

Shipments of Grain by Rail in Kentucky

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

This summary of grain shipments by rail in Kentucky 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.

Kentucky ranks 16th among the grain and oilseed producing States, with a 2006–2010 average yearly production of 236.6 million bushels (mbu).

From 2006 to 2010, corn comprised 69 percent of Kentucky crops, soybeans 21 percent, and wheat 9 percent, on average.

Nationally, Kentucky is ranked 24th in animal and poultry production, averaging 4.5 million Grain Consuming Animal Units (GCAU)² from 2006 to 2010.

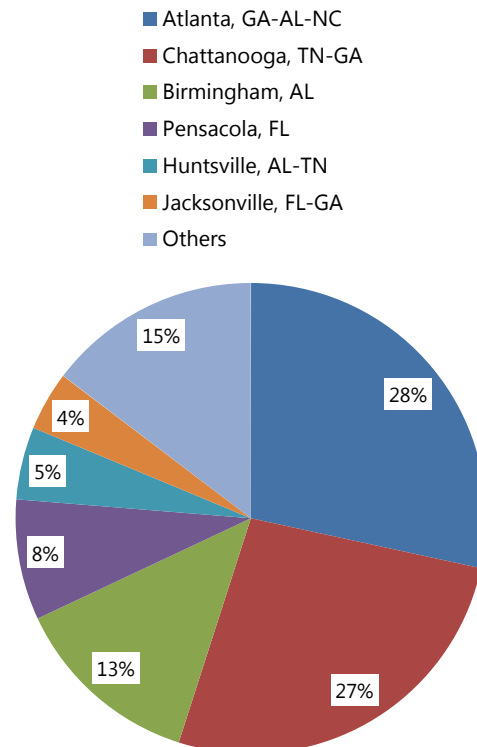
Railroad originations of grain and oilseeds averaged a market share of 11.8 percent during the crop marketing years of 2001–2004, later dropping to an average of 9.1 percent during 2007–2010.

During the period 2006–2010, Kentucky shipped 2.4 million tons of corn by rail, down 23.5 percent from 3.1 million tons from 1996 to 2000. (fig. 1)

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

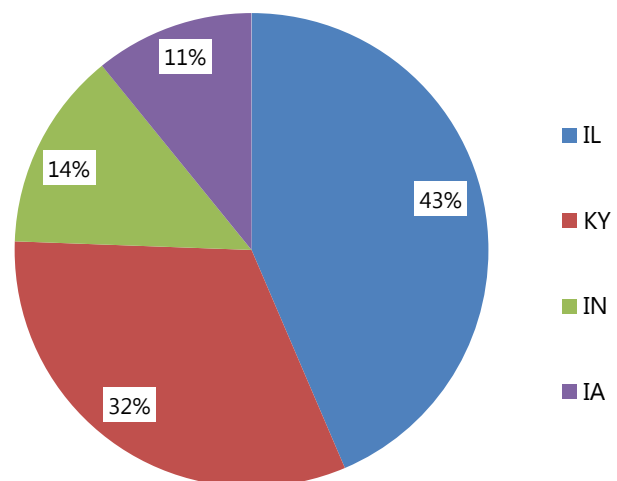
2 A standard unit used to compare feed needs of different livestock and poultry.

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



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

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



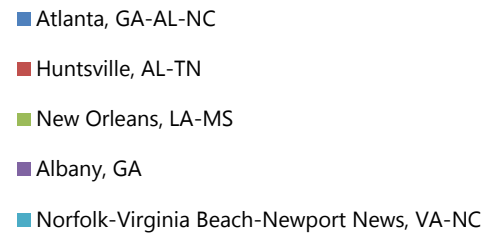
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Kentucky received a total of 177,000 tons of corn by rail during the 2006–2010 marketing years, down 64.6 percent from 500,000 tons during the 1996–2000 marketing years. (fig. 2)

From 2006–2010, Kentucky shipped 179,000 tons of soybeans by rail, down 73.4 percent from 674,000 tons shipped in the period 1996–2000. (fig. 3)

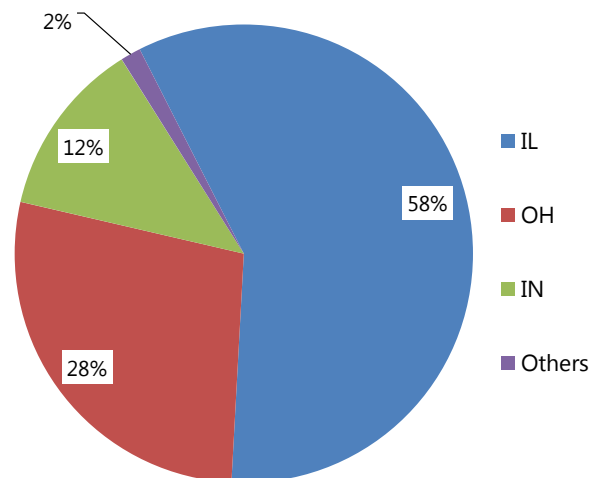
Kentucky received a total of 167,000 tons of soybeans by rail during the 2006–2010 marketing years. (fig. 4)

