



# GRAIN TRANSPORTATION REPORT

Transportation & Marketing, Agricultural Marketing Service  
United States Department of Agriculture

FEBRUARY 26, 2004

TM GRAIN TRANSPORT					
COST INDICATORS*	Truck	Rail	Barge	Ocean	
				Gulf	Pacific
02/25/04	107	201	88	327	317
Compared with Last Week	↑	↓	↓	↑	↑

\*Indicator: Base year 2000=100; Weekly updates include Truck=diesel; Rail=nearby secondary rail market; Barge=spot Illinois River Basis; Ocean vessel based on routes to Japan

**Accident Forces the Closure of Mississippi River.** An accident involving a 178-foot offshore supply boat and a container vessel caused the entrance of the Mississippi River to be closed to oceangoing vessels. The supply boat collided with the container vessels during the morning of February 21 in the Southwest Pass, 7 miles south of Pilottown, LA. It is the only river channel deep enough for large oceangoing vessels. Due to the closure, more than 50 vessels were waiting to pass through the entrance, either trying to get into or out of the Mississippi River.

The Mississippi River system is a major outlet for U.S. grain exports. More than 60 percent of U.S. grain exports pass through the river. During January, 7.48 million metric tons of grain were inspected for export through the Gulf ports. This represents about 75 percent of total U.S. grain inspected for exports for the month. Some port elevators reported no delays or disruption in loading or unloading activities following the closure, while others had reported a few delays or anticipated delays if the closure continued through the end of the week. The river has since been partially reopened after salvage crews moved the sunken vessel. *AP*, 2/22, [www.cnn.com](http://www.cnn.com), 2/23, *Journal of Commerce Online*, 2/25, information compiled by USDA from local grain elevators. [Surajudeen.Olowolayemo@usda.gov](mailto:Surajudeen.Olowolayemo@usda.gov)

**Late Grain Car Orders Increase Although BNSF Loadings Are Up.** On February 17, Burlington Northern Santa Fe Railway (BNSF) reported 18,952 grain cars past due, an increase of 5 percent over last week and the highest number since January 20. The average number of days late increased 3 percent from the prior week to an average of 19.2 days. BNSF grain movements for the week ending February 14 were up 4 percent from the prior 3-year average for that week. During the past 4 weeks, BNSF originated 4 percent more grain cars as compared with the prior 3-year average. [Marvin.Prater@usda.gov](mailto:Marvin.Prater@usda.gov)

**Quarterly Container Report Published:** Transportation Services Branch (TSB) has published the 4<sup>th</sup> quarter issue of the *Agricultural Container Indicators* report (AgCI). The AgCI is designed to educate agricultural shippers and exporters about the current status of rates, volume, and capacity in containerized shipping. This quarter's AgCI shows an increase in agricultural containerized exports of 7 percent above the 5-year average. Additionally, tariff rates reported in the AgCI remain relatively stable, compared with last quarter, showing a small decrease in rates for refrigerated commodities and a small increase in rates for dry commodities. The combination of the AgCI, the *Ocean Rate Bulletin*, and the *Agricultural Ocean Transportation Trends* report provides a complete, detailed look at the agricultural container shipping industry. The report is available at: [www.ams.usda.gov/tmd2/agci](http://www.ams.usda.gov/tmd2/agci). [April.Taylor@usda.gov](mailto:April.Taylor@usda.gov)

**New Weekly Grain Transportation Report Format.** In an ongoing effort to provide relevant data and information to our readers, we will be presenting a new format beginning with report dated March 4. Readers will notice improvements in readability and clarity, while an increase in data may help the report to appeal to a broader audience. There will be a clearer delineation between transportation modes, and data within each section will be more specific. Also, we hope that the improved graphics will help readers to better understand data. Please contact us with any comments or suggestions. <http://www.ams.usda.gov/tmd/TSB/contacts.htm>

Report is prepared by Deen Olowolayemo, Johnny Hill, Karla Martin and Delmy Salin, Agricultural Economists, Transportation & Marketing, Agricultural Marketing Service, USDA (202) 690-1304. Support provided by Upper Great Plains Transportation Institute, North Dakota State University. This report can be found on the Internet at [www.ams.usda.gov/tmd/grain.htm](http://www.ams.usda.gov/tmd/grain.htm). E-mail comments and questions to [Surajudeen.Olowolayemo@usda.gov](mailto:Surajudeen.Olowolayemo@usda.gov).

