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Agricultural Marketing Service

Transportation and Marketing Programs

Marketing and Transportation Analysis

# GRAIN TRANSPORTATION PROSPECTS



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# GRAIN TRANSPORTATION PROSPECTS

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This report was prepared by the Agricultural Marketing Service's (AMS) Marketing and Transportation Analysis Prospects Team, Karla Martin, Managing Editor, (202) 720-8264. Team members are:

Karla Martin, Agricultural Economist <a href="mailto:Karla.martin@usda.gov">Karla.martin@usda.gov</a> (202) 720-8264	Managing Editor and Grain Market Situation
Surajudeen Olowolayemo, Agricultural Economist <a href="mailto:Surajudeen.olowolayemo@usda.gov">Surajudeen.olowolayemo@usda.gov</a> (202) 690-1328	Grain Market Situation
Hooshang Fazel, Agricultural Economist <a href="mailto:Hooshang.fazel@usda.gov">Hooshang.fazel@usda.gov</a> (202) 690-4440	Ocean Freight Transportation Situation
Nick Marathon, Economist <a href="mailto:Nick.marathon@usda.gov">Nick.marathon@usda.gov</a> (202) 690-0331	Barge Transportation Situation
Marvin Prater, Agricultural Economist, <a href="mailto:Marvin.prater@usda.gov">Marvin.prater@usda.gov</a> (202) 690-6290	Rail Transportation Situation
James Del Ciello, Agricultural Marketing Specialist <a href="mailto:James.delciello@usda.gov">James.delciello@usda.gov</a> (202) 720-1378	Truck Transportation Situation

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## Summary

August production forecasts for U.S. grain (corn, sorghum, barley, oats, wheat, and rye) and soybean production are approximately 15.1 billion bushels for 2001/02, down 5 percent from the 2000/01 marketing year. Total use is projected at 16 billion bushels, up slightly from 2000/01, and ending stocks are down 22 percent. Exports have increased by 91.0 million bushels, up 2.14 percent from last year.

June 1 grain and soybean stocks in all positions are projected at 5.76 billion bushels, up 2 percent from last year and 27 percent from the 5-year average. Stocks were evenly split at off- and on-farm levels. Total stocks were up in six of the ten producing regions, with the Northern Plains having increased the most, 11 percent since last year.

The August production forecast for all classes of wheat put the 2001/02 wheat crop at 1.98 billion bushels, down approximately 238 million bushels or 11 percent from 2000/01. Domestic use is projected at 1.28 billion bushels, down 47 million bushels or 4 percent below 2001/02. And, exports are projected at 1.05 billion bushels, down 11 million bushels. Wheat stored in all positions on June 1, 2001, is at 873 million bushels, down 8 percent from a year ago and 38 percent above the 5-year average. On-farm stocks, estimated at 197 million bushels, were down 13 percent from the previous year but 45 percent above the 5-year average.

The U.S. corn crop for 2001/02 is forecast at 9.3 billion bushels, down 702 million bushels or 7 percent from the previous year. Exports of U.S. corn are projected at 2 billion bushels, up 125 million bushels or 7 percent from last year. Total corn use is projected up by 135 million bushels to 9.8 billion bushels. The forecast price range for corn is \$1.90-\$2.30 per bushel for 2001/02, compared to \$1.85 per bushel for 2000/01. Soybean production is forecast at 2.87 billion bushels. However, exports remain the same as during this period last year.

In relation to transportation, ocean freight rates peaked at different times for the two key grain routes, U.S. Gulf to Japan and Pacific Northwest (PNW) to Japan. For the Gulf to Japan, the average ocean freight rates reached a high of \$24.04 per metric ton in mid-May, and the rate from the PNW peaked (\$17.68 per metric ton) in mid-March. Since then, the average ocean freight rates for both of these routes have been falling.

Barge grain movements for July-August 2001 were 1.1 million tons per week, a 21-percent increase over the 5-year third quarter average. Although barge traffic slowed at L&D 15, grain movements increased at locks below that point. L&D 27, the last lock on the Mississippi, reported several weeks of over 1 million tons per week during June and into August. A surge in movements during midsummer is unusual and may indicate an anticipated increase in demand for exports. Soybean exports have been strong throughout the year, and, with a forecast of a record crop, there could be the potential for increased soybean barge movements on the Mississippi River. However, favorable ocean freight rates from the PNW to Asian markets may divert some soybeans that would have been shipped on the Mississippi River.

The availability of grain cars, though plentiful during the summer months, is expected to tighten considerably during the next few months. Since the wheat crop for 2001/02 is projected to be sharply lower than last year's crop, the need to relocate grain in the Plains States has been less than normal. Prior to and during harvest of the fall crops, however, the demand for grain transportation is expected to increase. But, bidding activity for guaranteed railcars has been weak, so far, and prices in the secondary railcar market have been moderate.

Trucks are an indispensable link in the supply chain, and agricultural producers transport more freight than any other sector in the American economy. The modal share for agricultural goods, whether measured in tons, value, or ton-miles, indicates that trucks remain the dominant mode of choice for transporting agricultural products to market. There are factors that may alter the way motor carrier services are provided to the agricultural economy in the future. The weaker U.S. economy, high fuel costs, expensive liability insurance rates, and changing asset valuations have lowered profits. These dynamics are forcing many smaller, independent, and owner-operator trucking firms into bankruptcy.

## Grain Market Situation

### Grain and Soybeans

Forecasts for U.S. grain (corn, sorghum, barley, oats, wheat, and rye) and soybean production is approximately 15.1 billion bushels for 2001/02, down 5 percent from a year earlier. Total use is projected at 16 billion bushels, up slightly from 2000/01. Ending stocks are down 22 percent from a year earlier.

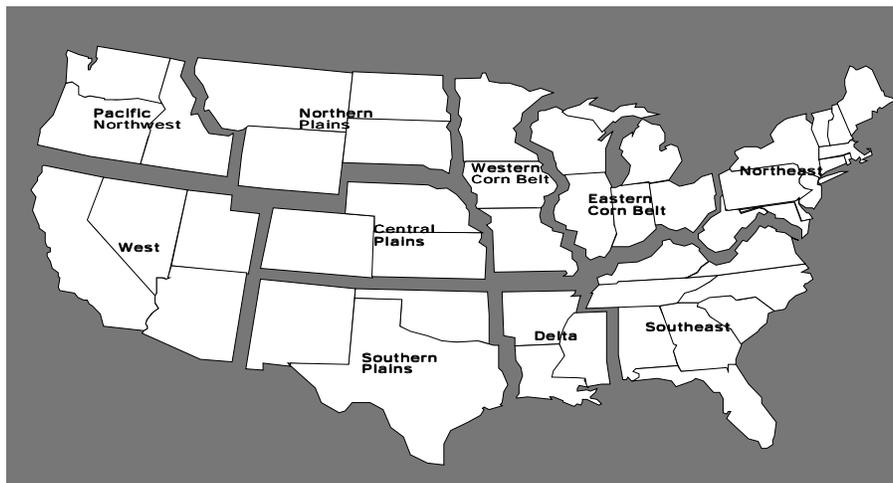
**Supplies.** Total supply for U.S. grain and soybeans is projected at 18.6 billion bushels, 4 percent lower than in 2000/01. And, imports are up 2 percent from a year earlier. The Eastern and Western Corn Belts, together, account for 8.51 billion bushels of the forecast grain and soybeans produced in the United States, 57 percent of the total production for 2001/02. In the Eastern Corn Belt, production was 4.67 billion bushels, down 4 percent from the previous year but up 4 percent, compared to the 5-year average. Production in the Western Corn Belt was down 10 percent at 3.84 billion bushels and 6 percent lower than the 5-year average. Forecast production in the Central Plains has increased by 7 percent, the only increase of all the regions. This 167-million-bushel increase is also a 5-percent decrease from the 5-year average (figure 1, table 1).

**Use.** Total use is 16 billion bushels, projected up slightly, with an additional 15 million bushels over last year. Domestic use is projected at 11.7 billion bushels. Exports have increased by 91 million bushels, a 2-percent increase from last year.

**Stocks and Storage.** June 1 grain and soybean stocks in all positions are projected at 5.76 billion bushels, up 2 percent from last year and 27 percent above the 5-year average. Of the total stocks, off-farm stocks were reported as 50.1 percent. Total stocks were up in 6 of the 10 producing regions (table 2), with the Northern Plains having increased the most by 11 percent since last year. The Eastern and Western Corn Belts contributed 3.64 billion bushels of stocks stored, 63.4 percent of the U.S. total.

