

# Shipments of Grain by Rail in Michigan

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This summary of grain shipments by rail in Michigan is drawn from *State Grain Rail Statistical Summary*,<sup>1</sup> 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.

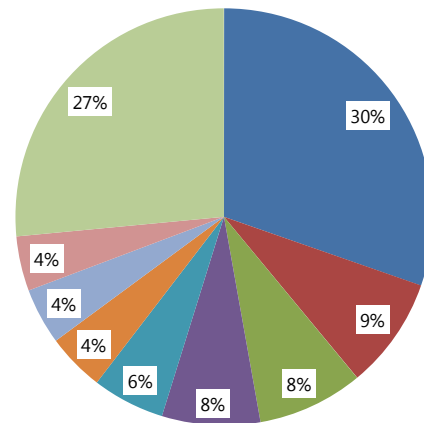
Michigan ranks 14th among the grain and oilseed producing States, with a 2006–2010 average yearly production of 424.7 million bushels (mbu). On average, from 2006 to 2010, corn comprised 71 percent of Michigan crops, soybeans 19 percent, wheat 10 percent, and oats 1 percent.

Nationally, Michigan is ranked 21st in animal and poultry production, averaging 6.7 million Grain Consuming Animal Units (GCAU)<sup>2</sup> from 2006 to 2010.

For each year from 2006 to 2010, an average of 2,900 metric tons of grain and oilseeds were inspected for export from Michigan. During the crop marketing years from 2007 to 2010, railroad originations of grain and oilseeds had an average market share of 20.4 percent, a decrease from the 27.2-percent average in the years 2001–2004.

**Figure 1. Business Economic Areas Receiving Michigan Corn by Rail, 2006–2010**

- Greenville, NC
- Charlotte-Gastonia-Rock Hill, NC-SC
- Greensboro-Winston-Salem-High Point, NC-VA
- Columbia, SC
- Raleigh-Durham-Chapel Hill, NC
- Staunton, VA-WV
- Ontario, Canada
- Atlanta, GA-AL-NC
- Others



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

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.

During the period 2006–2010, Michigan shipped 8.3 million tons of corn by rail, up 2.3 percent from 8.2 million tons from 1996 to 2000. (fig. 1)

From 2006 to 2010, Michigan shipped 3.8 million tons of soybeans by rail, up 74.4 percent from 2.2 million tons shipped in the period 1996–2000. (fig. 2)

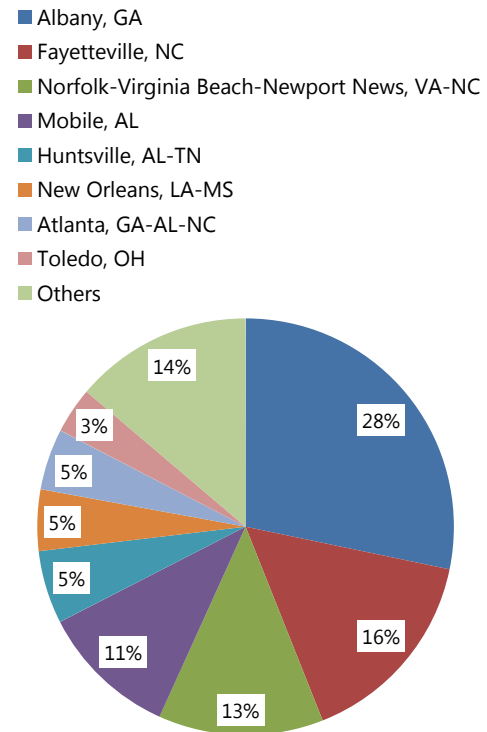
In the years 2006–2010, 1.9 million tons of wheat were shipped by rail from Michigan, an 83.3 percent increase from 1 million tons from 1996 to 2000. (fig. 3)

Michigan received a total of 694,000 tons of wheat by rail during the 2006–2010 marketing years, down 26.3 percent from 942,000 tons during the 1996–2000 marketing years. (fig. 4)

