

# Shipments of Grain by Rail in Arkansas

Marvin E. Prater Daniel O'Neil, Jr. Adam Sparger

This summary of grain shipments by rail in Arkansas 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.

Arkansas ranks 13th among the grain and oilseed producing States, with a 2006–2010 average yearly production of 465.4 million bushels (mbu).

During the period 2006 to 2010, rice production comprised 48 percent of Arkansas crops, soybeans 24 percent, corn 13 percent, cottonseeds 7 percent, wheat 6 percent, and sorghum 2 percent, on average.

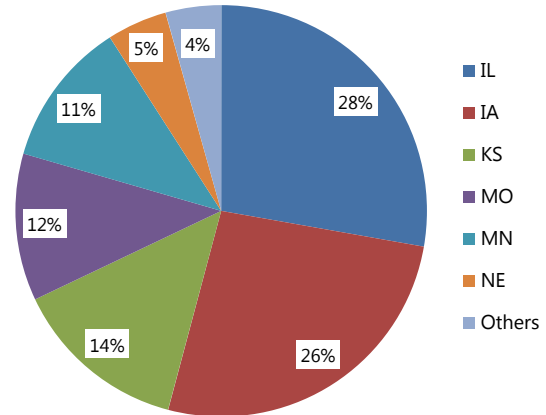
Nationally, Arkansas is ranked eighth in animal and poultry production, averaging 18.1 million Grain Consuming Animal Units (GCAU)<sup>2</sup> from 2006 to 2010.

During the crop marketing years from 2001 to 2004, railroad originations of grain and oilseeds averaged a market share of 8.9 percent, increasing to an average of 9.2 percent during 2007 to 2010.

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

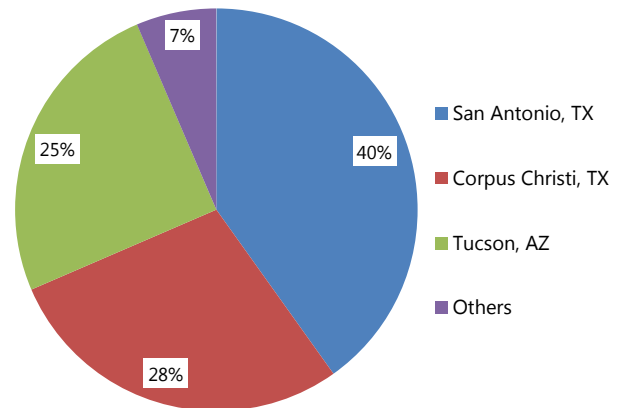
2 A standard unit to compare the feed needs of different livestock and poultry.

**Figure 1. Sources of Arkansas Rail Corn Receipts, 2006–2010**



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

**Figure 2. Business Economic Areas Receiving Arkansas Wheat by Rail, 2006–2010**



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Arkansas received a total of 13.1 million tons of corn by rail during the 2006–2010 marketing years, down 19 percent from 16.2 million tons during the 1996–2000 marketing years. (fig. 1)

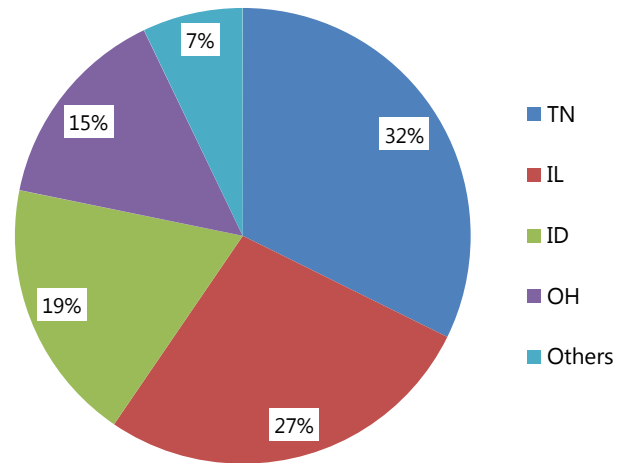
In the years 2006 to 2010, 356,000 tons of wheat were shipped by rail from Arkansas, a 164-percent increase from 135,000 tons from 1996 to 2000. (fig. 2)

Arkansas received a total of 166,000 tons of wheat by rail during the 2006–2010 marketing years, up 33.9 percent from 124,000 tons during the 1996–2000 marketing years. (fig. 3)

Fifty-eight percent of the grain car shipments originating in Arkansas from 2006 to 2010 were 1–5 cars in size; the remaining 42 percent of shipments were 6–49 cars. (fig. 4)