As of June 1, 29 percent of total U.S. grain storage capacity, as reported December 1, 2000, was in use. Of the total, 25 percent of the on-farm and 35 percent of the off-farm capacity were in use. The highest utilization rates were in the Eastern and Western Corn Belts, where 33 and 38 percent, respectively, of all storage capacity was in use on June 1 (table 3).

**Figure 1--U.S. grain production regions**



Source: USDA-AMS

**Table 1--U.S. grain<sup>1</sup> and soybean production, 1996/97-2001/02**

Region	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	Percent of 2000/01	Percent of 5-yr. avg.
Southeast	770	703	584	565	702	631	90	95
Delta	475	403	338	353	361	333	92	86
Eastern Corn Belt	4,034	4,493	4,605	4,530	4,877	4,673	96	104
Western Corn Belt	3,981	3,934	4,260	4,097	4,243	3,837	90	94
Southern Plains	649	828	717	804	675	593	88	81
Central Plains	2,767	2,898	3,087	2,945	2,532	2,699	107	95
Northern Plains	1,522	1,325	1,550	1,338	1,521	1,362	90	94
Pacific Northwest	497	478	459	390	460	356	77	78
West	150	143	139	120	120	93	78	69
Other States <sup>c</sup>	394	341	361	275	415	495	119	138

<sup>1</sup>U.S. grains include corn, sorghum, barley, oats, wheat, and rye.

<sup>c</sup>Other States include: Alabama, Arizona, California, Colorado, Florida, Georgia, Iowa, Idaho, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Montana, Nevada, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Virginia, Washington, Wisconsin, and Wyoming.

Note: The Northeast is combined with Other States region. Individual States will be published in the "Small Grains 2001 Summary" and the "Crop Production 2001 Summary".

Source: USDA-NASS

**Table 2—U.S. grain and soybean stocks by position, June 1, 1995-2001**

Region	1995			1996			1997		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	35	30	65	20	29	49	41	36	77
Southeast	37	73	110	16	66	82	27	58	85
Delta	4	35	39	2	30	32	2	26	28
Eastern Corn Belt	729	773	1,502	355	502	857	501	453	954
Western Corn Belt	1,162	681	1,843	471	531	1,001	742	499	1,241
Southern Plains	9	106	115	6	90	95	9	90	99
Central Plains	340	414	754	110	313	423	309	334	643
Northern Plains	308	118	427	125	94	219	272	109	381
Pacific Northwest	8	71	79	8	73	80	11	81	92
West	1	14	15	1	14	15	1	16	17
Unallocated	80	58	138	48	53	101	73	48	122
United States	2,714	2,373	5,087	1,161	1,793	2,954	1,988	1,748	3,738

Region	1998			1999			2000		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	29	35	64	32	42	74	27	52	79
Southeast	25	53	78	20	60	80	20	63	83
Delta	0	34	34	0	49	49	0	41	41
Eastern Corn Belt	653	684	1,337	772	786	1,558	708	936	1,644
Western Corn Belt	944	531	1,475	1,247	680	1,927	1,132	697	1,829
Southern Plains	2	132	135	4	189	194	5	210	215
Central Plains	356	426	782	483	536	1,020	379	609	987
Northern Plains	329	105	434	401	125	525	317	121	438
Pacific Northwest	24	103	128	22	107	129	21	113	135
West	0	24	25	1	6	7	0	20	21
Unallocated	114	39	154	133	55	188	106	48	154
United States	2,478	2,168	4,646	3,116	2,636	5,752	2,716	2,910	5,626

Region	2001			Percent of 2001			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>								
Northeast	41	42	83	150	80	104	137	107	120
Southeast	26	60	86	130	95	103	120	100	105
Delta	0	26	26	150	64	65	9	73	72
Eastern Corn Belt	810	895	1,705	114	96	104	135	133	134
Western Corn Belt	1,178	760	1,938	104	109	106	130	129	130
Southern Plains	3	179	181	60	85	85	53	126	123
Central Plains	342	595	937	90	98	95	104	134	122
Northern Plains	345	141	485	109	117	111	119	127	122
Pacific Northwest	13	97	110	62	85	82	77	101	98
West	0	23	24	100	115	115	57	145	141
Unallocated	114	71	186	108	148	120	121	147	129
United States	2,872	2,888	5,760	106	99	102	125	128	127

Source: USDA-NASS

**Table 3—U.S. grain storage capacity utilization, June 1, 1996-2001**

Region	1996			1997			1998		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>percent</i>			<i>percent</i>			<i>percent</i>		
Northeast	8	19	12	18	24	20	13	24	17
Southeast	3	19	9	5	17	10	5	16	9
Delta	1	8	6	1	7	5	0	9	6
Eastern Corn Belt	12	24	17	17	22	19	23	33	27
Western Corn Belt	14	31	20	23	29	25	30	31	30
Southern Plains	2	8	7	4	10	8	1	15	12
Central Plains	7	20	13	19	22	21	22	29	25
Northern Plains	8	21	11	17	25	19	21	24	22
Pacific Northwest	3	19	12	4	21	14	10	27	20
West	0	10	11	0	11	12	0	17	18
United States	10	22	15	18	22	20	23	27	25

Region	1999			2000			2001		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>percent</i>			<i>percent</i>			<i>percent</i>		
Northeast	14	29	20	12	35	21	18	29	20
Southeast	4	18	10	4	20	10	5	19	11
Delta	0	13	9	0	11	7	0	7	5
Eastern Corn Belt	26	37	31	24	44	32	27	41	33
Western Corn Belt	39	39	39	35	40	37	36	44	38
Southern Plains	2	23	18	2	25	20	1	21	17
Central Plains	29	35	32	23	39	31	21	35	28
Northern Plains	25	28	25	19	26	21	21	31	23
Pacific Northwest	9	28	21	9	30	22	5	26	18
West	0	4	5	0	14	14	0	15	15
United States	28	33	30	24	36	29	25	35	29

Note: Based on stage capacity as reported December of the preceding year.  
Source: USDA-NASS

## Wheat

The production forecast for all classes of wheat for the 2001/02 wheat crop is 1.98 billion bushels, down 238 million bushels or 11 percent from 2000/01. Total wheat use for 2001/02 is projected at 2.33 billion bushels, down 58 million bushels. Ending stocks for the 2001/02 marketing year are projected at 616 million bushels, down 29 percent from the previous year's level.

**Supplies.** For the 2001/02 marketing year beginning June 1, production forecast for all classes of wheat is 1.99 billion bushels, down 11 percent from last year. With imports projected at 90 million bushels, the total supplies are projected at 2.95 billion bushels, down 315 million bushels or 10 percent, compared to 2000/01.

Production forecast of winter wheat for 2001/02 is 1.39 billion bushels, down 178 million bushels or 11 percent. Hard Red Winter (HRW) wheat production is projected at 796 million bushels, down 44 million bushels or 6 percent from 2000/2002. Soft Red Winter (SRW) wheat is projected at 386 million bushels, down 85 million bushels or 18 percent. Winter wheat production is down in the major producing regions (figure 2) except in the Southern and Central Plains and the West.

**Use.** Total wheat use for 2001/02 is projected at 2.33 billion bushels, down 58 million bushels or 2 percent from 2000/01. Domestic use is projected at 1.28 billion bushels, down 47 million bushels or approximately 4 percent below 2001/02. Exports are projected at 1.05 billion bushels, down 11 million bushels from the previous year.

