



# GRAIN TRANSPORTATION REPORT

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

NOVEMBER 20, 2003

TM GRAIN TRANSPORT					
COST INDICATORS*					
	Truck	Rail	Barge	Ocean	
				Gulf	Pacific
11/19/03	99	325	107	201	278
Compared With Last Week	unchanged	↑	↓	↓	↓

\*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

Figure 1—Third Quarter U.S. Gulf to Japan Ocean Freight Rates Are Above 5-year Average

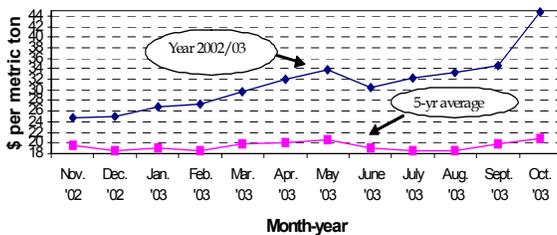
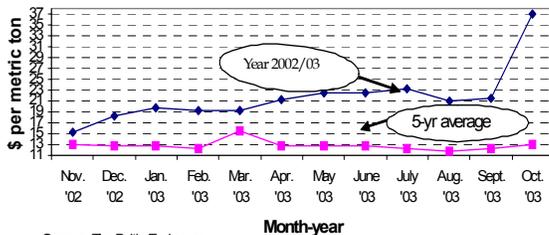


Figure 2— Third Quarter U.S. PNW to Japan Ocean Freight Rates Are Above 5-year Average



Source: The Baltic Exchange

**Third Quarter Ocean Freight Rates Were Up.** For the third quarter of 2003, ocean freight rates on two major grain routes exceeded their 5-year averages. Rates were \$33.35 per metric ton for the U.S. Gulf to Japan route (Gulf) and \$21.88 per metric ton for the Pacific Northwest to Japan route (PNW). The above-average trend in ocean freight rates started in August 2002 for the Gulf and in September 2002 for the PNW (figures 1 and 2).

For the Gulf, the \$33.35-per-metric-ton ocean freight rate in the third quarter of 2003 was approximately 4 percent more than in the second quarter of 2003 and 64 percent more than in the third quarter of 2002. It was also 75 percent higher than the 5-year average. For the PNW, the \$21.88-per-metric-ton ocean freight rate in the third quarter of 2003 was 1 percent less than in the second quarter of 2003 and 86 percent more than in the third quarter of 2002. It was also 81 percent higher than the 5-year average.

The difference between ocean freight rates from the Gulf and the PNW is referred to as “spread.” The lower the “spread,” the more attractive shipments of U.S. grain from the Gulf would be relative to those from the PNW. The “spread” was \$11.46 per metric ton in the third quarter of 2003, higher than the second quarter of 2003 by 14 percent, the third quarter of 2002 by 17 percent, and the 5-year average by 34 percent.

**Chinese Economy Continues to Impact Bulk Freight Market.** Increasing expansion in the Chinese economy has led to a tight bulk freight market, resulting in higher freight rates. China is importing a record amount of seaborne iron ore. The Chinese steel industry is committed to increasing expansion in the sector until 2010 due to a) the upcoming Olympics and b) an increase in the Chinese standard of living. World seaborne ore trade reached 480 million tons in 2002, and China is expected to import more than 140 million tons of ore in 2003, an increase of 27 percent over 2002. In addition, China has emerged as a world soybean-crushing powerhouse. China imported 20.3 million tons of soybeans in 2002/03, and it is expected to import a record 20.5 million tons of soybeans in 2003/04. Other causes for the tight bulk freight market include limited capacity of the shipping industry to keep up with demand and a slow rate of unloading and congestion in ports. Increased importation of coal by the Asian countries such as Japan and Korea for power generating or energy purpose is another factor contributing to the tight bulk market.