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



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

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



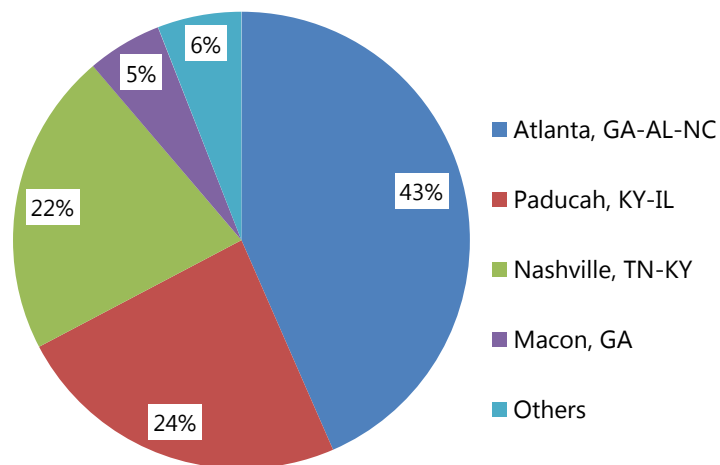
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

In the years 2006–2010, 182,000 tons of wheat were shipped by rail from Kentucky, a 32.8-percent decrease from 270,000 tons from 1996 to 2000. (fig. 5)

Kentucky received a total of 260,000 tons of wheat by rail during the 2006–2010 marketing years, up 58.3 percent from 164,000 tons during the 1996–2000 marketing years. (fig. 6)

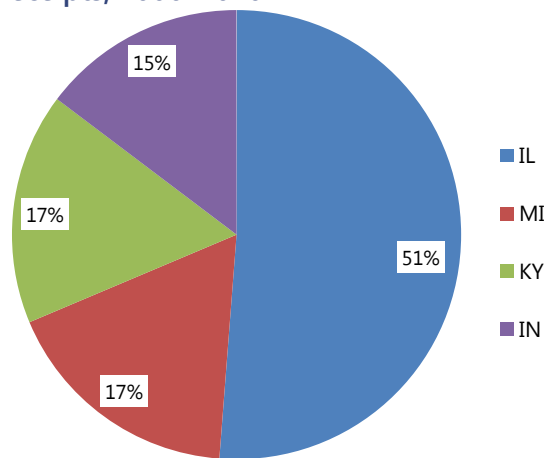
Seventeen percent of the grain car shipments originating in Kentucky from 2006 to 2010 were 1–5 cars in size, 13 percent were 6–49 cars, 65 percent were 50–74 cars, and the remaining 5 percent of shipments were 75 cars or greater. (fig. 7)

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



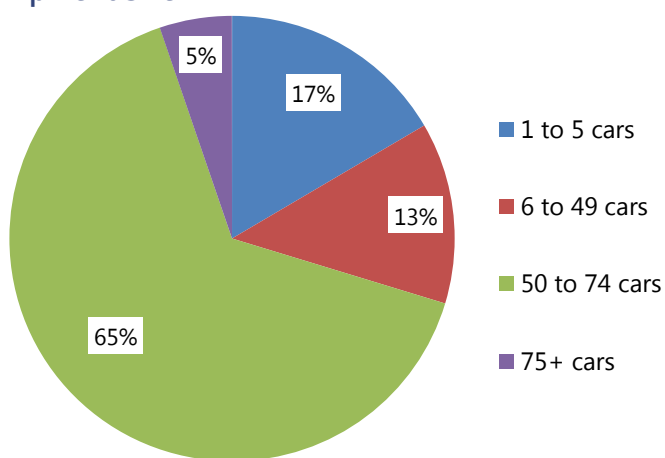
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 6. Sources of Kentucky Rail Wheat Receipts, 2006–2010



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 7. Kentucky Grain Originations by Shipment Size



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

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

	Corn	Soybeans	Wheat	Total Grain and Oilseeds	GCAUs*
Average Yearly Production	163.59 mbu†	50.71 mbu	21.22 mbu	236.60 mbu	4,536,132
Total Rail Receipts (tons)	176,890	167,348	259,836	-	-
Total Rail Shipments (tons)	2,368,882	179,368	181,652	-	-

* 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.

USDA is an equal opportunity provider and employer.

Preferred citation:

Prater, Marvin E., Daniel O'Neil, Jr., and Adam Sparger. *Shipments of Grain by Rail in Kentucky*. U.S. Department of Agriculture, Agricultural Marketing Service, January 2014. Web. <<http://dx.doi.org/10.9752/TS109.01-2014>>