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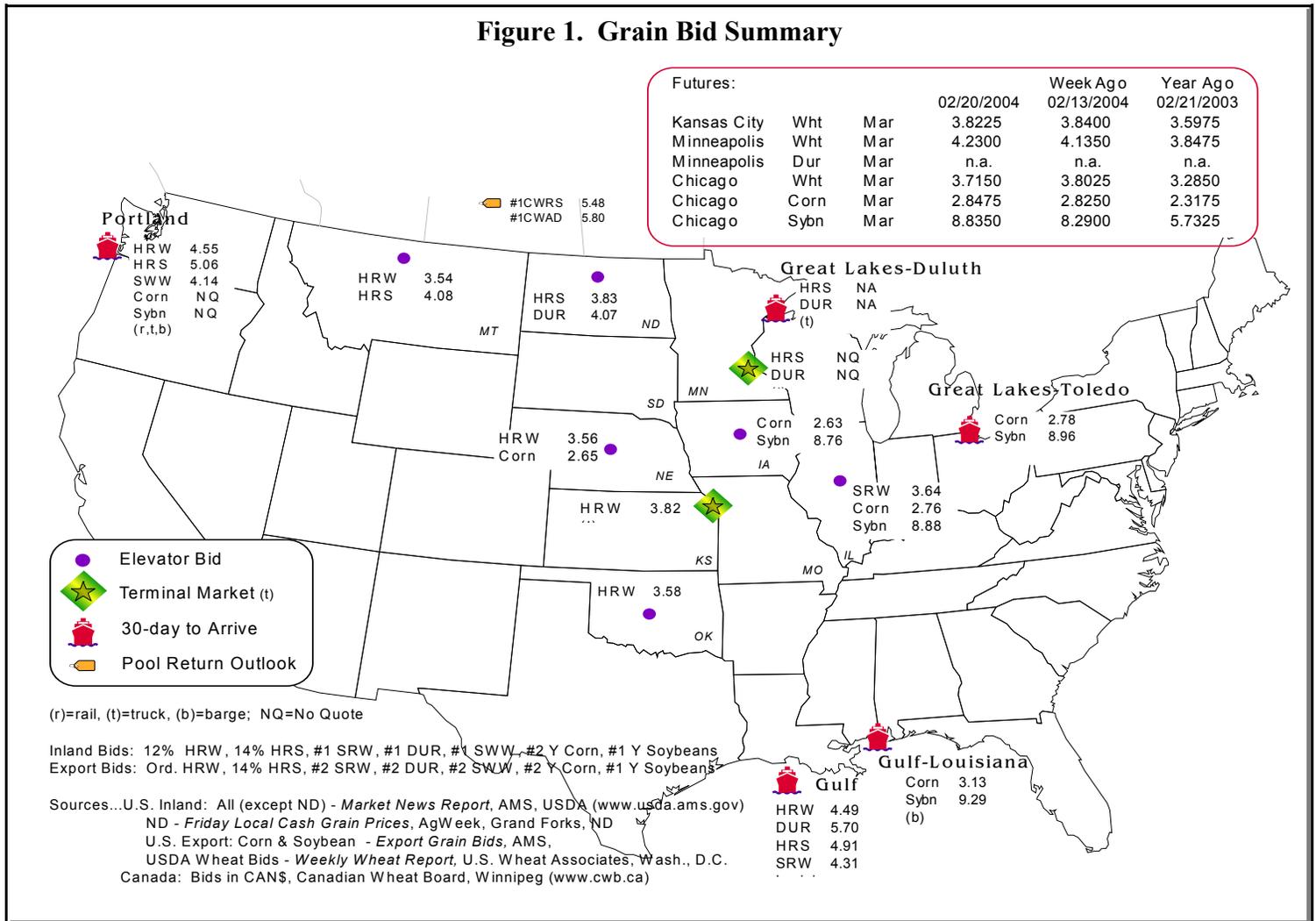
The Grain Transportation Report is a weekly news source for grain logistics. Detailed data and trend information on five major modes: barge, truck, rail, container, and vessel, provide timely insight into grain transport. The report is offered to policymakers and industry as a tool in day-to-day decision making and longer-term strategic planning for an effective and efficient U.S. grain logistics system.

**Table 1-- Market update: U.S. origins to export position price spreads (per bushel)**

Commodity	Origin--Destination	This week	Last week
Corn	IL -- Gulf	-0.37	-0.40
Corn	NE -- Gulf	-0.48	-0.50
Soybean	IA -- Gulf	-0.53	-0.54
HRW	KS -- Gulf	-0.67	-0.69
HRS	ND -- Portland	-1.23	-1.24

The **Grain Bid Summary** illustrates the market relationships for commodities. Positive and negative adjustments in differential between terminal and futures markets, and the relationship to inland market points, are indicators of changes in fundamental market supply and demand. The map may be used to monitor market and time differentials.

**Figure 1. Grain Bid Summary**

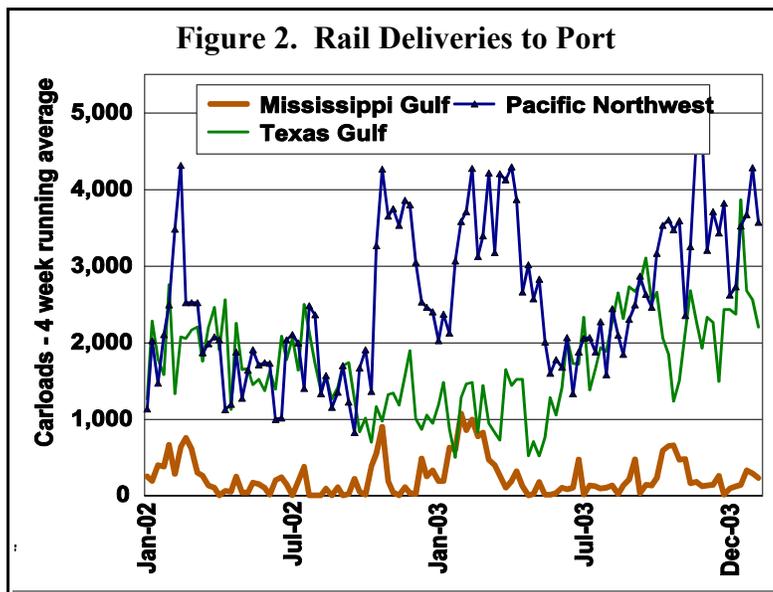


**RAIL TRANSPORTATION**

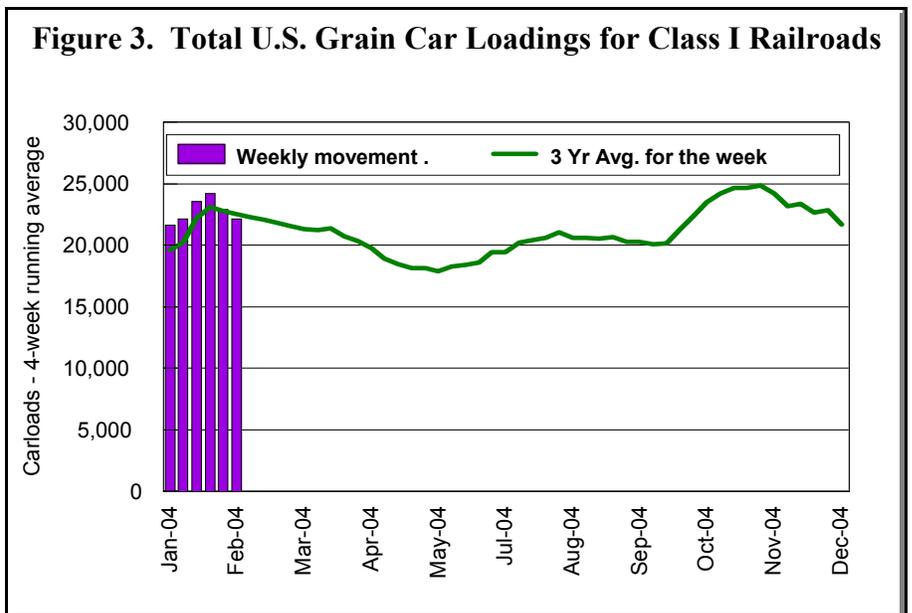
**Table 2--Rail deliveries to port (carloads)**

	Mississippi Gulf*	Texas Gulf	Pacific Northwest	Atlantic & East Gulf	Total
Week Ending:					
02/18/04	28	1,752	5,272	304	7,356
02/11/04	364	2,332	4,530	651	7,877
2004 YTD	1,511	18,302	27,592	2,443	49,848
2003 YTD	5,132	7,913	22,265	5,013	40,323
% 2003 YTD	29%	231%	124%	49%	124%
Total 2003	14,934	88,118	150,530	20,509	274,091
Total 2002	10,937	84,625	111,832	20,842	228,236

Source: Transportation & Marketing/AMS/USDA; (\*) Incomplete Data



Railroads originate approximately 40% of U.S. grain shipments. Trends in these loadings are indicative of market conditions and expectations.