**Stocks and Storage.** Wheat stored in all positions on June 1, 2001, is at 873 million bushels, down 8 percent from a year ago but 38 percent above the 5-year average (table 4). On-farm stocks, estimated at 197 million bushels, were down 13



**Table 4--U.S. wheat stocks by position, June 1, 1995-2001**

Region	1995			1996			1997		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	0	10	10	0	6	6	0	9	9
Southeast	0	5	5	0	5	5	0	5	5
Delta	0	1	1	0	3	3	0	2	2
Eastern Corn Belt	1	36	37	1	29	30	1	29	30
Western Corn Belt	16	32	48	5	31	36	21	23	44
Southern Plains	1	46	47	2	40	42	2	29	30
Central Plains	15	75	90	6	66	72	7	54	61
Northern Plains	123	71	194	55	48	103	115	58	172
Pacific Northwest	4	55	59	4	56	60	7	63	69
West	0	8	8	0	9	9	0	9	9
Unallocated	3	4	7	2	9	10	2	11	13
United States	163	343	507	75	301	376	155	289	444

Region	1998			1999			2000		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	0	15	15	0	18	18	0	23	23
Southeast	0	7	7	0	12	12	0	14	14
Delta	0	5	5	0	7	7	0	2	2
Eastern Corn Belt	3	69	72	5	105	110	3	119	122
Western Corn Belt	18	35	53	24	47	70	19	46	65
Southern Plains	2	75	76	4	121	125	4	127	131
Central Plains	23	135	158	34	190	224	28	222	250
Northern Plains	153	56	209	186	68	254	148	62	210
Pacific Northwest	19	82	101	13	83	96	16	90	106
West	0	15	15	1	12	13	0	14	14
Unallocated	6	5	11	11	7	18	8	5	13
United States	224	498	722	278	668	946	227	723	950

Region	2001			Percent of 2000			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>								
Northeast	0	18	18	0	79	79	0	129	129
Southeast	0	10	10	0	0	0	0	0	0
Delta	0	4	4	78	74	75	0	142	143
Eastern Corn Belt	0	21	21	98	103	103	128	175	174
Western Corn Belt	16	42	58	82	92	89	90	116	107
Southern Plains	2	110	112	55	87	86	86	140	139
Central Plains	18	202	220	65	91	88	92	151	144
Northern Plains	143	65	208	97	105	99	109	111	110
Pacific Northwest	9	74	83	56	83	79	77	100	97
West	0	14	14	100	99	99	111	119	119
Unallocated	6	14	19	69	281	150	184	97	135
United States	197	676	873	87	93	92	145	135	138

Source: USDA-NASS

percent from the previous year and 45 percent above the 5-year average. Off-farm stocks, estimated at 676 million bushels, were down 7 percent from a year ago but 35 percent above the 5-year average.

Sixty-two percent of the Nation's on-farm stock was in the Plains regions with the Central Plains accounting for 25 percent, followed by the Northern Plains with 25 percent and the Southern Plains with 13 percent. The Central Plains experienced the largest absolute reduction in stock of 30 million bushels or 12 percent. Southern Plains stocks fell by 19 million bushels or 14 percent to 112 million bushels. On-farm stocks in Texas declined by 13 million bushels, while stocks in Oklahoma fell by 5.9 million bushels. The Southern Plains stocks were approximately equally distributed between Texas and Oklahoma. Total stocks in both the Central and Southern Plains were 44 and 39 percent, respectively, above the 5-year average. The Southern and Central Plains regions had a majority of their stocks off farm (98 and 92 percent, respectively).

## Corn

The U.S. corn crop for 2001/02 is projected at 9.3 billion bushels, down 702 million bushels or 7 percent from the previous year. Projected domestic use is little changed, but exports are projected up 125 million bushels at 2 billion bushels or 7 percent from last year. With projected use well above production, ending stocks (1.46 billion bushels) are down 544 million bushels or 27 percent from last year.

**Supplies.** The August production forecast of the 2001/02 corn crop is 9.3 billion bushels, down 702 million bushels or 7 percent from the previous year (table 5). With the beginning stocks projected at 2 billion bushels and imports at 15 million bushels, total supplies for 2001/02 are projected at 11.3 billion bushels. This is down 409 million bushels or 3 percent from the estimated available supplies for 2000/01.

Corn production is forecast down in all regions except the Central Plains, where production is expected to increase by 33 million bushels or 2 percent from 2000/01. However, production in the Central Plains is still 4 percent less than the 5-year average (table 5).

While the Eastern and Western Corn Belts are the two largest corn producing regions, accounting for 37 and 30 percent of total production, respectively, they also are expected to show the largest absolute decline in production. Production is forecast down 194 million bushels to 3.38 billion bushels in the Eastern Corn Belt. This is 5 percent below the previous year and 3 percent above the 5-year average. While Indiana recorded a modest gain of 29.4 million bushels or 4 percent, Illinois, Michigan, Ohio, and Wisconsin experienced declines in production. Production in Illinois fell by 99.1 million bushels, while Ohio and Wisconsin production fell by 50.4 and 45.8 million bushels, respectively. Production is forecast down 320 million bushels to 2.77 billion bushels in the Western Corn Belt. This is 10 and 7 percent, respectively, below the previous year and 5-year average for the region. Production is forecast down 144.8 and 118.5 million bushels (15 and 7 percent), respectively, in Minnesota and Iowa. Production is forecast down 56.87 million bushels or 14 percent in Missouri. While production is down in the Northeast, Southeast, and Northern Plains, production at these regions is above the 5-year average.

**Table 5--U.S. corn production, 1996/97-2001/02**

Region	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	Percent of 2000/2001	Percent of 5-yr. avg.
	<i>million bushels</i>							
Northeast	295	232	254	172	282	258	91	105
Southeast	461	395	324	330	412	385	94	100
Delta	155	118	108	89	104	101	97	88
Eastern Corn Belt	2,994	3,260	3,336	3,304	3,577	3,383	95	103
Western Corn Belt	2,920	2,793	3,087	2,996	3,093	2,773	90	93
Southern Plains	238	280	228	284	285	190	66	72
Central Plains	1,663	1,650	1,814	1,733	1,580	1,613	102	96
Northern Plains	428	394	528	452	535	482	90	103
Pacific Northwest	34	30	33	32	19	11	61	39
West	45	55	48	40	40	32	81	71
Other States <sup>1</sup>	n/a	n/a	n/a	n/a	41	37	n/a	n/a
United States	9,233	9,207	9,759	9,431	9,968	9,266	93	97

<sup>1</sup>Other States include: Arizona, Florida, Idaho, Montana, Oregon, Utah, West Virginia, and Wyoming.  
Source: USDA-NASS

**Use.** Total corn use for 2001/02 is at 9.8 billion bushels, up 135 million bushels or 1 percent from last year. Domestic use is projected at 7.83 billion bushels, up 10 million bushels from the previous year. Export corn use for the current marketing year is projected at 2 billion bushels, up 125 million bushels or 7 percent from 2000/01.

**Stocks and Storage.** June 1 corn stocks in all positions were reported at 3.9 billion bushels, up 9 percent from a year earlier and 36 percent above the 5-year average (table 6). June 1 stocks were reported up for all regions, with the Western Corn Belt recording a net absolute gain of 157 million bushels. A total of 1.54 billion bushels of corn was on farm in the Western Corn Belt. This is 11 percent above the previous year and 40 percent above the 5-year average. Sixty-four percent of the Western Corn Belt stocks were on farms. Stocks were up in all States in the region, with Iowa leading with a net gain of 93.8 million bushels. Approximately 890 million bushels of on- and off-farm stocks were on farms in Iowa, representing 58 percent of the total stocks on farm in the region. The Eastern Corn Belt stored 1.33 billion bushels of corn, 52 percent of which were on the farm. The Eastern Corn Belt stocks were 6 percent above the previous year and 38 percent above the 5-year average. Stocks on farm increased in all States in the region except Michigan, where stocks on farm declined by 4.1 million bushels. Illinois was responsible for having the largest share of Eastern Corn Belt stocks. Illinois stocks on farm were 661.9 million bushels of corn as stocks, representing a gain of 37.6 million bushels, compared to the previous year. Indiana, Ohio, and Wisconsin also recorded gains in stocks on farm. Five hundred eighty-seven million bushels of corn were on farm as stocks in the Central Plains. This is 2 percent above the previous year and 23 percent above the 5-year average. Fifty-two percent of the stocks were on off-farm facilities.