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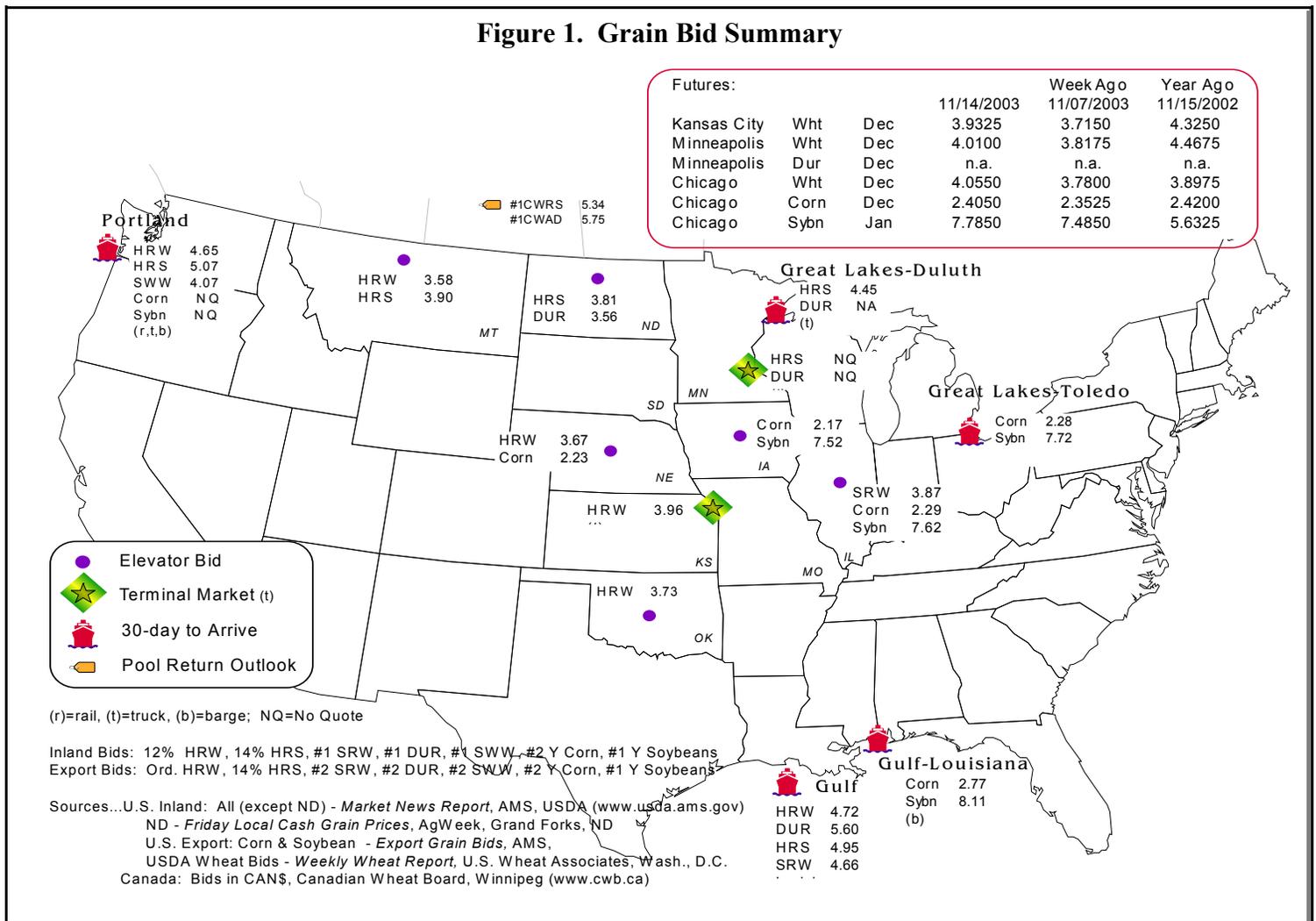
The Grain Transportation Report is a weekly news source for grain logistics. Detailed data and trend information on five major modes: barge, truck, rail, container, and vessel, provide timely insight into grain transport. The report is offered to policymakers and industry as a tool in day-to-day decision 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	-0.48	-0.50
Corn	NE -- Gulf	-0.54	-0.58
Soybean	IA -- Gulf	-0.59	-0.54
HRW	KS -- Gulf	-0.76	-0.67
HRS	ND -- Portland	-1.26	-1.18

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**

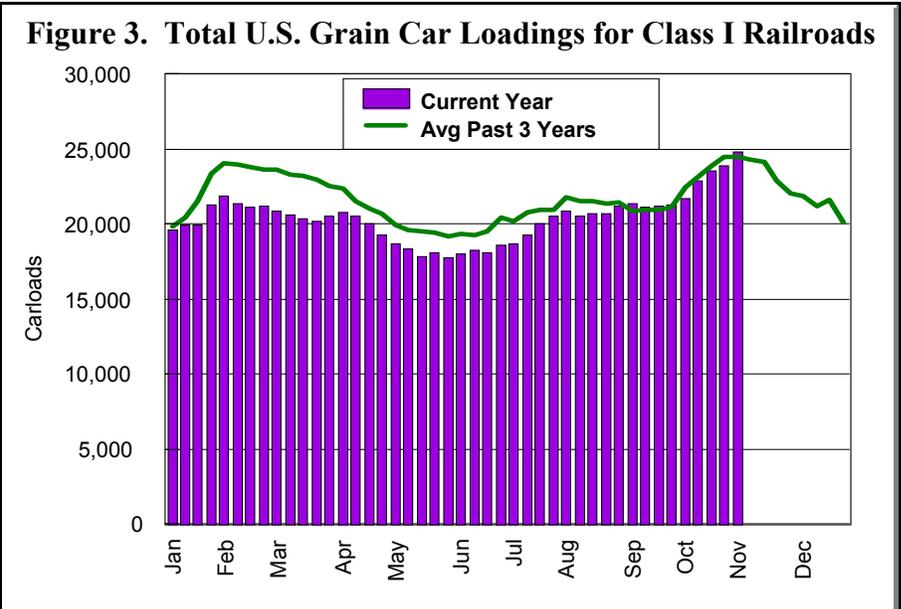
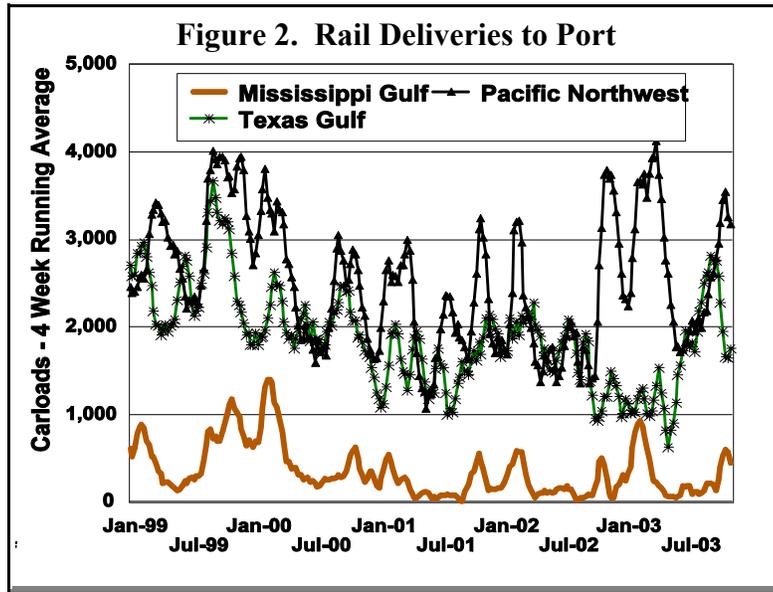


**RAIL TRANSPORTATION**

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

	Mississippi Gulf*	Texas Gulf	Pacific Northwest	Atlantic & East Gulf	Total
Week Ending:					
11/05/03	484	2,146	2,354	1,354	6,338
11/12/03	166	2,683	3,256	1,276	7,381
2003 YTD	13,891	74,184	124,950	16,013	229,038
2002 YTD	9,687	77,281	93,719	18,346	199,033
% 2002 YTD	143%	96%	133%	87%	115%
Total 2002	11,127	85,822	113,857	21,562	232,368
Total 2001	10,022	81,804	111,376	26,604	229,806

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.