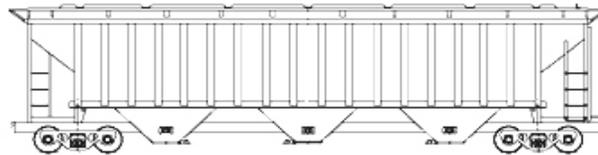
**Table 3--Class I rail carrier grain car bulletin (Grain carloads originated)**

	East		West			U.S. Total	Canada	
	CSXT	NS	BNSF	KCS	UP		CN	CP
02/14/04	2,645	3,088	9,997	587	6,225	22,542	5,372	3,334
This Week Last Year	2,954	3,154	9,249	341	5,945	21,643	2,578	3,488
2004 YTD	17,985	21,116	56,204	3,860	39,901	139,066	27,930	20,435
2003 YTD	18,369	20,382	48,301	2,342	40,311	129,705	19,945	20,709
% 2003 YTD	98%	104%	116%	165%	99%	107%	140%	99%
2003 Total	149,389	174,338	425,035	24,859	340,993	1,114,614	202,294	201,729

**U.S. rail covered hopper cars online index\***

Jan-04	95.0	102.7	93.8	92.4	95.4	96.0
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Source: Association of American Railroads; \*Base Year =2001, Index based on Number of Covered Hopper Cars Online (available for Service).



**Table 4--Tariff rail rates for unit train shipments\***

Date effective	Commodity	Origin	Destination	Rate per car	Rate per MT	Rate/per bushel**
02/05/04	Wheat	Kansas City, MO	Galveston, TX	\$1,820	\$20.06	\$0.55
02/05/04	Wheat	Minneapolis, MN	Portland, OR	\$4,148	\$45.72	\$1.24
02/05/04	Wheat	St. Louis, MO	Houston, TX	\$1,945	\$21.44	\$0.58
02/05/04	Wheat	Kansas City, MO	Laredo, TX	\$2,280	\$25.13	\$0.68
02/05/04	Wheat	Chicago, IL	Albany, NY	\$1,834	\$20.22	\$0.55
02/05/04	Corn	Minneapolis, MN	Portland, OR	\$3,240	\$35.71	\$0.91
02/05/04	Corn	Chicago, IL	Baton Rouge, LA	\$2,736	\$30.16	\$0.77
02/05/04	Corn	Council Bluffs, IA	Baton Rouge, LA	\$2,170	\$23.92	\$0.61
02/05/04	Corn	Evansville, IN	Raleigh, NC	\$1,841	\$20.29	\$0.52
02/05/04	Corn	Des Moines, IA	Laredo, TX	\$2,864	\$31.57	\$0.80
02/05/04	Soybean	Minneapolis, MN	Portland, OR	\$3,110	\$34.28	\$0.93
02/05/04	Soybeans	Chicago, IL	Baton Rouge, LA	\$2,736	\$30.16	\$0.82
02/05/04	Soybeans	Council Bluffs, IA	Baton Rouge, LA	\$2,799	\$30.85	\$0.84
02/05/04	Soybeans	Des Moines, IA	Laredo, TX	\$2,864	\$31.57	\$0.86
02/05/04	Soybeans	Evansville, IN	Raleigh, NC	\$1,841	\$20.29	\$0.55

Sources: [www.bnsf.com](http://www.bnsf.com), [www.cpr.ca](http://www.cpr.ca), [www.csx.com](http://www.csx.com), [www.uprr.com](http://www.uprr.com)

\*A unit train refers to shipments of at least 52 cars.

\*\*Approximate load per car = 100 tons: Corn 56 lbs/bu, Wheat & Soybeans 60 lbs/bu\*

**Table 5--Secondary rail car market,**  
Average premium/discount to tariff, \$/car - last week

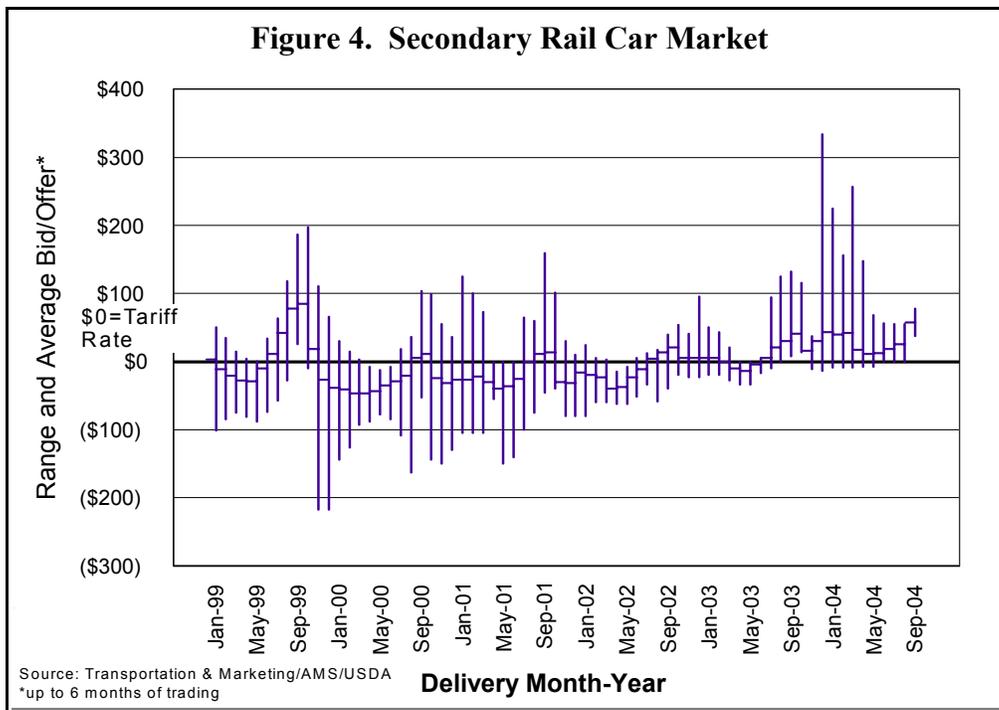
	Delivery Period			
	Apr-04	May-04	Jun-04	Jul-04
BNSF-GF	\$63	\$45	\$35	\$38
UP-Pool	\$148	\$68	\$56	\$55

Rail service may be ordered directly from the railroad via **Auction** for guaranteed service or tariff for non-guaranteed service, or through the secondary market. The **Secondary Rail Market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The auction and secondary rail values are indicators of rail service quality and demand/supply.