**Table 6--U.S. corn stocks by position, June 1, 1995-2001**

Region	1995			1996			1997		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	32	17	49	18	20	38	39	25	64
Southeast	24	41	65	10	35	45	23	36	58
Delta	0	11	11	0	7	7	0	9	9
Eastern Corn Belt	609	570	1,179	268	335	603	420	324	744
Western Corn Belt	952	437	1,389	337	321	658	603	334	937
Southern Plains	4	29	33	3	32	34	5	34	38
Central Plains	265	208	473	76	163	239	252	197	449
Northern Plains	120	16	136	30	13	43	99	24	123
Pacific Northwest	0	4	4	0	5	5	0	6	6
West	0	4	4	0	4	4	0	4	4
Unallocated	66	6	72	39	5	43	61	3	64
United States	2,072	1,343	3,415	780	938	1,718	1,501	996	2,497
Region	1998			1999			2000		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	27	18	45	30	20	50	26	19	44
Southeast	25	33	57	20	32	52	20	36	56
Delta	0	12	12	0	20	20	0	15	15
Eastern Corn Belt	545	514	1,059	628	529	1,157	581	668	1,249
Western Corn Belt	761	349	1,110	987	430	1,417	922	459	1,381
Southern Plains	0	40	40	0	43	43	0	41	41
Central Plains	287	207	494	387	247	634	301	274	575
Northern Plains	112	20	132	142	21	163	123	26	148
Pacific Northwest	0	6	6	0	9	9	0	7	7
West	0	6	6	0	6	6	0	4	4
Unallocated	74	6	80	63	3	66	58	6	64
United States	1,830	1,210	3,040	2,257	1,359	3,616	2,030	1,556	3,586
Region	2001			Percent of 2000			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>								
Northeast	39	20	59	153	109	134	140	100	123
Southeast	26	39	65	130	106	115	133	113	120
Delta	0	18	18	0	121	121	0	142	142
Eastern Corn Belt	687	643	1,330	118	96	106	141	136	138
Western Corn Belt	987	551	1,538	107	120	111	137	145	140
Southern Plains	0	53	53	0	130	130	0	140	135
Central Plains	283	304	587	94	111	102	109	140	123
Northern Plains	146	43	189	119	169	128	144	210	156
Pacific Northwest	0	8	8	0	112	112	0	124	124
West	0	7	7	0	181	181	0	155	155
Unallocated	63	6	69	109	99	108	107	130	109
United States	2,231	1,693	3,924	110	109	109	133	140	136

Source: USDA-NASS

## Soybeans

The U.S. soybean crop is forecast at a record 2.87 billion bushels in production, up 97 million bushels or 4 percent from a year earlier. Total use is up slightly at 2.82 billion bushels, 8 million higher than last year. And, ending stocks (3 billion bushels) are up 50 million bushels or 20 percent from last year.

**Supplies.** This year's soybean crop is projected at 2.87 billion bushels, up 97 million bushels or 4 percent from 2000/01 (table 7). With beginning stocks at 250 million bushels and imports at 4 million bushels, the total supplies for 2001/02 are projected at 3.12 billion bushels, up 58 million bushels or 2 percent above last year's level.

Soybean production is forecast up in all regions except the Northeast, Southeast, and Western Corn Belt. The Corn Belt regions account for 69 percent of the total soybean production, with the Eastern Corn Belt leading with 39 percent of the Nation's soybean output. Production is projected at 1.09 billion bushels in the Eastern Corn Belt. This is up 51 million bushels or 5 percent above 2000/01 and 13 percent above the 5-year average. Production increased in all States in the region, with Illinois experiencing the largest absolute increase of 22 million bushels or 5 percent. Illinois and Indiana produced 69 percent of the region's soybean output, with Illinois accounting for 44 percent. Ohio output increased 10.5 million bushels to 197 million bushels. Both Michigan and Wisconsin also experienced a modest increase in their production.

While the Western Corn Belt is projected to produce 31 percent of the Nation's soybean output, its production of 890 million bushels fell 37 million bushels or 4 percent below 2000/01 and 1 percent below the 5-year average. Production decreased by 20.2 million bushels (7 percent) in Minnesota and 18.2 million bushels (10 percent) in Missouri. Output increased slightly by 660,000 bushels to 460 million bushels in Iowa. Iowa is projected to produce 52 percent of the region's output.

**Use.** Total soybean use for 2001/02 is projected at 2.82 billion bushels, up 8 million bushels. The 2001/02 domestic crush is projected at 1.66 billion bushels, up 25 million bushels from 2000/01. Soybean exports are projected at 995 million bushels.

**Table 7--U.S. soybean production, 1996/97-2001/02**

Region	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	Percent of 2000/01	Percent of 5-yr. avg.
	<i>million bushels</i>							
Northeast	41	40	44	38	57	53	93	120
Southeast	170	163	143	105	156	152	97	103
Delta	202	213	155	164	141	145	103	83
Eastern Corn Belt	839	965	1,014	959	1,038	1,089	105	113
Western Corn Belt	790	908	952	915	927	890	96	99
Southern Plains	14	21	12	17	12	13	113	87
Central Plains	209	231	240	262	224	288	129	123
Northern Plains	115	147	180	193	214	237	111	139
Other States <sup>1</sup>	n/a	n/a	n/a	n/a	1	1	116	n/a
United States	2,380	2,689	2,741	2,654	2,770	2,867	104	108

<sup>1</sup>Other States include: Florida and West Virginia.  
Source: USDA-NASS

**Stocks and Storage.** Soybeans stored in all positions on June 1 were recorded at 708 million bushels, down 66 million bushels or 9 percent lower than last year (table 8). Off-farm stocks, at 343 million bushels, are 15 percent lower than last year and 2 percent below the 5-year average. On-farm stocks, at 365 million bushels, are 1 percent below the previous year's level and 14 percent above the 5-year average. The Corn Belts accounted for 73 percent of the total soybeans

**Table 8--U.S. soybean stocks by position, June 1, 1995-2001**

Region	1995			1996			1997		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	0	1	1	0	1	1	0	1	1
Southeast	13	26	39	6	25	31	4	17	21
Delta	4	20	24	2	19	21	2	14	16
Eastern Corn Belt	110	152	262	78	125	202	72	89	162
Western Corn Belt	172	156	328	116	140	255	103	100	203
Southern Plains	0	4	4	0	2	2	0	0	0
Central Plains	24	48	72	16	43	59	18	29	47
Northern Plains	20	8	28	13	8	22	13	7	20
Pacific Northwest	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0
Unallocated	6	27	33	4	25	29	5	25	30
United States	349	443	792	234	389	623	216	284	500

Region	1998			1999			2000		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	0	1	1	0	2	2	0	9	9
Southeast	0	13	13	0	16	16	0	12	12
Delta	0	16	16	0	20	20	0	23	23
Eastern Corn Belt	100	85	184	133	131	264	119	133	252
Western Corn Belt	153	105	257	220	156	376	180	146	326
Southern Plains	0	1	1	0	1	1	0	2	2
Central Plains	24	35	59	42	36	78	29	52	81
Northern Plains	23	8	31	25	12	37	20	11	31
Pacific Northwest	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0
Unallocated	19	13	32	39	16	55	23	17	40
United States	318	276	594	458	391	849	370	404	774

Region	2001			Percent of 2000			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>								
Northeast	0	1	1	0	13	13	0	40	40
Southeast	0	10	10	0	81	81	0	60	53
Delta	0	4	4	0	19	19	0	24	23
Eastern Corn Belt	115	112	227	97	84	90	115	99	107
Western Corn Belt	164	129	293	91	88	90	106	100	103
Southern Plains	0	1	1	0	60	60	0	80	80
Central Plains	29	45	74	100	88	92	113	116	115
Northern Plains	25	12	37	125	115	122	132	132	132
Pacific Northwest	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0
Unallocated	32	28	60	139	165	150	178	147	162
United States	365	343	708	99	85	91	114	98	106

Source: USDA-NASS

stored in the Nation. The Western Corn Belt stored the largest amount of stocks, 293 million bushels, representing 41 percent of the Nation's stocks. The Western Corn Belt has 56 percent of its stocks on farms. The Western Corn Belt stocks are 10 percent below 2000 stocks and 3 percent above the 5-year average. While stocks in Missouri increased slightly by 4.64 million bushels, stocks on farm in Iowa and Minnesota decreased by 15.3 and 21.9 million bushels, respectively. However, Iowa stored 54 percent of the region's stocks, amounting to 158.6 million bushels. Of soybeans, 227 million bushels were stored in the Eastern Corn Belt. This is 10 percent below the 2000 level and 7 percent above the 5-year average. Fifty-one percent of the Eastern Corn Belt stocks were in facilities located on farms. Stocks were down in Illinois, Michigan, and Wisconsin, while stocks were up in Indiana and Ohio. Of the region's stocks, 52 percent were on farm in Illinois, totaling 118.5 million bushels. Central Plains stocks were 8 percent below 2000 stocks and 15 percent above the 5-year average.