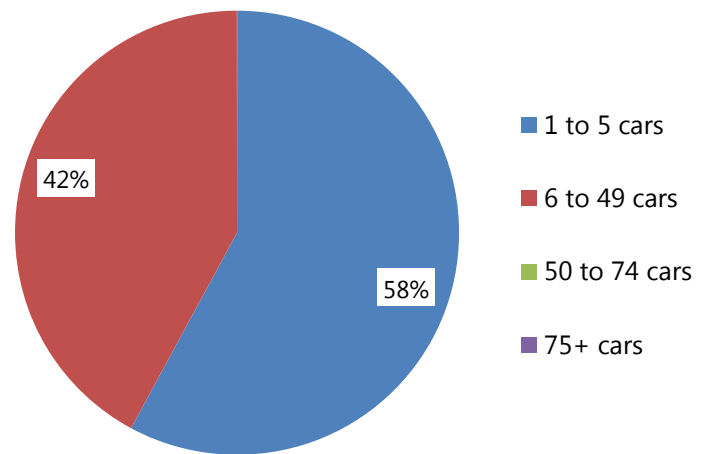
Average tariff rail rates for shipments originating in Arkansas were 3.5 cents per ton-mile from 2006 to 2010. Rates ranged from 1.84 cents per ton-mile in 1996 to 3.96 cents in 2010. Between 2005 and 2010, rates increased 71 percent. (fig. 5)

**Figure 3. Sources of Arkansas Rail Wheat Receipts, 2006–2010**



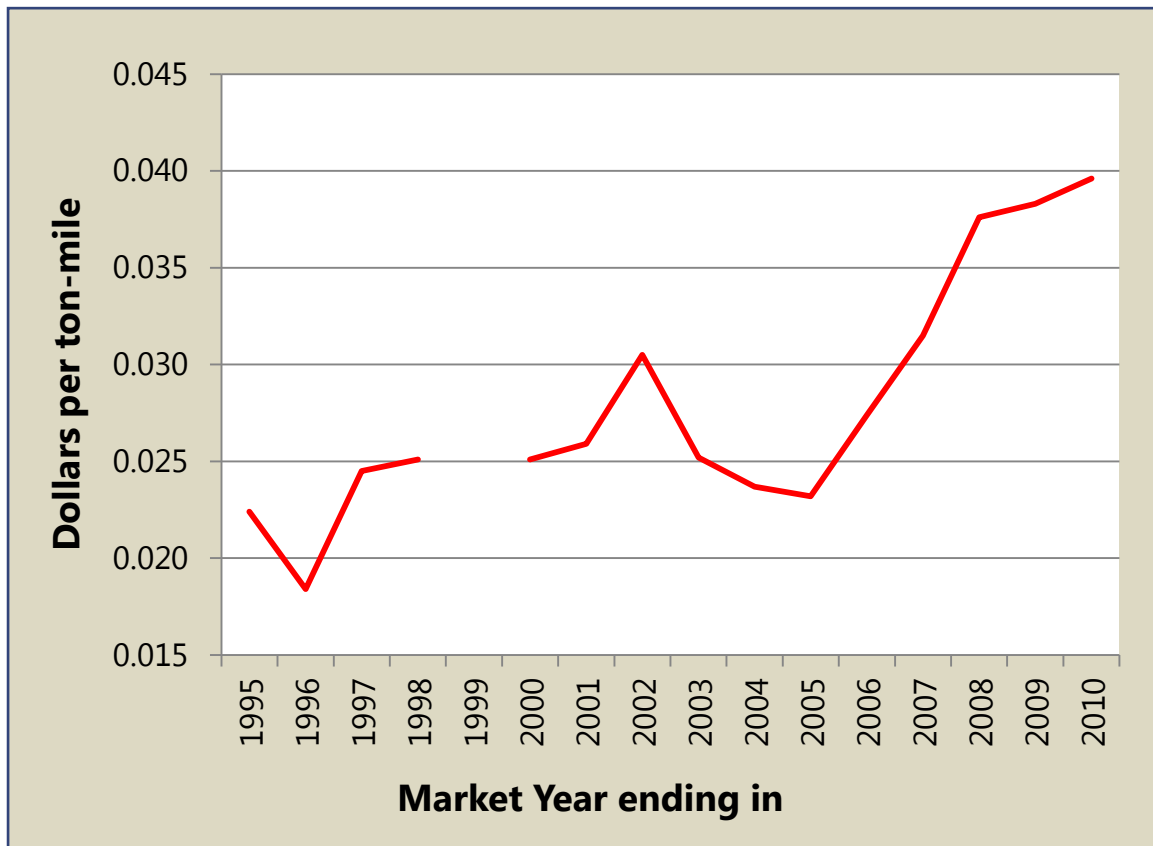
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

**Figure 4. Arkansas Grain Originations by Shipment Size**



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 5. Arkansas Rail Tariff Rates\*



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

\* Gaps in Figure 5 occur where there are less than 30 annual observations.

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

	Corn	Soybeans	Wheat	Total Grain and Oilseeds	GCAUs*
Average Yearly Production	62.06 mbu†	113.07 mbu	25.69 mbu	465.40 mbu	18,084,955
Total Rail Receipts (tons)	13,131,129	-	166,096	-	-
Total Rail Shipments (tons)	-	-	355,548	-	-

\* Grain Consuming Animal Units

† Million bushels

## Data and Methodology

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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:**

Prater, Marvin E., Daniel O'Neil, Jr., and Adam Sparger. *Shipments of Grain by Rail in Arkansas*. U.S. Department of Agriculture, Agricultural Marketing Service, January 2014. Web. <<http://dx.doi.org/10.9752/TS096.01-2014>>