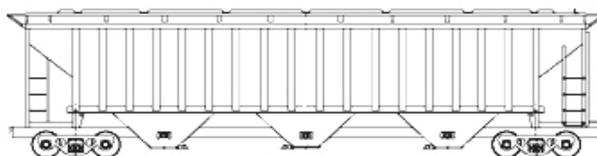
**Table 3--Class I rail carrier grain car bulletin (Grain carloads originated)**

	East		West			U.S. Total	Canada	
	CSXT	NS	BNSF	KCS	UP		CN	CP
11/01/03	3,721	4,222	9,870	639	7,268	25,720	4,676	4,848
This Week Last Year	3,500	3,349	8,629	178	6,772	22,428	3,053	5,022
2003 YTD	121,019	142,344	339,555	19,279	288,053	910,250	160,438	162,294
2002 YTD	120,016	138,171	333,301	22,834	290,236	904,558	168,091	167,640
% 2002 YTD	101%	103%	102%	84%	99%	101%	95%	97%
2002 Total	142,760	164,745	400,179	27,161	344,296	1,079,141	191,835	195,765

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

Oct-03	95.1	99.1	96.3	87.7	96.9	96.6
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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**
11/03/03	Wheat	Kansas City, MO	Galveston, TX	\$1,820	\$20.06	\$0.55
11/03/03	Wheat	Minneapolis, MN	Portland, OR	\$4,148	\$45.72	\$1.24
11/03/03	Wheat	St. Louis, MO	Houston, TX	\$1,945	\$21.44	\$0.58
11/03/03	Wheat	Kansas City, MO	Laredo, TX	\$2,280	\$25.13	\$0.68
11/03/03	Wheat	Chicago, IL	Albany, NY	\$1,834	\$20.22	\$0.55
11/03/03	Corn	Minneapolis, MN	Portland, OR	\$3,130	\$34.50	\$0.88
11/03/03	Corn	Chicago, IL	Baton Rouge, LA	\$2,736	\$30.16	\$0.77
11/03/03	Corn	Council Bluffs, IA	Baton Rouge, LA	\$2,170	\$23.92	\$0.61
11/03/03	Corn	Evansville, IN	Raleigh, NC	\$1,886	\$20.79	\$0.53
11/03/03	Corn	Des Moines, IA	Laredo, TX	\$2,864	\$31.57	\$0.80
11/03/03	Soybean	Minneapolis, MN	Portland, OR	\$3,110	\$34.28	\$0.93
11/03/03	Soybeans	Chicago, IL	Baton Rouge, LA	\$2,736	\$30.16	\$0.82
11/03/03	Soybeans	Council Bluffs, IA	Baton Rouge, LA	\$2,799	\$30.85	\$0.84
11/03/03	Soybeans	Des Moines, IA	Laredo, TX	\$2,864	\$31.57	\$0.86
11/03/03	Soybeans	Evansville, IN	Raleigh, NC	\$1,886	\$20.79	\$0.57

Sources: [www.bnsf.com](http://www.bnsf.com), [www.cpr.ca](http://www.cpr.ca), [www.csx.com](http://www.csx.com), [www.upr.com](http://www.upr.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			
	Dec-03	Jan-04	Feb-04	Mar-04
BNSF-GF	\$334	\$185	\$89	\$55
UP-Pool	\$126	\$84	\$34	\$31

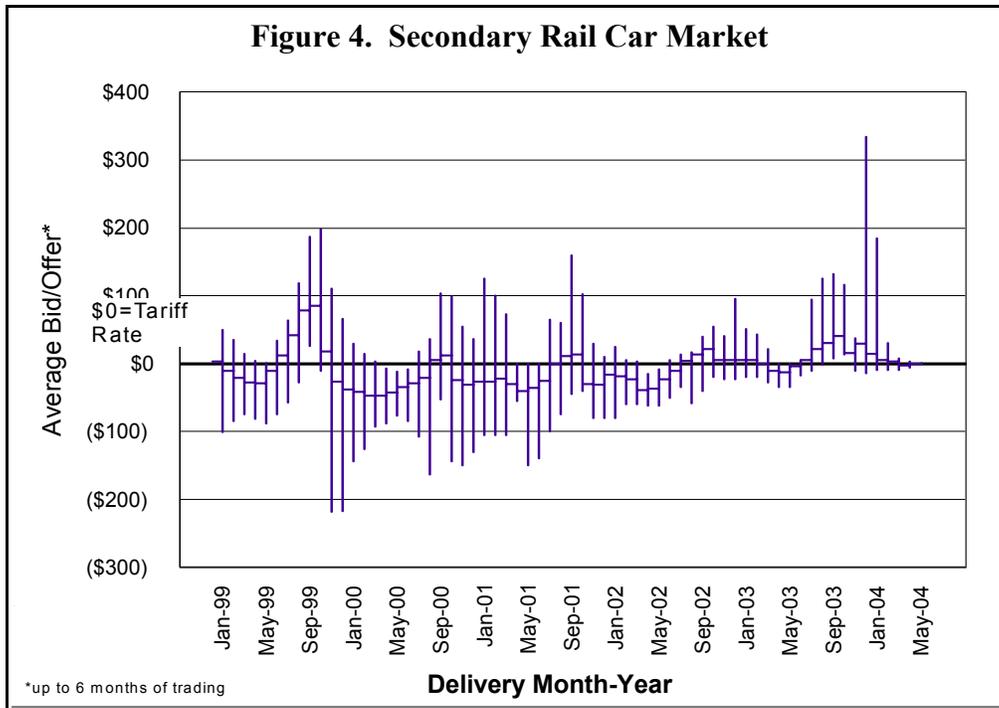
Sources: James B. Joiner & Co.; Tradewest Brokerage Co.  
: GF=Guaranteed Freight, Pool=Guaranteed Pool  
Note: Bids listed are market INDICATORS only & are NOT guaranteed prices, missing value=No Bid Quoted