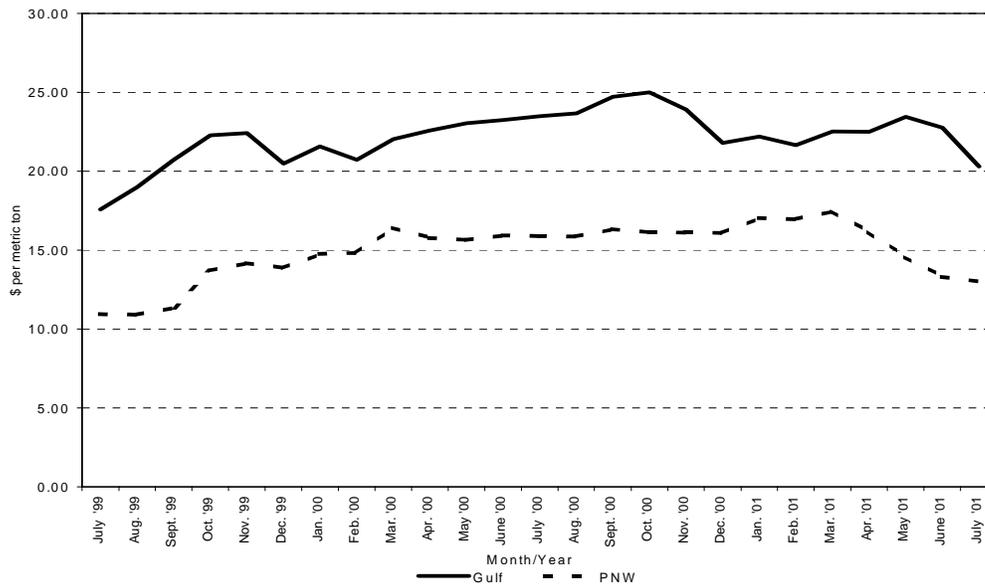
Karla Martin (202) 720-8264 [karla.martin@usda.gov](mailto:karla.martin@usda.gov) and  
 Surajudeen Olowolayemo (202) 690-1328 [surajudeen.olowolayemo@usda.gov](mailto:surajudeen.olowolayemo@usda.gov)

# Transportation Situation

## Ocean Freight

Ocean freight rates decreased at the beginning of the third quarter of 2001 (figures 3 and 4). The Baltic Exchange, as of August 9, 2001, reported the daily average rates for two key grain routes, the U.S. Gulf (Gulf) to Japan and Pacific Northwest (PNW) to Japan, to be \$17.78 and \$10.39 per metric ton, respectively. Both of these rates were at their lowest since July 1999 (for the Gulf) and September 1999 (for the PNW), which was before the recent increase in fuel prices. After reaching a high of \$9.88 per metric ton in early June, the ocean freight rate “spread”<sup>1</sup> dropped to \$6.37 per metric ton (almost a 36-percent drop) in late July (figure 4). Ocean rates peaked at different times this year for the Gulf to Japan and PNW to Japan. For the Gulf to Japan, the average ocean freight rates reached a high of \$24.04 per metric ton in mid-May, and the rate from the PNW peaked (\$17.68 per metric ton) in mid-March (figure 3). Since then, the average ocean freight rates for both of these routes have been falling.

**Figure 3--Average ocean freight rate from the Gulf and PNW to Japan, July 1999-July 2001**

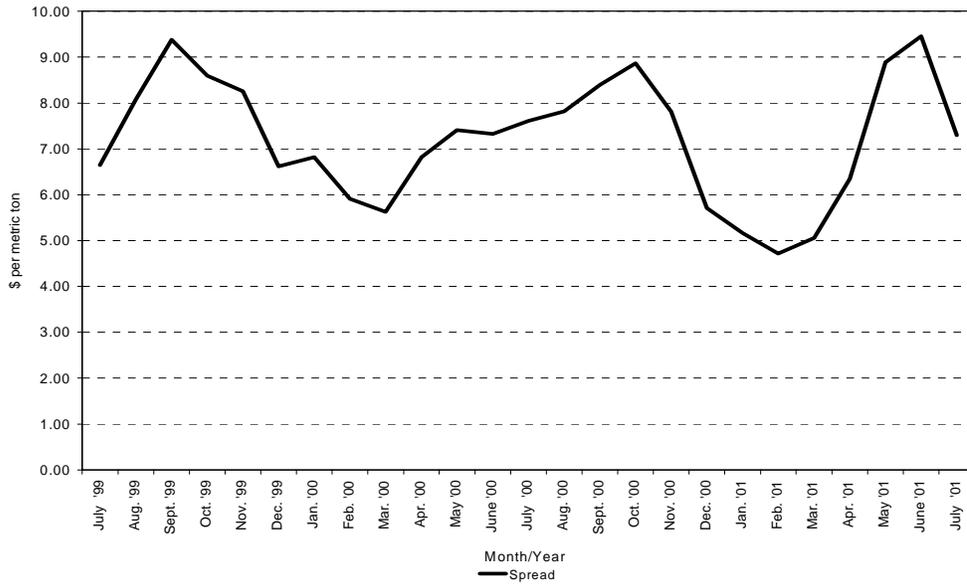


Source: Baltic Exchange

The June 2001 average ocean freight rate from the Gulf to Japan, at \$ 22.76 per metric ton, was one of the highest rates for the month of June. However, it was slightly less than in June 2000 and May 2001 (table 9). The June rate exceeded the 5-, 10-, and 15-year averages. In July 2001, the cost of ocean grain transportation from the Gulf was \$20.31 per metric ton, which was almost 14 percent less than last year. It was higher than the 5- and 15-year averages but less than the 10-year average for the month of July (table 9).

<sup>1</sup> The difference between the Gulf and Pacific Northwest to Japan Ocean freight rates is called the “spread.”

**Figure 4--Average ocean freight rate “spread” to Japan, July 1999-July 2001**



Source: Baltic Exchange

**Table 9--Average ocean freight rates to Japan by month, January-July**

Export range Year	January	February	March	April	May	June	July
	<i>\$/ metric ton</i>						
<b>Gulf<sup>*</sup></b>							
1998	20.35	17.85	18.46	18.14	17.08	14.40	13.42
1999	13.92	15.13	16.32	16.16	18.28	16.40	17.39
2000	21.57	20.74	22.05	22.59	23.05	23.26	23.50
2001	22.20	21.67	22.52	22.49	23.02	22.76	20.31
5-year average	20.71	20.19	20.93	20.60	20.65	19.65	19.88
10-year average	23.24	22.54	23.11	23.15	23.92	22.17	22.27
15-year average	23.15	22.87	23.45	23.32	23.87	21.64	20.25
<b>Pacific Northwest<sup>**</sup></b>							
1998	11.43	9.40	12.19	11.52	10.89	10.62	10.02
1999	9.56	9.22	10.34	9.58	11.26	11.73	11.03
2000	14.75	14.83	16.42	15.77	15.64	15.94	15.89
2001	17.04	16.95	17.46	16.15	15.30	13.31	13.01
5-year average	13.40	12.98	14.38	13.48	13.13	12.77	12.33
10-year average	14.05	13.71	14.43	13.87	13.82	13.34	13.09
15-year average	13.84	13.83	14.58	13.70	13.60	13.00	12.07
<b>Spread<sup>1</sup></b>							
1998	8.92	8.45	6.27	6.62	6.19	3.78	3.39
1999	4.36	5.91	5.98	6.58	7.02	4.67	6.36
2000	6.82	5.91	5.63	6.82	7.41	7.32	7.61
2001	5.16	4.72	5.06	6.34	7.72	9.45	7.30
5-year average	7.31	7.21	6.55	7.12	7.51	6.88	7.55
10-year average	9.18	8.83	8.69	9.27	10.10	8.84	9.18
15-year average	9.31	9.05	8.87	9.62	10.26	8.63	8.18

<sup>1</sup> Gulf minus Pacific Northwest

\*Route 2

\*\*Route 3

Source: Baltic Exchange

The rates from the PNW to Japan for June and July were higher than the 5- and 15-year averages but lower than the 10-year average. During June 2000, grain shippers in the PNW faced an average ocean freight rate of \$15.94 per metric ton, which was one of the highest rates for that month. However, the average March 2001 rate from the PNW to Japan (\$17.46 per metric ton) (table 10) was the highest average monthly rate for a single month since September 1995. Since March, the ocean freight rate from the PNW to Japan has dropped by approximately 25 percent (table 10).

World supply and demand factors usually determine ocean freight rates. This year, due to a weaker global economy, the demand for international ocean transportation has decreased. On the other hand, the supply of ships is plentiful relative to demand. The large number of new vessels on order limits the prospects of higher rates. Carriers had expected major rate hikes, but external factors made this impossible. Market reports indicate no increased rates<sup>2</sup> on transpacific service contracts for the “just-started” shipping season.

In transatlantic trade, last year’s rate increases appear to have ended. Shippers and carriers have agreed to ocean freight rates that are based on expected future market conditions, rather than on recent peak market conditions. Competition from new carriers has kept the recent rate increases relatively low in contrast to preceding years. Although the Trans-Atlantic Conference Agreement has recently introduced several modest rate increases for both eastbound and westbound directions, its ability to raise rates is limited due to the fact that most of the cargo moves under individual service contracts. This year, with the slowing U.S. and global economy, a return to more traditional peak-season traffic patterns is expected. Unlike in past years when a surge in imports overloaded U.S. infrastructure and caused delays, few expect delays during the 2001 peak season. The significant softening in ocean freight rates in the recently concluded negotiating season indicates that the carriers have a surplus vessel capacity to handle the surge.