Seventeen percent of the grain car shipments originating in Michigan from 2006 to 2010 were 1–5 cars in size, 15 percent were 6–49 cars, 57 percent were 50–74 cars, and the remaining 11 percent of shipments were 75 cars or greater. (fig. 5)

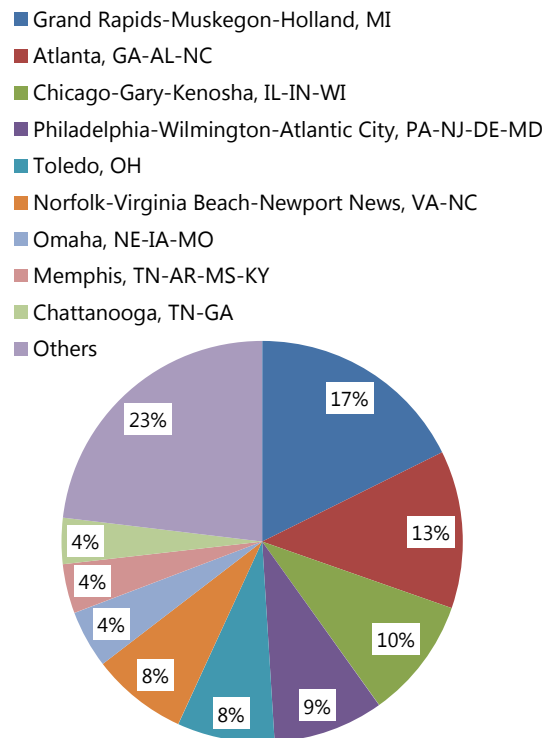
Average tariff rail rates for shipments originating in Michigan were 9.8 cents per ton-mile from 2006 to 2010. Rates ranged from 2.81 cents per ton-mile in 1999 to 9.74 cents in 2001. (fig. 6)

**Figure 2. Business Economic Areas Receiving Michigan Soybeans by Rail, 2006–2010**



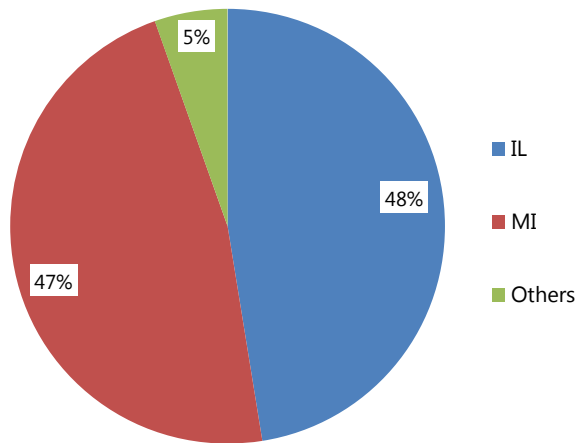
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

**Figure 3. Business Economic Areas Receiving Michigan Wheat by Rail, 2006-2010**



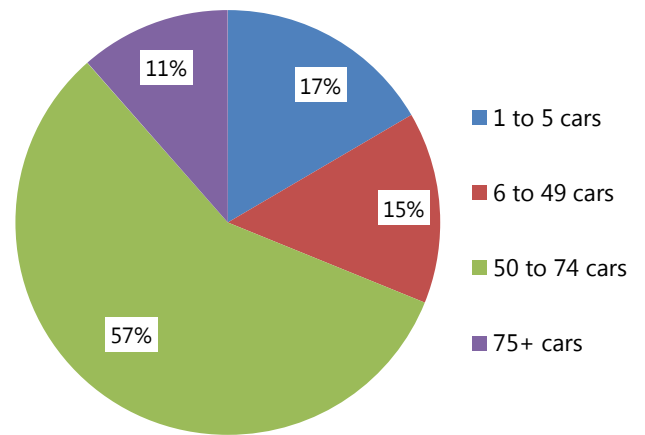
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 4. Sources of Michigan Rail Wheat Receipts, 2006–2010