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

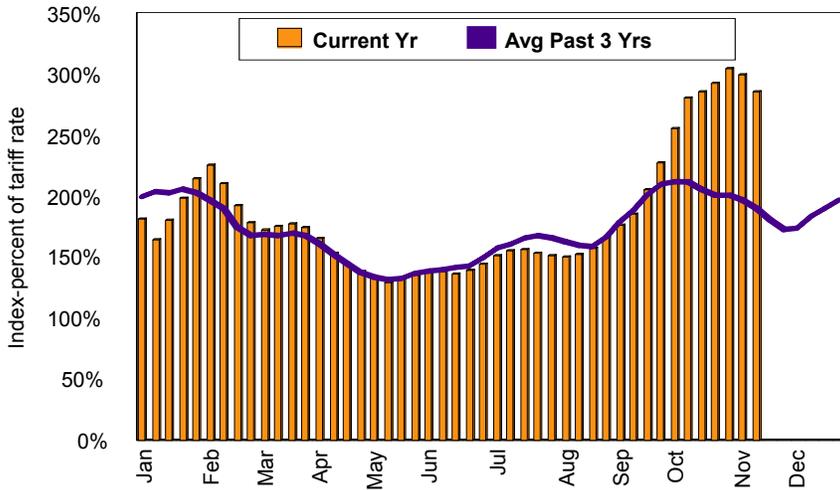
Delivery for:	Dec-03	Jan-04	Feb-04
COT/N. Grain	no bid	no bid	\$84
COT/S. Grain	no bid	\$4	\$40
GCAS/Region 1	\$18	\$29	\$13
GCAS/Region 2	\$195	\$73	\$30

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	11/12/03	11/5/03	Dec '03	Feb '04
Twin Cities	236	260	nq	nq
Mid-Mississippi	228	260	225	nq
Illinois River	214	277	192	185
St. Louis	167	252	154	150
Lower Ohio	204	310	157	150
Cairo-Memphis	164	237	142	136

Source: Transportation & Marketing/AMS/USDA

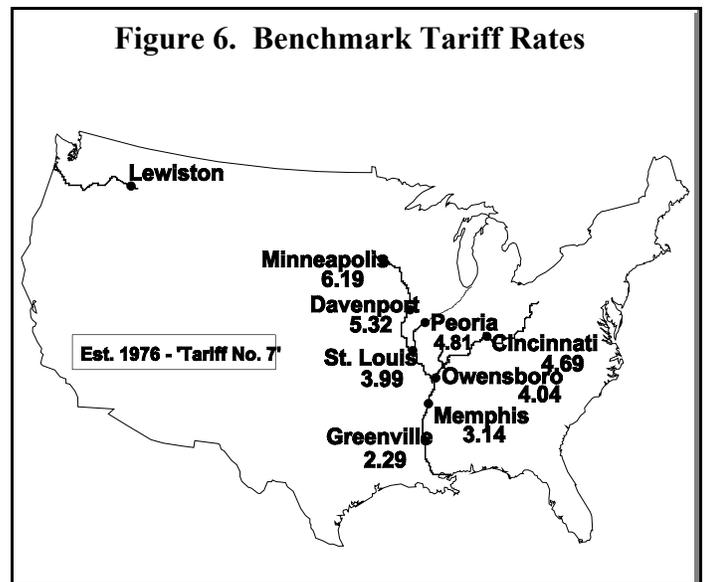
**Table 8--Barge futures market**

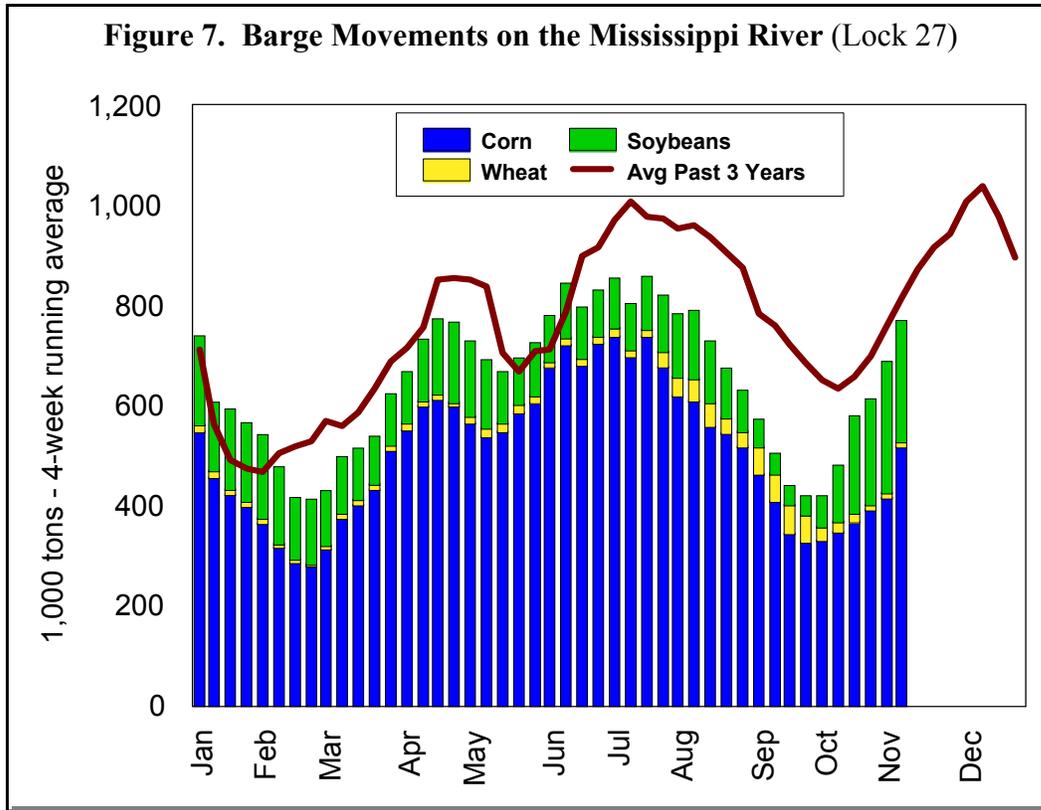
Southbound barge freight nominal/cash basis values  
 Index=percent of tariff, based on 1976 tariff benchmark rate

