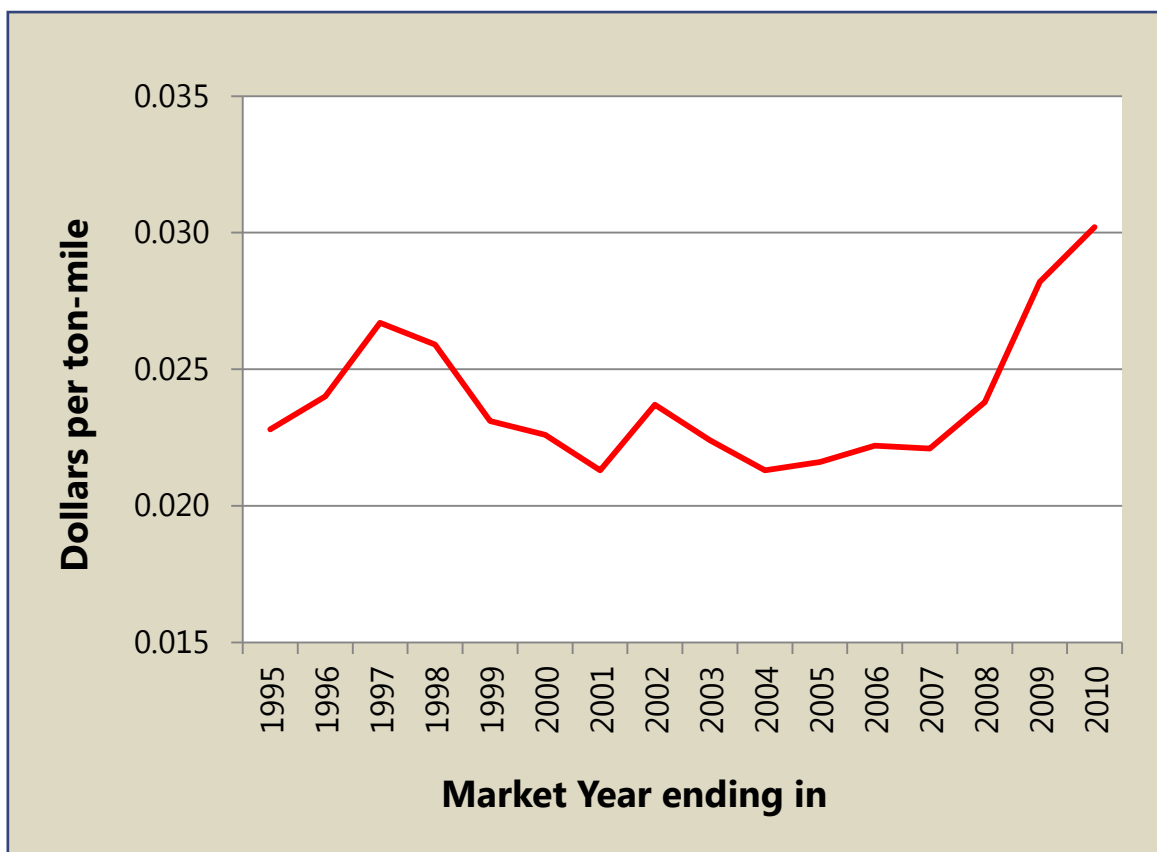
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 6. South Dakota Grain Originations by Shipment Size



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 7. Average South Dakota Rail Tariff Rates



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Table 1. South Dakota Grain and Oilseed Production and Rail Shipments, 2006-2010

	Corn	Soybeans	Wheat	Total Grain and Oilseeds	GCAUs*
Average Yearly Production	545.68 mbu†	147.66 mbu	130.55 mbu	838.74 mbu	8,729,243
Total Rail Receipts (tons)	1,766,608	71,640	-	-	-
Total Rail Shipments (tons)	18,992,277	14,558,643	18,671,684	-	-

* Grain Consuming Animal Units

† Million bushels

Data and Methodology

Data from the Surface Transportation Board's Confidential Waybill Samples over the period 1996-2010 were analyzed to measure grain and oilseed shipments by rail. The data were aggregated and sorted by a number of characteristics, the major categories being shipment origin, destination, and type of grain or oilseed. This information was then organized by both origin and destination State. The data were also sorted by shipment size for each State, showing the relative frequencies of grain and oilseed shipments of different sizes. Data having less than 30 observations are excluded, as are States having data for only 1 or 2 years of the 5-year period. Despite these precautions, States with relatively low volumes are more subject to year-to-year variation than are States with higher volumes because of the number of available observations used to calculate totals. This is a result of the sampling techniques used in the Waybill Samples. Thus, higher volumes are less likely to suffer from sampling limitations and be more representative of actual rail movements for any given year than are lower volumes.

GCAUs were calculated for each State using information on animal populations and the corresponding levels of feed necessary to maintain the populations. These calculations included meat and poultry for consumption and production purposes. Cows, sheep, turkeys, hogs, and chickens were included.

The export inspection numbers in this report were taken from USDA Grain Inspection, Packers and Stockyards Administration grain and oilseed export inspections at U.S. ports exporting grain and oilseeds in bulk. Grain and oilseed production levels by State were also calculated.

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