Hooshang Fazel, (202) 690-4440 [Hooshang.fazel@usda.gov](mailto:Hooshang.fazel@usda.gov)

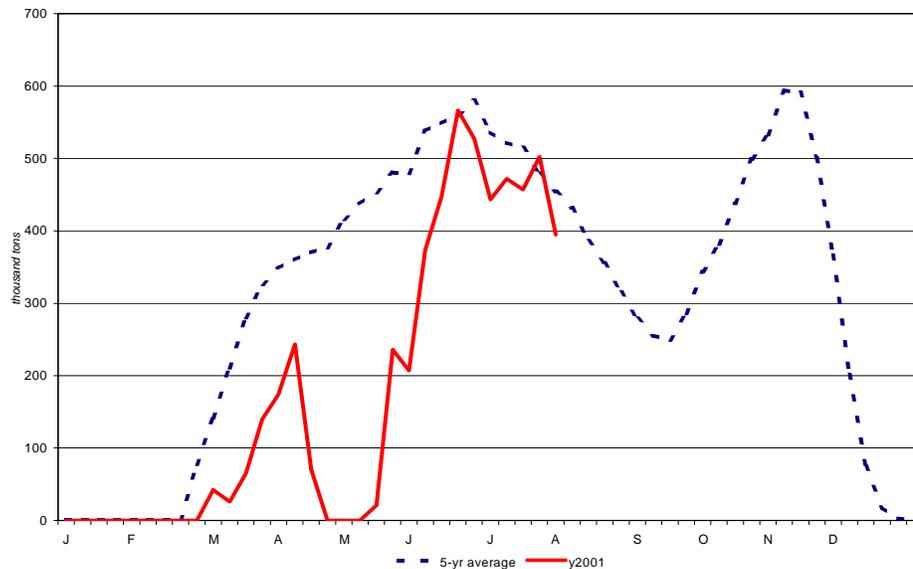
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<sup>2</sup> American Shippers, June 2001.

## Barge

By late May 2001, segments of the Mississippi River that were closed by severe flooding were reopened to navigation. As traffic resumed, a backlog of grain barges experienced significant delays at several locks. Periods of congestion on the river continued into July, with 1- to 6-hour delays reported at Locks 20-25 (Canton to Winfield, MO). Figure 5 shows the weekly grain shipments for this year and the 5-year average for Locks & Dam (L&D) 15 at Rock Island, IL (across the river from Davenport, IA). Grain traffic at L&D 15 begins in March and generally increases each week until July. L&D 15 has a 600-foot main chamber, which requires a typical 15-barge tow to transit the lock in two shifts. This year, traffic at L&D 15 was slowed by high water levels in March and April and completely stopped during late April and early May. During the second week of May, traffic resumed at L&D 15 and increased significantly for several weeks until July. At that time, L&D 15 barge shipments experienced typical decreasing weekly volumes that generally last until the corn and soybean harvest.

**Figure 5--Weekly grain traffic at Mississippi River Locks 15**



Source: U.S. Army Corps of Engineers

Barge grain movements for July-August 2001 were 1.1 million tons per week, a 21-percent increase over the 5-year third quarter average (table 10). Although barge traffic slowed at L&D 15, grain movements increased at locks below that point. L&D 27, the last lock on the Mississippi, reported several weeks of over 1 million tons per week during June and into August. A surge in movements during midsummer is unusual and may indicate an anticipated increase in demand for exports. Soybean exports have been strong throughout the year, and, with a forecast of a record crop, there could be the potential for increased soybean barge movements on the Mississippi River. However, favorable ocean freight rates from the PNW to Asian markets may divert some soybeans that would have been shipped on the Mississippi River.

Grain barge shipments are monitored by the U.S. Department of Agriculture from weekly lock reports provided by the U.S. Army Corps of Engineers (Corps). The combined data from Mississippi River Locks 27, Ohio River Locks 52, and the Norrell Lock on the Arkansas River are considered to be the total volume of barged grain since each lock is the last or second to last one in its respective river. It should be noted that any grain originating on the Mississippi River below Locks 27 is not recorded by the Corps reporting system and, thus, may underestimate total barge movements.

**Table 10--Average weekly grain barge shipments by quarter, 1996-2001**

Year	1 <sup>st</sup> quarter (Jan.-Mar.)	2 <sup>d</sup> quarter (Apr.-June)	3 <sup>d</sup> quarter (July-Sept.)	4 <sup>th</sup> quarter (Oct.-Dec.)	Annual (Jan.-Dec.)
<i>1,000 tons</i>					
1996	855	1,035	740	1,137	942
1997	753	785	803	1,145	871
1998	741	786	866	1,078	868
1999	831	1,081	1,040	1,039	998
2000	799	948	975	989	928
2001	784	834	1,074	-	-
5-yr. avg.	796	927	885	1,078	921

Note: All averages based on shipments through Mississippi L&D 27, Ohio L&D, and Norrel L&D on the Arkansas River through August 25, 2001.  
Source: U.S. Army Corps of Engineers

Barge freight rates for grain shipped from St. Louis to New Orleans for the third quarter of 2001 averaged 132 percent of tariff, which was 20 percent lower than the 5-year average (table 11). This would seem to indicate that there has been an ample supply of barges to meet current demand in the St. Louis area. Barge rates are quoted in terms of differentials from barge tariff benchmarks.<sup>3</sup> The tariff rate from St. Louis to New Orleans is \$3.99 per ton; therefore, the spot market rate quoted is 1.32 times \$3.99 or \$5.27 per ton. Due to weather conditions and flooding, there were no reported barge freight rates for Minneapolis-St. Paul to New Orleans during the first and second quarter. For the beginning of the third quarter 2001, Minneapolis-St. Paul rates were reported at 220 percent of tariff (\$13.62 per ton), which was about average for the last 5 years.

**Table 11--Average weekly barge rates by quarter, 1996-2001**

Region/year	1st quarter (Jan.-Mar.)	2d quarter (Apr.-June)	3d quarter (July-Sept.)	4th quarter (Oct.-Dec.)
<i>percent of tariff</i>				
Minneapolis-St. Paul to New Orleans: Tariff = \$6.19 per ton				
1996	no rates	180	151	236
1997	165	146	179	249
1998	164	166	241	325
1999	213	182	271	269
2000	210	177	248	202
2001	no rates	no rates	220 *	-
5-yr. avg.	190	171	217	256
St. Louis to New Orleans: Tariff = \$3.99 per ton				
1996	180	99	106	148
1997	118	90	122	140
1998	93	106	199	189
1999	123	107	196	163
2000	145	110	201	161
2001	166	124	132 *	-
5-yr. avg.	132	102	164	158

\*As of August 25, 2001

Nick Marathon (202) 690-0331 [nick.marathon@usda.gov](mailto:nick.marathon@usda.gov)

<sup>3</sup> The benchmarks are from the Bulk Grain and Grain Products Freight Tariff No. 7, which was issued by the Waterways Freight Bureau (WFB) of the Interstate Commerce Commission (ICC). In 1976, the U.S. Department of Justice entered into an agreement with the ICC and made Tariff No. 7 no longer applicable. Today, the WFB no longer exists, and the ICC has become the Surface Transportation Board of the U.S. Department of Transportation. However, the barge industry continues to use the benchmarks as rate units.

## **Rail**

The availability of grain cars, though plentiful during the summer months, is expected to tighten considerably during the next few months. Since the wheat crop for 2001/02 is sharply lower than last year's crop, the need to relocate grain in the Plains States has been less than normal. Prior to and during harvest of the fall crops, however, the demand for grain transportation is expected to increase. But, the bidding activity for guaranteed railcars has been weak, so far, and prices in the secondary railcar market have been moderate.

Although gasoline and diesel fuel prices have been on the decline in recent weeks, fuel prices remain at high levels, and fuel surcharges on rail tariffs remain in place at present, but the situation could change quickly. Due to decreased profit levels, however, some railroads plan to modestly increase rail tariff rates and contract rates. Also, in an effort to increase profitability, some Class I railroads are evaluating whether to continue service on low-density lines.