Week ended	River/region	Contract period	Rate	
			futures	cash
11/18/03	St. Louis	Dec.	n/a	150
		Feb.	n/a	145
		Apr.	n/a	145
		May	n/a	140
		June	n/a	145
		Illinois River	Dec.	n/a
		Feb.	n/a	195
		Apr.	n/a	160
		May	n/a	150
		June	n/a	155

Source: St. Louis Merchants Exchange

**Figure 6. Benchmark Tariff Rates**



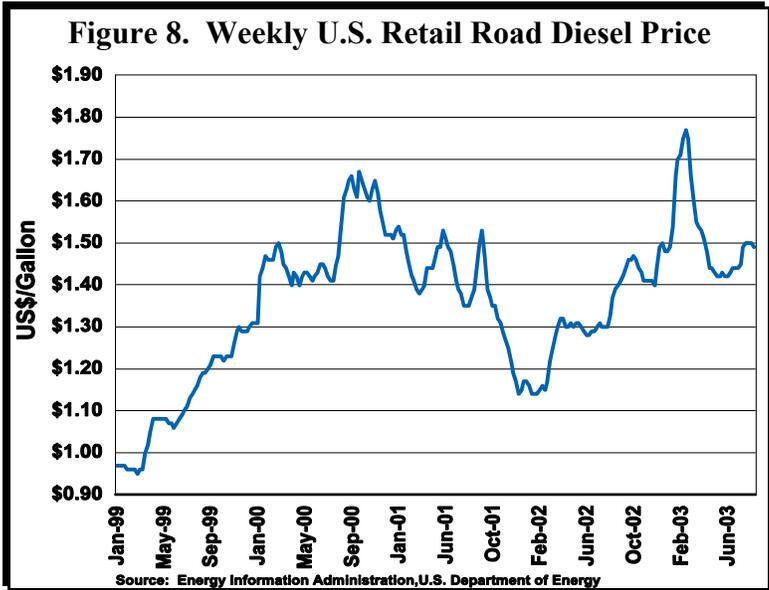


**Table 9--Barge grain movements (1,000 tons)**

Week ending 11/08/03	Corn	Wht	Sybn	Total
<b>Mississippi River</b>				
Rock Island, IL (L15)	309	6	42	359
Winfield, MO (L25)	416	11	94	523
Alton, IL (L26)	806	19	133	959
Granite City, IL (L27)	814	22	137	975
<b>Illinois River (L8)</b>	294	6	16	315
<b>Ohio River (L52)</b>	46	0	138	191
<b>Arkansas River (L1)</b>	n/a	n/a	n/a	n/a
2003 YTD	24,514	2,476	7,489	35,103
2002 YTD	29,417	2,304	9,654	42,753
% 2002 YTD	84%	108%	78%	83%
2002 Total	35,066	2,590	11,634	50,810

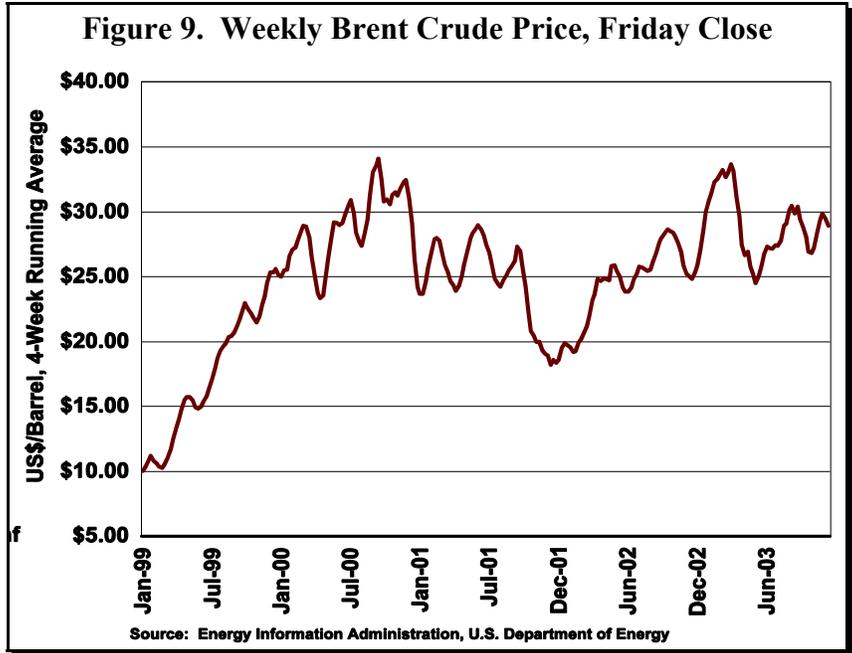
Source: U.S. Army Corp of Engineers  
 YTD and Calendar year total includes Miss/27, Ohio/52 and Ark/1.

