

Shipments of Grain by Rail in California

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This summary of grain shipments by rail in California 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.

California ranks 20th among the grain and oilseed producing States, with a 2006–2010 average yearly production of 194.5 million bushels (mbu). During the period 2006 to 2010, average California crop production was 50 percent rice, 19 percent wheat, 15 percent corn, 13 percent cottonseed, 2 percent barley, and 1 percent oats.

Nationally, California is ranked seventh in animal and poultry production, averaging 18.2 million Grain Consuming Animal Units (GCUA)² from 2006 to 2010.

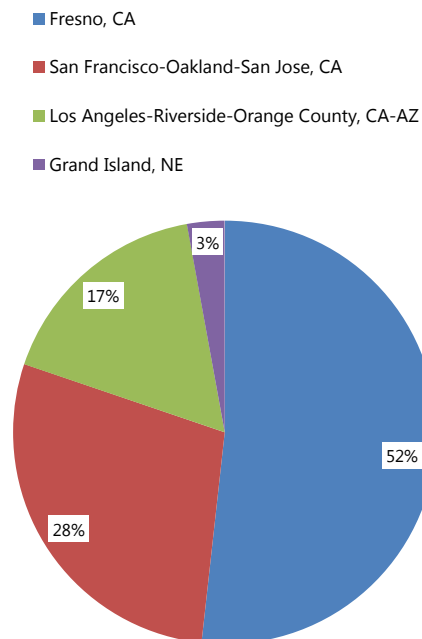
California has export ports at Los Angeles, Oakland, and Long Beach that export grain in containers. On average from 2006 to 2010, 97,000 metric tons of bulk grain and oilseeds were inspected for export from California.

During the crop marketing years from 2001 to 2004, railroad originations of grain and oilseeds averaged a market share of 5.4 percent, increasing to an average of 9.3 percent during 2007 to 2010.

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

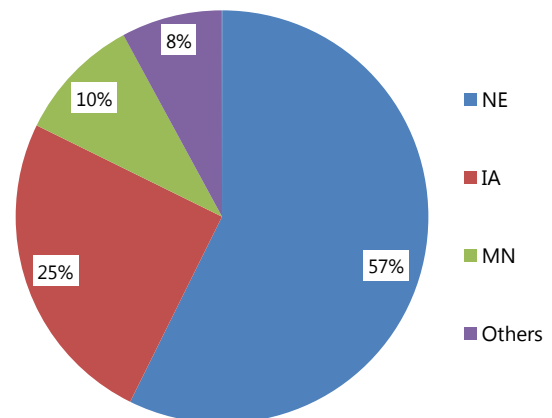
2 A standard unit used to compare the feed needs of different livestock and poultry.

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



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

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



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

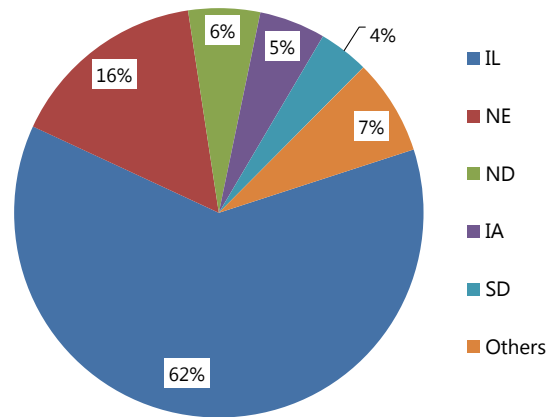
During the period 2006 to 2010, California shipped 156,000 tons of corn by rail, up 132 percent from 67,000 tons from 1996 to 2000. (fig. 1)

California received a total of 40.5 million tons of corn by rail during the 2006–2010 marketing years, up 81 percent from 22.4 million tons during the 1996–2000 marketing years. (fig. 2)

California received a total of 585,000 tons of soybeans by rail during the 2006–2010 marketing years, up 300 percent from 146,000 tons during the 1996–2000 marketing years. (fig. 3)