**Table 6--Railroad car 'Auction' results**  
Average premium/discount to tariff, \$/car - last auction

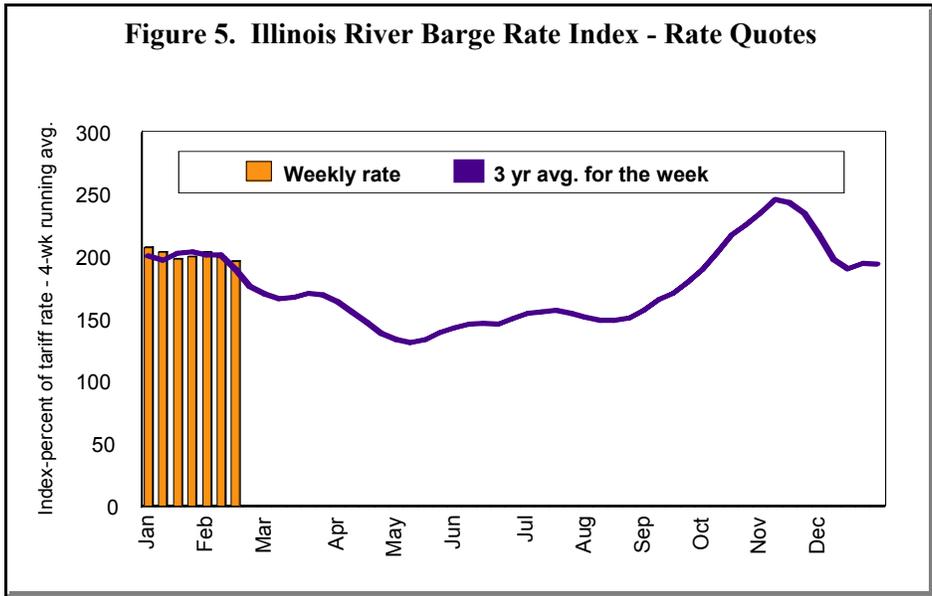
Delivery for:	Apr-04	May-04	Jun-04
COT/N. Grain	no offer	no offer	no offer
COT/S. Grain	no offer	no offer	no offer
GCAS/Region 1	\$118	\$75	no offer
GCAS/Region 2	\$307	\$117	no offer

Source: Transportation & Marketing/AMS/USDA.  
COT=Certificate of Transportation; GCAS=Grain Car Allocation System



**BARGE TRANSPORTATION**

**Figure 5. Illinois River Barge Rate Index - Rate Quotes**



The **Illinois River Barge Rate Index** averaged 183% of the Benchmark Tariff Rate between 1999 and 2001, based on weekly market quotes. The **Index**, along with **Rate Quotes** and **Futures Market** bids are indicators of grain transport supply and demand.

Calculating **Barge Rate** Per Ton:  
 Index × 1976 Tariff Benchmark  
 Rate per Ton

Select applicable index from market quotes included in tables on this page. The 1976 benchmark rates per ton are provided in map below.

**Table 7-- Barge rate quotes: Southbound barge freight**  
 Index=percent of tariff, based on 1976 tariff benchmark rate

Location	2/18/04	2/11/04	Mar '04	May '04
Twin Cities	nq	nq	nq	191
Mid-Mississippi	nq	nq	184	168
Illinois River	181	183	173	158
St. Louis	133	135	137	131
Lower Ohio	130	134	136	127
Cairo-Memphis	117	118	123	118

