

Shipments of Grain by Rail in Arizona

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This summary of grain shipments by rail in Arizona 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.

Arizona ranks 35th among the grain- and oilseed-producing States, with a 2006–2010 average yearly production of 31.3 million bushels (mbu).

On average from 2006 to 2010, cottonseed production comprised 37 percent of Arizona grain and oilseed crops, wheat 34 percent, barley 14 percent, corn 11 percent, and sorghum 4 percent.

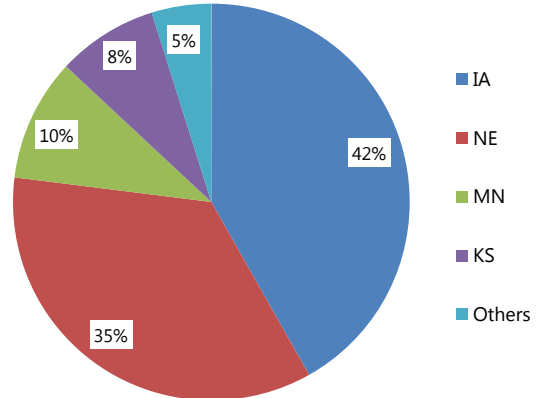
Nationally, Arizona is ranked 28th in animal and poultry production, averaging 3.7 million Grain Consuming Animal Units (GCAU)² from 2006 to 2010.

During the crop marketing years from 2001 to 2004, railroad originations of grain and oilseeds averaged a market share of 23.1 percent, increasing to an average of 29.3 percent during 2007 to 2010.

Arizona received a total of 6.4 million tons of corn by rail during the 2006–2010 marketing years, up 460 percent from 1.1 million tons during the 1996–2000 marketing years. (fig. 1)

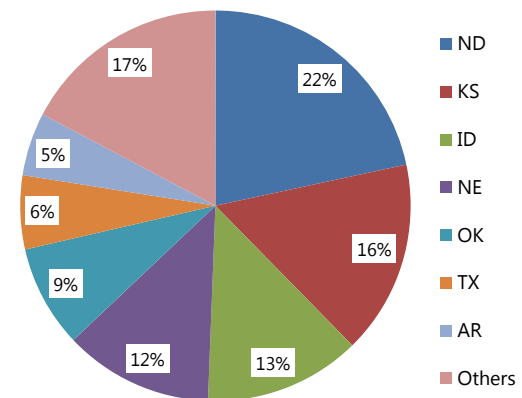
Arizona received a total of 1.7 million tons of wheat by rail during the 2006–2010 marketing years, up 95.8 percent from 870,000 tons during the 1996–2000 marketing years. (fig. 2)

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



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 2. Sources of Arizona Rail Wheat Receipts, 2006–2010



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 the feed needs of different livestock and poultry.

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

	Corn	Soybeans	Wheat	Total Grain and Oilseeds	GCAUs*
Average Yearly Production	3.55 mbu†	-	10.77 mbu	31.33 mbu	3,673,558
Total Rail Receipts (tons)	6,394,687	-	1,702,240	-	-

* 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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