On June 11, 2001, the Surface Transportation Board (STB) released new rules governing major railroad mergers and simultaneously lifted its 15-month moratorium on such mergers.<sup>4</sup> The new rules, which took effect July 11, increase the burden on applicants to demonstrate that a proposed merger is in the public interest. Rail service is not likely to be disrupted by new major rail mergers in the near future since none of the Class I railroads appear to have immediate plans to engage in such mergers.

For the first 31 weeks of 2001 (through August 4), grain cars originated on U.S. Class I railroads decreased 2.1 percent, compared to the same period in 2000 (648,728, compared to 662,549) and decreased 4.7 percent from the 31-week average of 1996-99.<sup>5</sup> For the most current 4-week period (weeks 28 through 31, which corresponds to the period of July 8 through August 4, 2001), grain cars originated by U.S. Class I railroads were 1.3 percent fewer than those originated during the same period in 2000 (84,087, versus 85,189). This was 3 percent fewer than the 1996-99 average for the same 4-week period.

### ***Western Railroads***

Demand for grain transportation on the western railroads was weak during the first 31 weeks of 2001 (through August 4). Only 459,008 grain cars were originated during this period in 2001, compared to 485,732 cars for the same period in 2000, a 5.5-percent decrease and a 9.1-percent decrease from the 1996-99 average for the same period (figure 6). Rail industry sources attribute the decline in demand for grain transportation in part to sharply lower wheat production. Grain cars loaded on the western railroads during the most recent 4 weeks of 2001 decreased 2.7 percent as compared to the corresponding period in 2000 (60,926 carloads, compared to 62,623) and decreased 6.3 percent when compared to the 1996-99 average of same 4-week periods (figure 7).

Due to reduced crops this year, bidding activity for guaranteed grain cars on the two major western railroads, Burlington Northern Santa Fe (BNSF) and Union Pacific (UP), has been slow. Railcars in the secondary market for September 2001 are selling at average premiums of \$39 on BNSF and \$50 on UP; for October 2001, \$40 and \$50, respectively; and for November 2001, a premium of \$12 and a discount of \$14, respectively. Both of the major western railroads currently have covered-hopper railcars in storage, but the number in storage is expected to decrease markedly as the demand for transportation increases this fall.

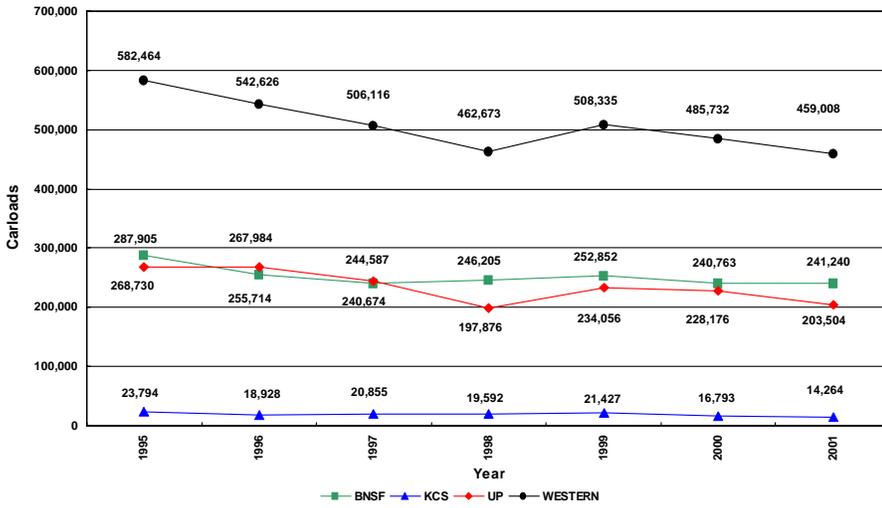
Western railroad sources report limited gathering movements of grain, mainly due to the poor wheat crop this year. Railroads also report that grain movements to processors have been limited but that soybean movements to crush plants

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<sup>4</sup> A major merger is defined as a combination between two Class I railroads, each having 1999 operating revenues greater than \$258.5 million.

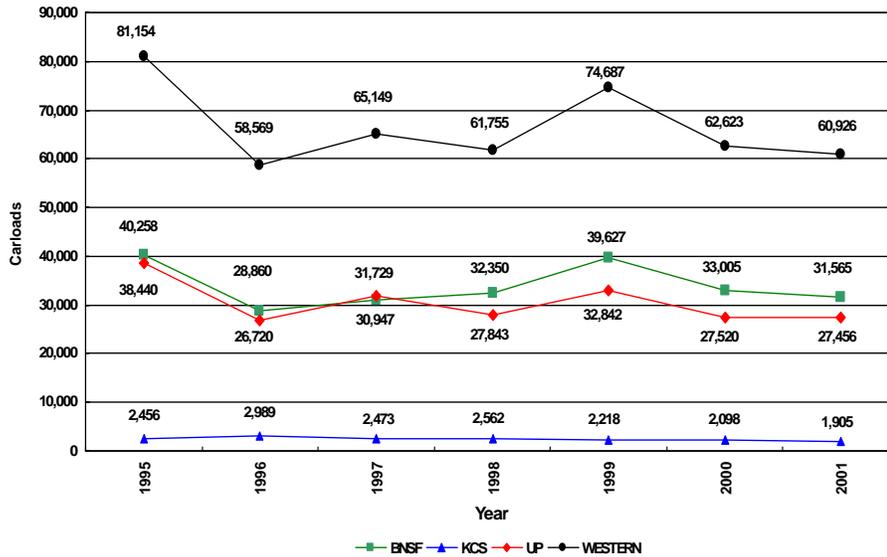
<sup>5</sup> All traffic comparisons exclude Illinois Central, which, in the fourth quarter of 2000, began to report its cars originated as part of that originated by Canadian National.

**Figure 6--Western Class I railroad carloads of grain originated  
(first 31 weeks of the year, 1995-2001)**



Source: Weekly Railroad Traffic, Association of America Railroads

**Figure 7--Western Class I railroad carloads of grain originated  
(weeks 28 through 31, 1995-2001)**



Source: Weekly Railroad Traffic, Association of America Railroads

have been normal or a little higher than average. Movements of grain to the Texas and Louisiana Gulf are reported to be slow. Soybean movements to the Texas Gulf Coast for export are reported to be a little above average but stronger to Mexico and the PNW. Grain exports to Mexico have been reported to be strong all year.

**Burlington Northern Santa Fe Railway.** The number of grain cars loaded on BNSF increased slightly (0.2 percent) during the first 31 weeks of 2001 as compared to the same period in 2000 (241,240 railcars, versus 240,763) (figure 6). This is 3.1 percent less than the average of the comparable periods from 1996 to 1999. The number of grain cars originated during the past 4 weeks (weeks 28 through 31, which correspond to the period of July 8 through August 4, 2001) has decreased 4.4 percent from the comparable period in 2000 (31,565 railcars, compared to 33,005) (figure 7).

BNSF reports a greater proportion of grain moving in its shuttle train and Scoots programs and less in traditional unit-train and carload service. On August 6, BNSF began offering single-trip shuttles for shipment starting in September. This will allow shuttle-train shippers to more easily respond to peak-season capacity needs.

As of August 4, BNSF had 26,281 covered hopper railcars in its active grain fleet, with the number in storage decreasing to only 259. Although BNSF's grain fleet still exceeds demand, the availability of grain cars is expected to tighten considerably during the peak grain-moving season this fall. Thus, effective August 1, 2001, BNSF is instituting peak season demurrage rates of \$75 daily. As of August 7, BNSF reported 3,534 past-due railcar orders that were an average of 4.6 days late. For the week ending August 4, BNSF reported an average grain fleet cycle time of 30.82 days. Since BNSF has purchased many locomotives over the past 4 years, loaded cars should not have to wait for power.

Only 16.2 percent of the guaranteed railcars offered for the month of July 2001 and 64.3 percent offered for the month of August 2001 were sold, compared with 60.4 percent and 75.1 percent, respectively, in 2000. However, activity on guaranteed cars offered for September and October 2001 is much greater, with 72.7 and 65.2 percent, respectively, sold so far.

All of BNSF's yards seem to be relatively fluid. The simple average of the reported terminal dwell times for July has decreased to 25.6 hours (figure 8). BNSF's average train speed for July was 24.3 miles per hour for all trains and 22.1 miles per hour for grain trains.

**Kansas City Southern Lines.** Grain originated on the Kansas City Southern Lines (KCS) during the first 31 weeks of 2001 was down 15.1 percent, compared to the same period in 2000 (14,264 railcars, compared to 16,793) and was down 29.4 percent from the average of comparable periods from 1996 to 1999 (figure 6). Grain originated during the past 4 weeks (weeks 28 through 31, which correspond to the period of July 8 through August 4, 2001), decreased 9.2 percent, compared to the same period in 2000, and was 25.6 percent less than the average of comparable 4-week periods from 1996 to 1999 (figure 7).