**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)-11/18/03**

Type	This week	Last week	Change
Light Sweet Crude (NYMEX)	28.82	30.65	↓
Brent Crude	32.49	28.95	↑

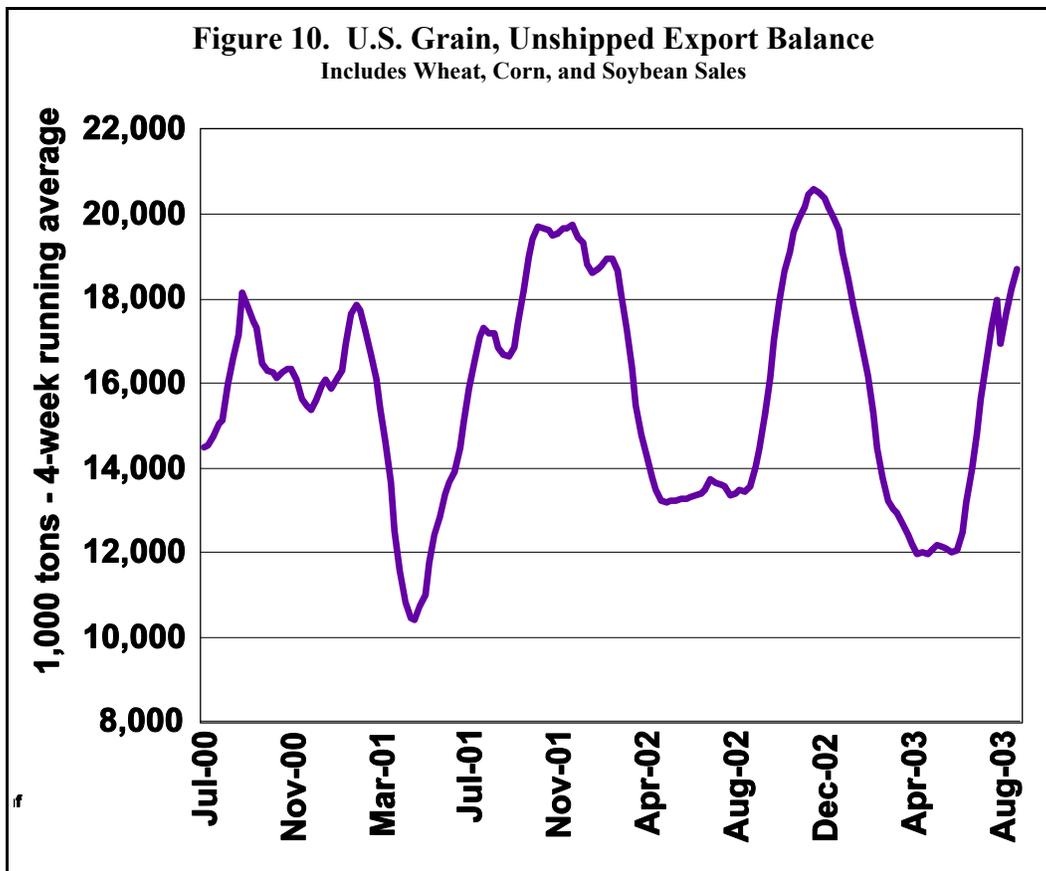
Source: U.S. Department of Energy, [www.eia.doe.gov](http://www.eia.doe.gov); \*U.S. Refiner Crude Acquisition Cost, Composite Domestic & Import

**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				
11/06/03	2,382	473	924	609	122	4,509	10,239	10,891	25,639
This Week Year Ago	1,384	723	1,625	741	183	4,655	7,986	7,403	20,044
Cumulative Exports-Crop Year									
2003/04 YTD	5,297	1,866	3,094	1,873	602	12,731	8,062	6,460	27,253
2002/03 YTD	3,740	1,216	3,087	1,632	404	10,079	6,521	5,613	22,213
% 2002/03 YTD	142%	153%	100%	115%	149%	126%	124%	115%	123%
2001/02 Total	8,761	5,485	5,582	3,175	1,133	24,135	48,003	29,926	102,064
2000/01 Total	9,314	4,445	5,775	5,156	1,130	25,819	47,734	27,567	101,120

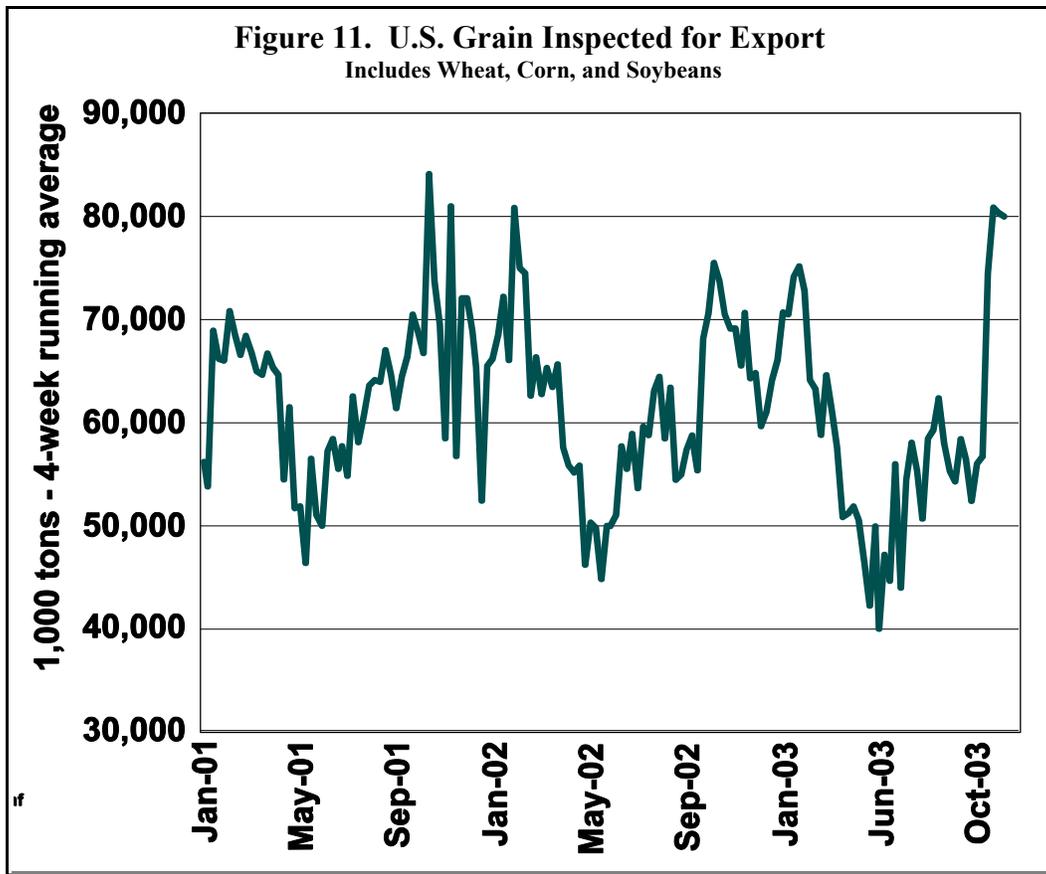
Source: Foreign Agricultural Service/USDA; YTD: Year-to-Date; Crop Year: Wheat=5/31-6/01, Corn & Soybeans=9/01-8/31