Source: Transportation & Marketing/AMS/USDA, nq= no quote

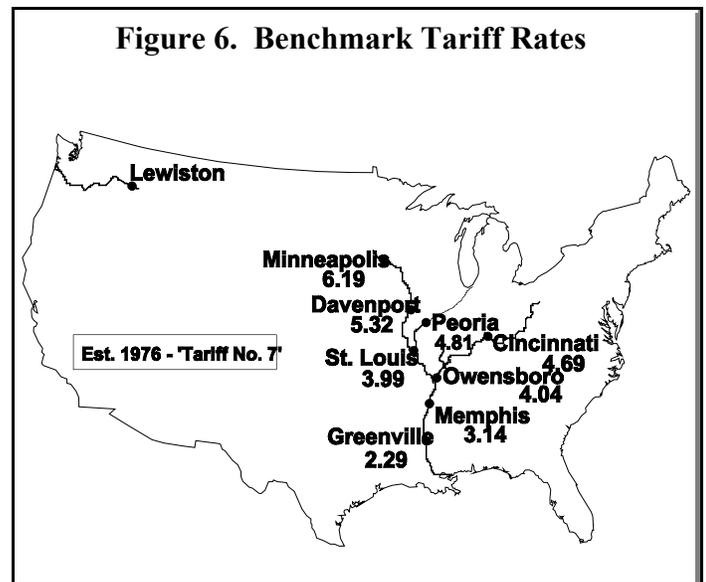
**Table 8--Barge futures market**

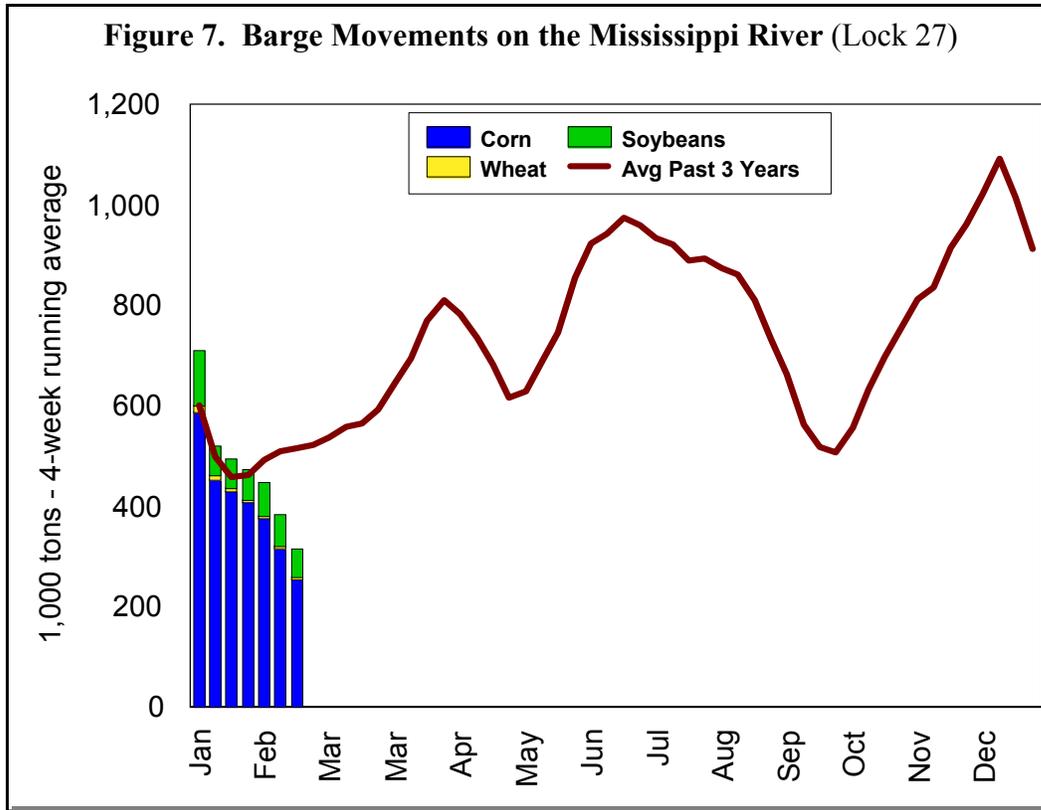
Southbound barge freight nominal/cash basis values  
 Index=percent of tariff, based on 1976 tariff benchmark rate

Week ended	River/region	Contract period	Rate	
			futures	cash
02/17/04	St. Louis	Mar.	n/a	150
		May	n/a	145
		July	n/a	155
		Sep.	n/a	190
		Oct.	n/a	225
	Illinois River	Mar.	n/a	173
		May	n/a	155
		July	n/a	163
		Sep.	n/a	203
		Oct.	n/a	225

Source: St. Louis Merchants Exchange

**Figure 6. Benchmark Tariff Rates**



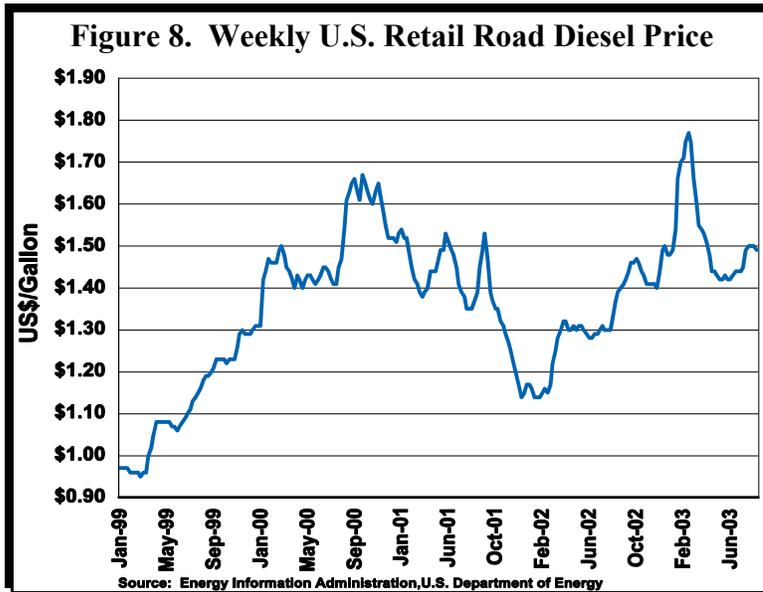


**Table 9--Barge grain movements (1,000 tons)**

<b>Week ending 2/14/04</b>	<b>Corn</b>	<b>Wht</b>	<b>Sybn</b>	<b>Total</b>
<b>Mississippi River</b>				
Rock Island, IL (L15)	0	0	0	0
Winfield, MO (L25)	0	0	0	0
Alton, IL (L26)	193	0	40	233
Granite City, IL (L27)	173	5	40	218
<b>Illinois River (L8)</b>	144	0	34	178
<b>Ohio River (L52)</b>	149	1	54	206
<b>Arkansas River (L1)</b>	0	23	14	37
2004 YTD	3,112	319	1,057	4,611
2003 YTD	3,004	242	1,840	5,298
% 2003 YTD	104%	312%	59%	87%
2003 Total	29,898	2,787	9,146	42,526

Source: U.S. Army Corp of Engineers  
 YTD and Calendar year total includes Miss/27, Ohio/52 and Ark/1.

TRUCK TRANSPORTATION



The weekly **Diesel Price** provides a proxy for trends in U.S. truck rates. Diesel fuel is a significant expense for truck grain movements, accounting for 37% of the estimated variable cost. **Crude Oil Price** is an indicator in future diesel price trends.

**Light Sweet Crude** is exchanged on the New York Mercantile Exchange. North Sea oil has a "benchmark" role in crude oil pricing. Brent crude, a blend of North Sea oils, is traded on the International Petroleum Exchange in London.