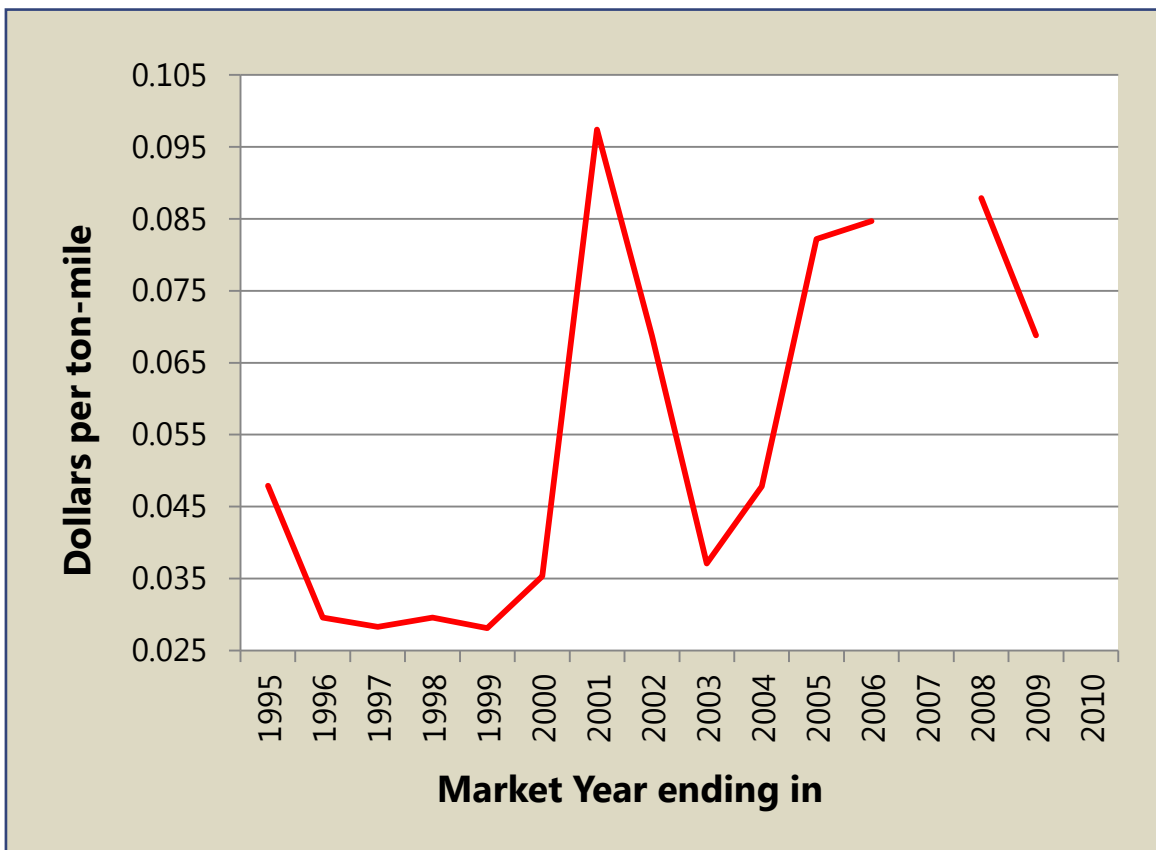
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 5. Michigan Grain Originations by Shipment Size



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 6. Average Michigan Rail Tariff Rates\*



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples  
 \*Gaps occur where there are less than 30 annual observations.

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

	Corn	Soybeans	Wheat	Total Grain and Oilseeds	GCAUs*
Average Yearly Production	299.41 mbu†	79.88 mbu	41.05 mbu	424.65 mbu	6,704,745
Average Yearly Export Inspections (metric tons)	-	2,923	4	2,927	-
Total Rail Receipts (tons)	-	-	694,136	-	-
Total Rail Shipments (tons)	8,341,549	3,795,369	1,853,139	-	-

\* 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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### Preferred citation:

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