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

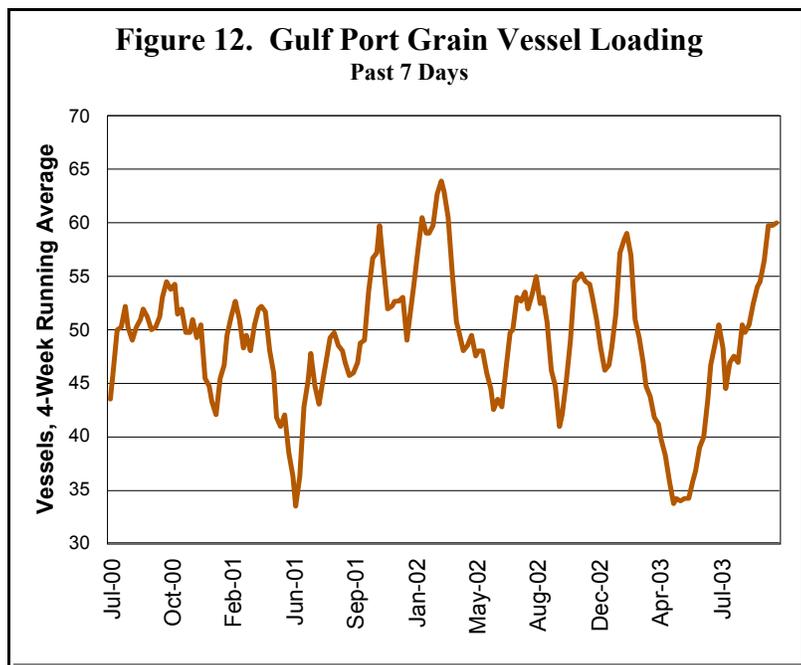
Date	<u>Pacific Region</u>			<u>Mississippi Gulf</u>			<u>Texas Gulf</u>			<u>Port Region Total</u>		
	<i>Wheat</i>	<i>Corn</i>	<i>Soybn</i>	<i>Wheat</i>	<i>Corn</i>	<i>Soybn</i>	<i>Wheat</i>	<i>Corn</i>	<i>Soybn</i>	<i>Pacific</i>	<i>Mississippi</i>	<i>Texas</i>
11/13/03	162	129	144	118	741	666	205	18	16	435	1,526	240
2003 YTD	7,860	4,611	4,266	5,379	26,006	15,349	6,006	649	94	16,736	46,734	6,749
2002 YTD	7,917	3,356	2,612	5,118	32,266	15,327	5,237	259	373	13,885	52,712	5,869
% 2002 YTD	99%	137%	163%	105%	81%	100%	115%	250%	25%	121%	89%	115%
2002 Total	9,128	3,994	2,870	5,670	36,383	18,549	5,875	266	373	15,992	60,602	6,514