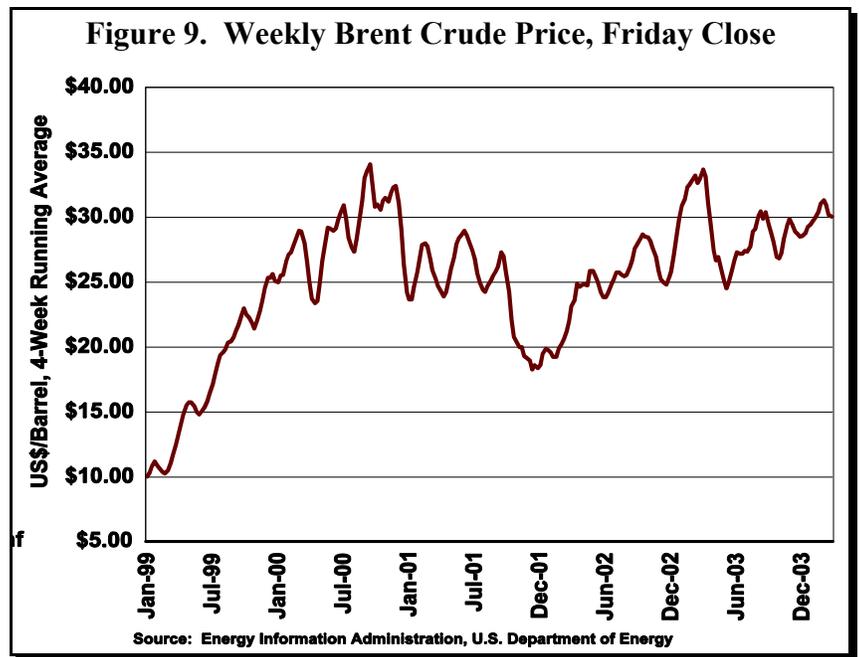


Table 10--Crude oil prices (US\$ per Barrel)-02/24/04

Type	This week	Last week	Change
Light Sweet Crude (NYMEX)	33.31	34.54	↓
Brent Crude	n/a	30.96	n/a

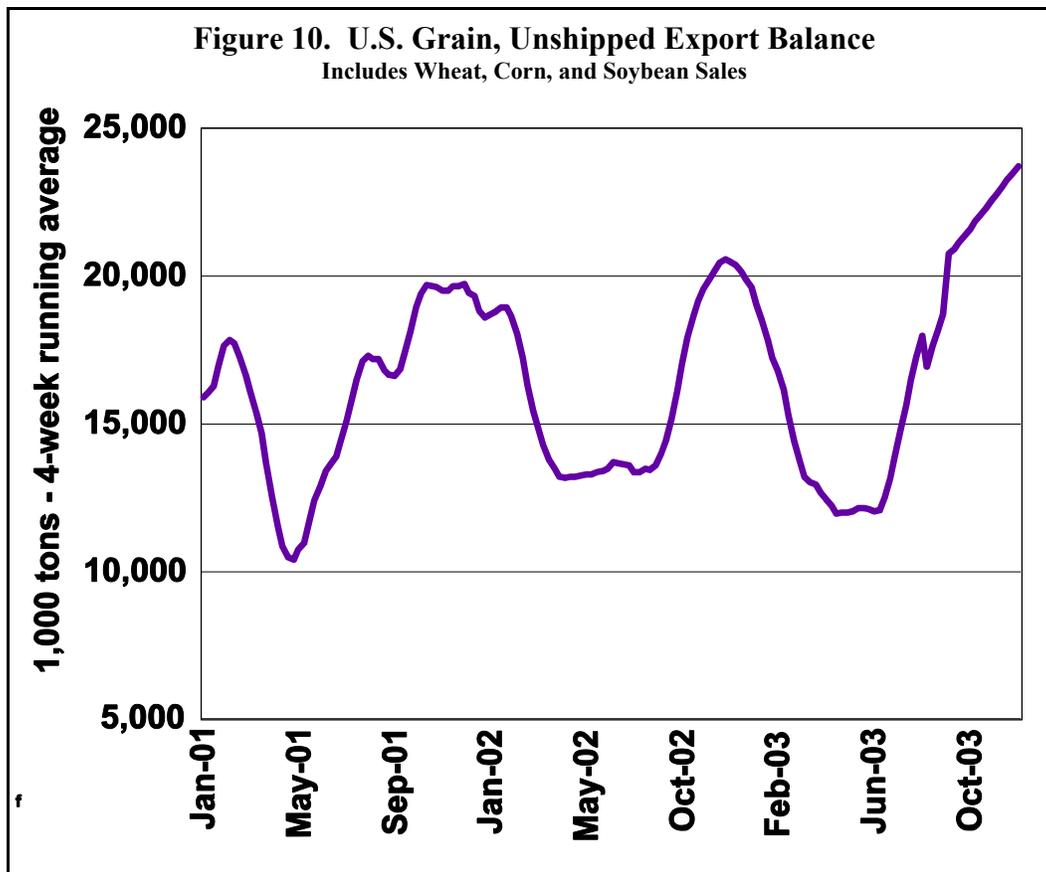
Source: U.S. Department of Energy, [www.eia.doe.gov](http://www.eia.doe.gov); \*U.S. Refiner Crude Acquisition Cost, Composite Domestic & Import

**GRAIN EXPORTS**

**Table 11--U.S. export balances (1,000 Metric Tons)**

Unshipped export balance	Wheat					All Wheat	Corn	Soybean	Total
	HRW	SRW	HRS	SWW	DUR				
02/12/04	2,605	1,964	1,258	982	201	7,010	9,579	6,628	23,217
This Week Year Ago	1,134	445	1,157	616	128	3,481	4,827	5,068	13,376
Cumulative Exports-Crop Year									
2003/04 YTD	8,980	2,629	4,732	3,436	762	20,540	21,936	18,524	61,000
2002/03 YTD	5,294	2,194	4,807	2,545	559	15,400	18,443	18,936	52,779
% 2002/03 YTD	170%	120%	98%	135%	136%	133%	119%	98%	116%
2002/03 Total	6,896	2,899	6,645	3,517	720	20,677	39,646	28,908	89,231
2001/02 Total	8,704	5,485	5,554	3,127	1,133	24,003	47,460	29,838	101,301