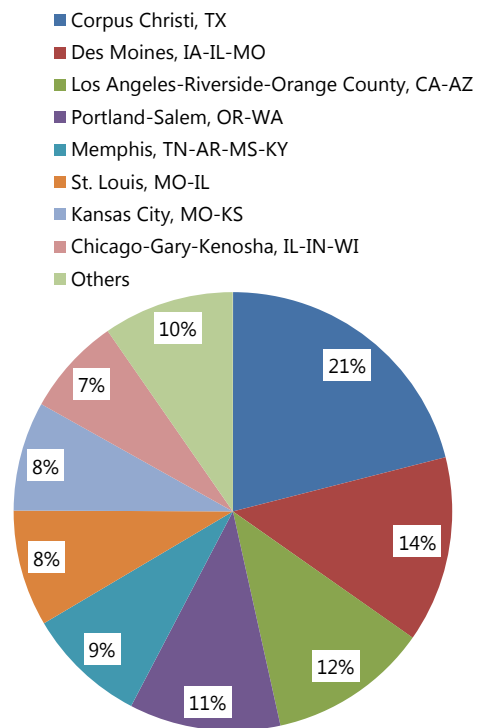
In the years 2006 to 2010, 2.2 million tons of wheat were shipped by rail from California, a 78-percent increase from 1.2 million tons from 1996 to 2000. (fig. 4)

Figure 3. Sources of California Rail Soybean Receipts, 2006–2010



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 4. Business Economic Areas Receiving California Wheat by Rail, 2006–2010



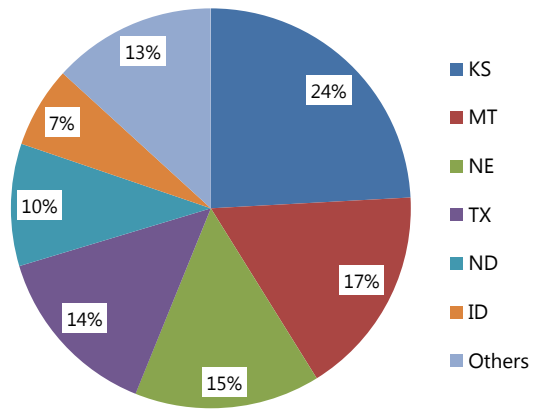
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

California received a total of 10.6 million tons of wheat by rail during the 2006–2010 marketing years, up 35 percent from 7.8 million tons during the 1996–2000 marketing years. (fig. 5)

Thirty-five percent of the grain car shipments originating in California from 2006 to 2010 were 1–5 cars in size, while the remaining 65 percent of shipments were 6–49 cars. (fig. 6)

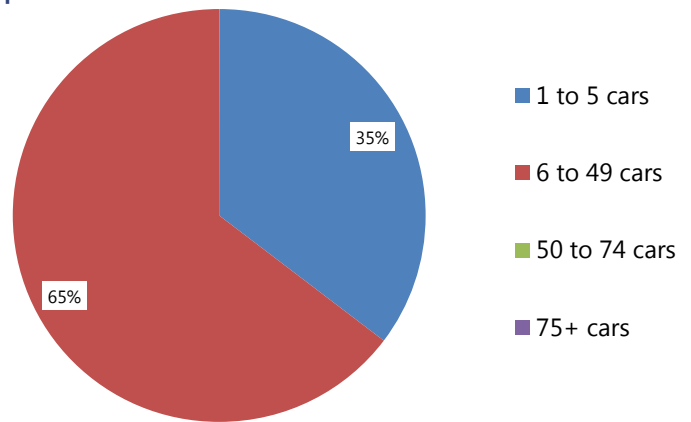
Average tariff rail rates for shipments originating in California were 5.9 cents per ton-mile from 2006 to 2010. Rates ranged from 2.77 cents per ton-mile in 2002 to 5.69 cents in 1996. Rates increased 72 percent from 2005 to 2010. (fig. 7)