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)**

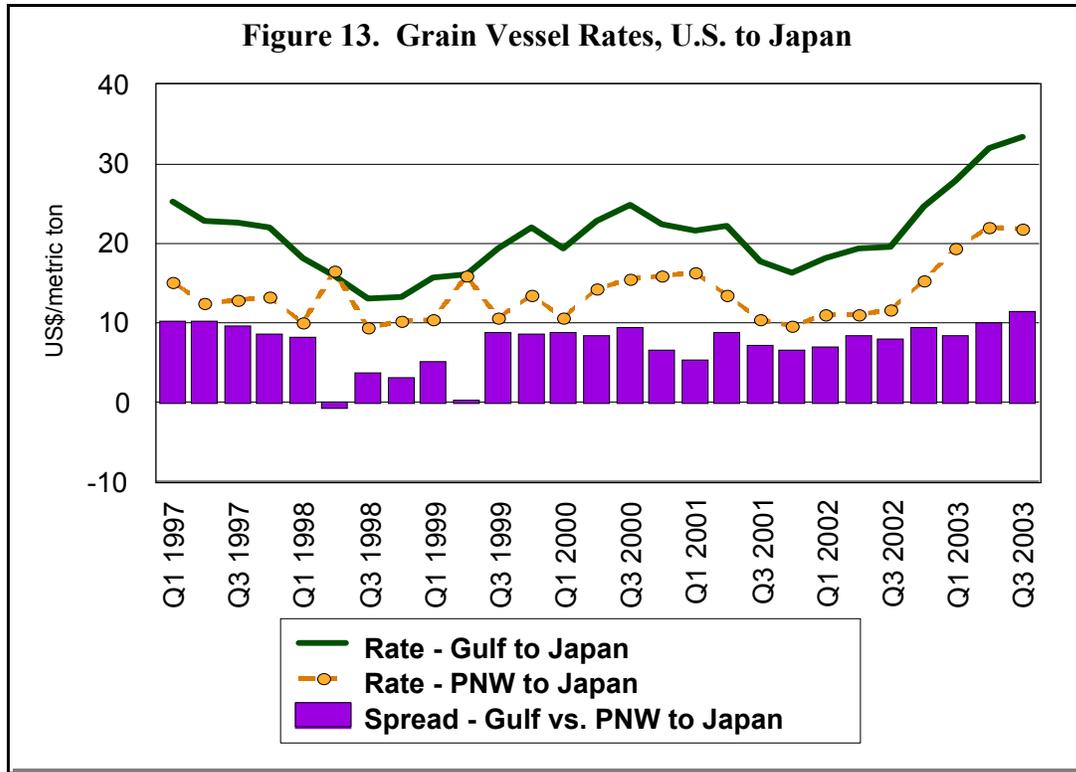
Date	Gulf			Pacific Northwest	Vancouver B.C.
	In Port	Loaded 7-Days	Due Next 10-Days	In Port	In Port
11/06/03	34	56	93	9	3
11/13/03	37	57	83	10	13
2002 Range	(15..55)	(33..66)	(44..82)	(3..15)	(0..12)
2002 Avg	35	51	65	8	5

Source: Transportation & Marketing/AMS/ USDA

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

	2003 3 <sup>rd</sup> Qtr	2002 3 <sup>rd</sup> Qtr	Change %		2003 3 <sup>rd</sup> Qtr	2002 3 <sup>rd</sup> Qtr	Change %
<b>Gulf to</b>				<b>Pacific NW to</b>			
Japan	\$33.83	\$19.54	73%	Japan	-	\$11.57	-
Mexico	-	\$7.25	-	Taiwan	\$19.50	\$11.21	73%
Taiwan	\$33.00	-	-				
N. Europe	\$22.88	-	-	<b>Argentina/Brazil to</b>			
N. Africa	\$25.50	\$13.50	89%	Med. Sea	\$33.38	\$19.93	67%
Med. Sea	\$24.88	\$11.92	109%	N. Europe	\$22.50	\$18.65	21%
				China	\$34.75	-	-

Source: Transportation & Marketing/AMS/USDA



**Table 15--Ocean freight rates for selected shipments**

Week Ending 11/15/03

Export region	Import region	Grain	Month	Volume loaded (Tons)	Freight rate (\$/ton)
U.S. Gulf	Adriatic	Hvy Grain	Oct 28/31	36,000	\$28.50
U.S. Gulf	Ghana	Wheat	Oct 20/30	15,000	\$42.65*
U.S. Gulf	Taiwan	Hvy Grain	Nov 5/18	44000/46000	\$44.00
U.S. Gulf	Japan	Hvy Grain	Nov 1/10	42,000/44,000	\$38.80
U.S. Gulf	Japan	Hvy Grain	Oct 20/30	54,000	\$37.00
U.S. Gulf	China	Hvy Grain	Oct 25/Nov 5	55,000	\$45.00
U.S. Gulf	China	Hvy Grain	Nov 8/15	55,000	\$46.00

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

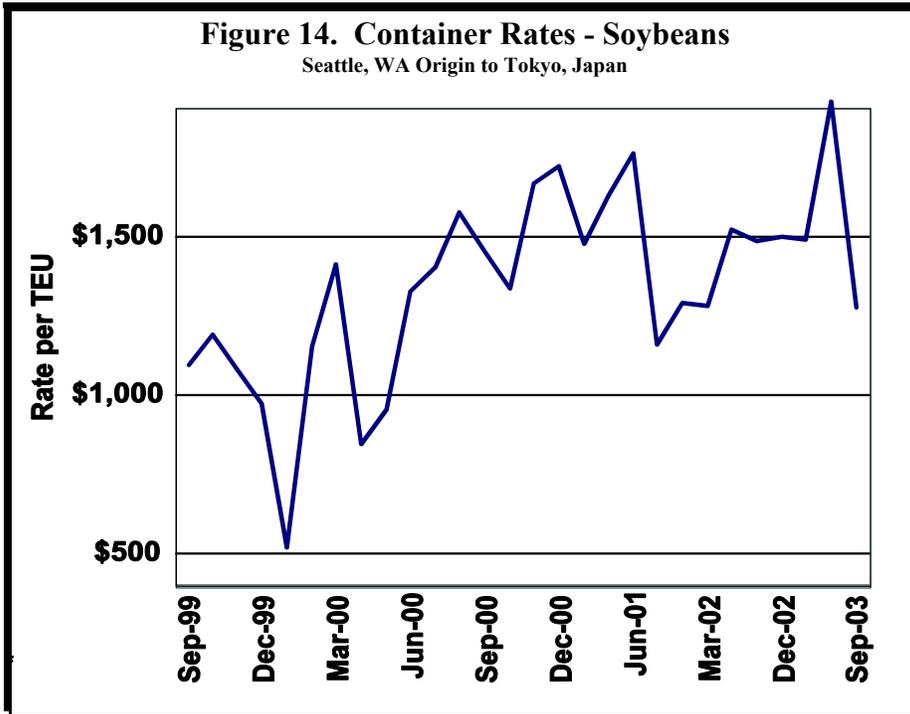
\*Most food aid from the United States is required to be shipped on U.S. flag vessels. The vessels are of limited availability resulting in higher rates. In addition, destinations receiving food aid generally lack adequate port unloading facilities, requiring the vessel to remain in port for a longer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