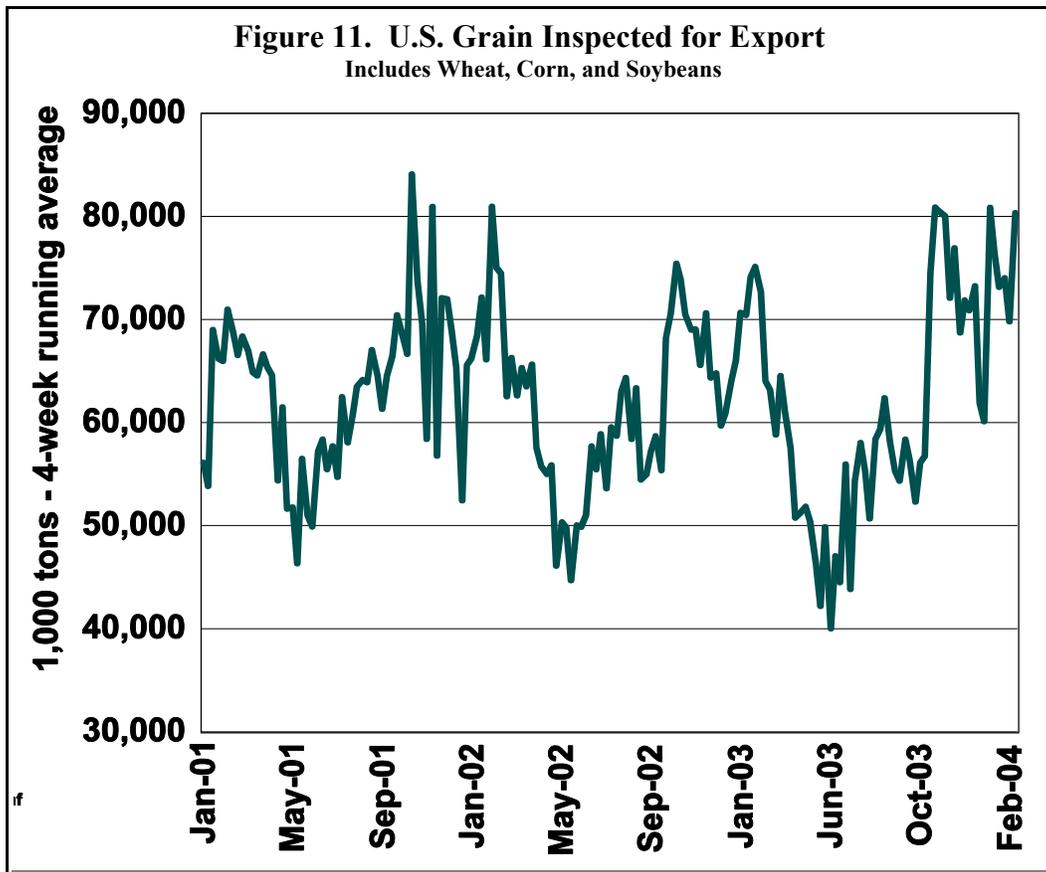
Source: Foreign Agricultural Service/USDA; YTD: Year-to-Date; Crop Year: Wheat=6/01-5/31, Corn & Soybeans=9/01-8/31



**Table 12--Select U.S. port regions - grain inspections for export (1,000 metric tons)**

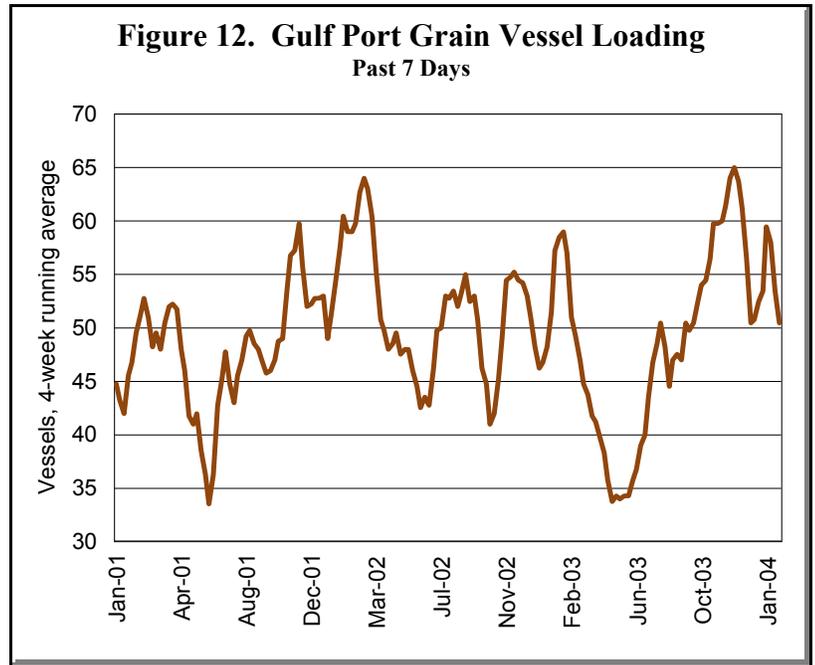
Date	Pacific Region			Mississippi Gulf			Texas Gulf			Port Region Total		
	Wheat	Corn	Soybn	Wheat	Corn	Soybn	Wheat	Corn	Soybn	Pacific	Mississippi	Texas
02/19/04	119	239	95	142	807	366	150	1	0	454	1,315	151
2004 YTD	1,839	1,223	972	999	5,589	3,806	1,740	44	0	4,035	10,394	1,784
2003 YTD	1,028	869	1,017	863	4,514	5,964	672	8	11	2,914	11,341	690
% 2003 YTD	179%	141%	96%	116%	124%	64%	259%	542%	0%	138%	92%	258%
2003 Total	8,764	5,450	5,114	5,855	30,352	18,972	7,032	746	103	19,328	55,179	7,880

Source: Federal Grain Inspection Service YTD-Year-to-Date



The U.S. Exports Approximately One-Quarter of the Grain it Produces. On average, it includes nearly 45% of U.S. grown wheat, 35% of U.S. grown soybeans, and 20% of the U.S. grown corn.

Over 60% of these U.S. export grain shipments departed through Louisiana Gulf region in 2002.