Figure 5. Sources of California Rail Wheat Receipts, 2006–2010



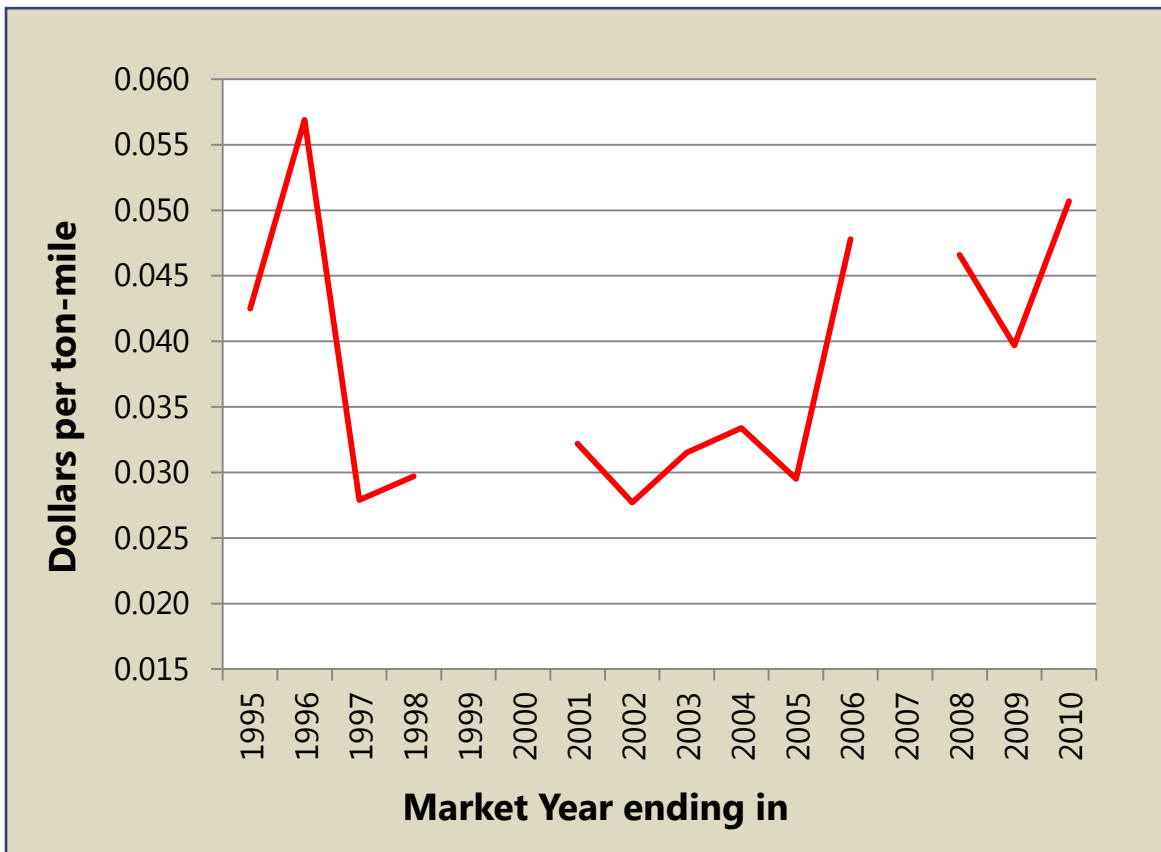
Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 6. California Grain Originations by Shipment Size



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

Figure 7. Average California Rail Tariff Rates*



Source: USDA analysis of Surface Transportation Board Confidential Waybill Samples

* Gaps in Figure 7 occur where there are less than 30 annual observations.

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

	Corn	Soybeans	Wheat	Total Grain and Oilseeds	GCAUs*
Average Yearly Production	29.96 mbu†	-	36.44 mbu	194.46 mbu	18,174,341
Average Yearly Export Inspections (metric tons)	69,534	20,825	6,550	97,380	-
Total Rail Receipts (tons)	40,509,502	584,718	10,590,569	-	-
Total Rail Shipments (tons)	156,350	-	2,215,404	-	-

* 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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