**Table 13--Weekly port region grain ocean vessel activity (number of vessels)**

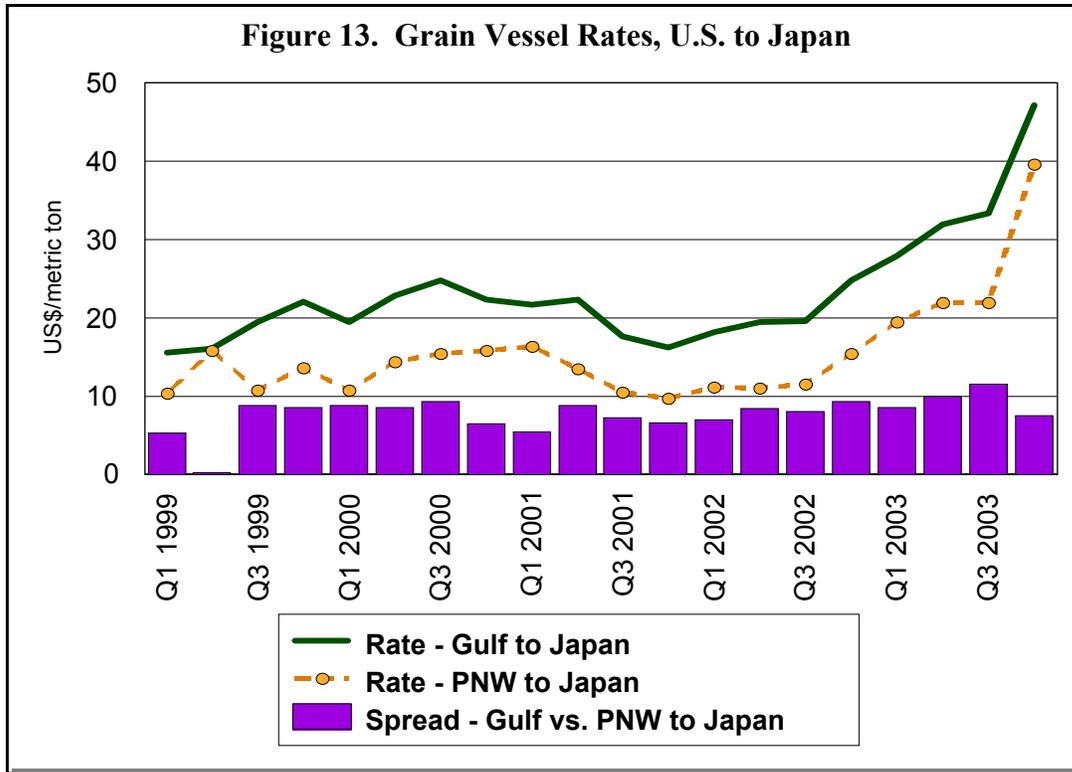
Date	Gulf			Pacific Northwest	Vancouver_B.C.
	In Port	Loaded 7-Days	Due Next 10-Days	In Port	In Port
02/12/04	35	46	74	12	6
02/19/04	39	49	74	9	6
2003 Range	(11..47)	(30..76)	(39..93)	(3..13)	(1..15)
2003 Avg	31	49	62	9	6

Source: Transportation & Marketing/AMS/ USDA

**Table 14--Quarterly ocean freight rates (average rates & percentage changes, U.S. dollars/metric ton)**

	2003 4 <sup>th</sup> Qtr	2002 4 <sup>th</sup> Qtr	Change %		2003 4 <sup>th</sup> Qtr	2002 4 <sup>th</sup> Qtr	Change %
<b>Gulf to</b>				<b>Pacific NW to</b>			
Japan	\$41.83	\$24.75	69%	Japan	-	\$15.39	-
Taiwan	\$44.00	-	-				
N. Europe	-	\$18.07	-	<b>Argentina/Brazil to</b>			
N. Africa	\$35.00	\$18.33	91%	Med. Sea	\$38.50	\$22.00	75%
Med. Sea	\$31.75	-	-	N. Europe	-	\$22.63	-

Source: Maritime Research, Inc.



Source: The Baltic Exchange

**Table 15--Ocean freight rates for selected shipments**  
Week Ending 02/21/04

Export region	Import region	Grain	Month	Volume loaded (Tons)	Freight rate (\$/ton)
U.S. Gulf	Peru	Grain	Mar 9/18	9,710	\$55.59*
U.S. Gulf	Taiwan	Hvy Grain	Mar 10/20	56,000	\$68.00
U.S. Gulf	China	Hvy Grain	Feb 5/14	55,000	\$60.00
U.S. Gulf	Japan	Hvy Grain	Mar 10/20	54,000	\$75.00
U.S. Gulf	Haiti	Wheat	Feb 17/27	8,500	\$53.89*

Source: Maritime Research Inc.

Rates shown are for metric ton (2,204.62 lbs.=one metric ton), F.O.B., except where otherwise indicated; op=option

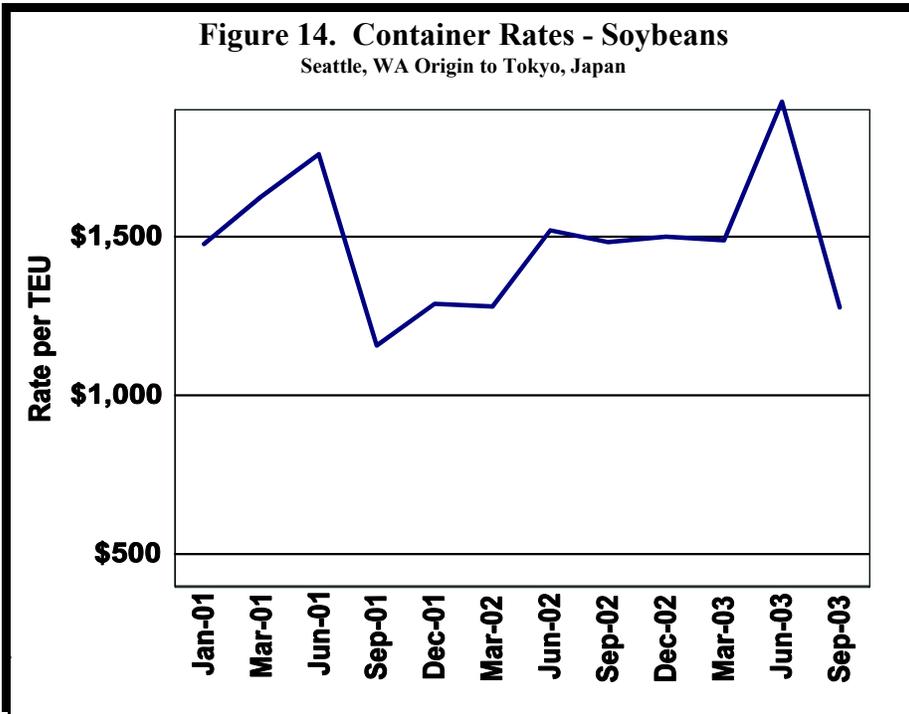
\*Most food aid from the United States is required to be shipped on U.S. flag vessels. The vessels are of limited availability resulting in higher rates. In addition, destinations receiving food aid generally lack adequate port unloading facilities, requiring the vessel to remain in port for a longer duration than normal.

CONTAINER

**Container Ocean Freight Rates**

Average rate per twenty-equivalent-unit (TEU), weighed by shipping line market share

Source: Transportation & Marketing/AMS/USDA, Quarterly Updates




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Approximately 420,000 MT of grain and oilseed exports were marketed via container in 2001. This volume increased 26% compared to 1997.

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