KCS has overhauled its main north-south line, over which most of its grain traffic moves, and has been improving its east-west lines. And, while these ongoing improvement efforts, combined with several derailments and washouts earlier in the year, did result in some delays, increased train speeds and decreased dwell times since May 2001 provide evidence that KCS is now fluid. The average speed for all trains on KCS increased from 22.1 miles per hour during March to 25.6 miles per hour in July. KCS' simple average of terminal dwell times decreased from a high of 29.5 hours in April to 21.8 hours in July (figure 8). The simple average of its terminal dwell times has decreased further to only 20.3 hours for the week ending August 3. KCS now has the lowest simple average of terminal dwell times of all U.S.-owned Class I railroads.

KCS reports its grain car fleet at 3,365 covered hoppers as of August 6. Of this fleet, 600 railcars were reported in service to processors, 2,395 railcars were in guaranteed service programs, 336 railcars were available for tariff service, and 34 railcars were out of service. KCS states that it has adequate power and railcars available at this time but expects seasonal shortages of railcars in September and October.

KCS focuses mainly on carload domestic grain traffic, primarily serving poultry producers located in Arkansas, Oklahoma, Texas, Louisiana, and Mississippi. KCS reports a 3- to 5-percent decrease in traffic to these poultry producers since they are reducing production due to low poultry prices. KCS also reports an increase in wheat movements from Kansas and Oklahoma to export destinations located in Beaumont, TX.

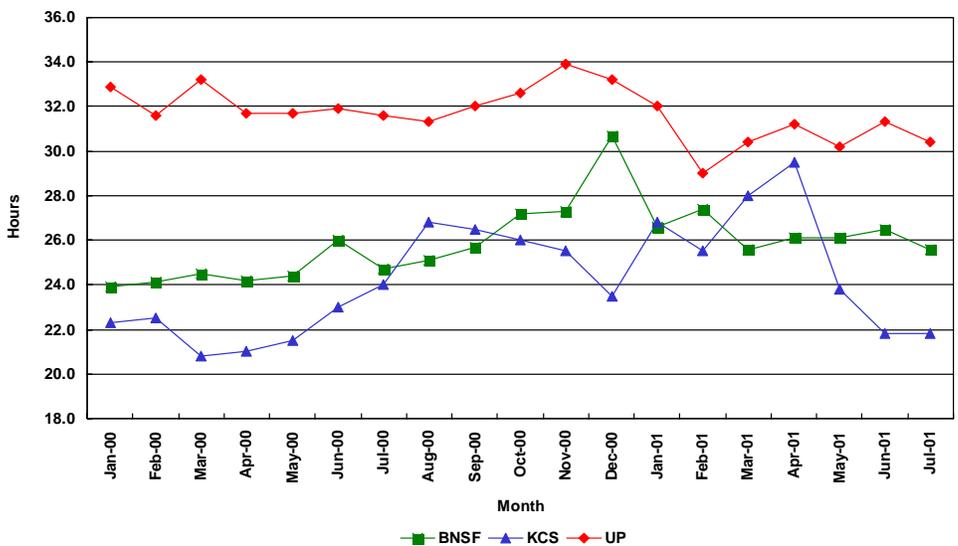
**Union Pacific Railroad.** Grain movements on UP were down 10.8 percent for the first 31 weeks of 2001, compared to the same period in 2000 (203,504 railcars, versus 228,176), and down 13.8 percent, compared to the average of the same periods from 1996 to 1999 (figure 6). Grain movements on UP have begun to recover during the last 4 weeks (weeks 28 through 31, which correspond to the period of July 8 through August 4, 2001). During this period, grain movements decreased by only 0.2 percent, compared to the same period in 2000 (27,456 railcars, compared to 27,520), but were still down 7.8 percent, compared to the average of the same periods from 1996 to 1999 (figure 7).

The UP system remains fluid, and grain car cycle times remain very good. UP reports that it has plenty of grain cars in storage and that it has been meeting all guaranteed railcar commitments. Due to the adequate availability of railcars, bids for guaranteed railcars have been weak. As the fall harvest season approaches, railcar availability should tighten. UP states that it expects to have adequate locomotive power.

In June, UP instituted a new, more flexible shuttle plan. The new shuttle plan does not restrict purchasers to specific corridors and allows the customer to adjust the train size for individual shuttles. UP has also been partnering with Canadian Pacific to move Dakota wheat to the PNW.

UP reported an average speed for all trains of 25.0 miles per hour and 21.9 miles per hour for grain unit trains during July. The simple average of the terminal dwell times for July was 30.4 hours but has improved to 30 hours for the week ending August 3. UP's terminal dwell times are currently the longest of the U.S.-owned Class I railroads (figure 8).

**Figure 8--Western railroad average terminal dwell times,<sup>1</sup>  
(January 2000-July 2001)**



<sup>1</sup> Simple average of all terminals.  
Source: Railroad Performance Measures, Association of American Railroads

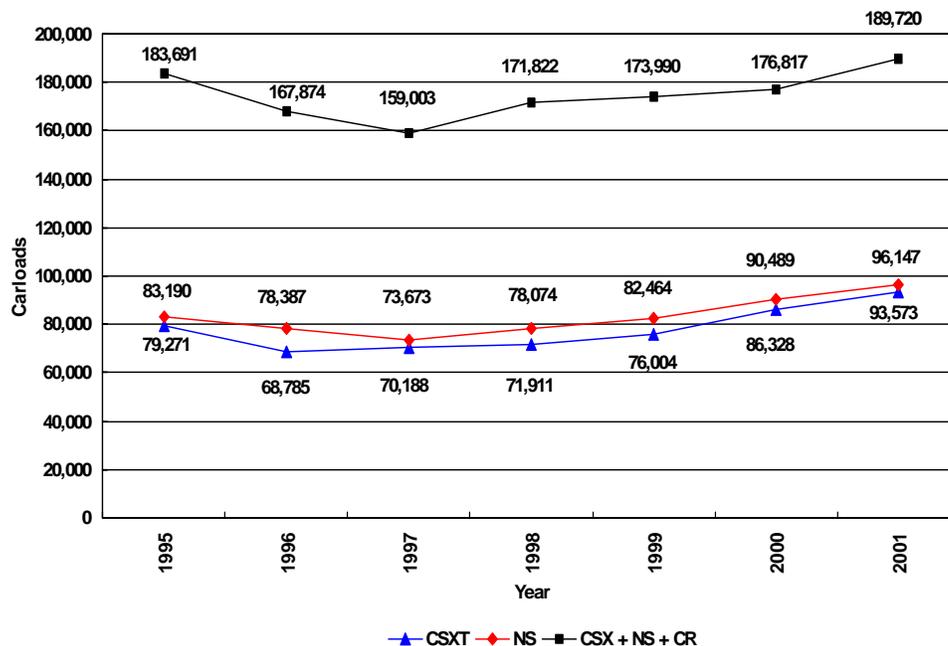
## Eastern Railroads

The eastern railroads now are moving more grain than before the split of Conrail. Grain cars originated on the eastern railroads for the first 31 weeks of 2001 increased 7.3 percent over those originated in the comparable period of 2000 (189,720 railcars, compared to 176,817) and increased 9 percent over those originated on those lines in the comparable period of 1999 (figure 9).<sup>6</sup> This increase in grain traffic on the eastern railroads has weakened during the past 4 weeks (weeks 28 through 31, which correspond to the period of July 8 through August 4, 2001). Grain traffic originated on the eastern railroads increased only 2.6 percent during the most recent 4 weeks of 2001 as compared to the same period in 2000 (23,161 railcars, compared to 22,566) and was 9.3 percent greater than that originated in the comparable period of 1999 (figure 10).

**CSX Transportation.** During the first 31 weeks of 2001, CSX grain carloadings were 8.4 percent greater than during the same period in 2000 (93,573 carloads, compared to 86,328) (figure 9). This rate of increase has weakened to only 0.1 percent during the past 4 weeks (weeks 28 through 31, which correspond to the period of July 8 through August 4, 2001) as compared to the same period in 2000 (10,814 carloads, versus 10,800) (figure 10). CSX states that export movements to the East Coast have been slow. Deliveries of soybeans and grain to processing plants located in the Southeast, however, are reported to have increased about 3 percent.

CSX reports that its supply of covered hopper railcars (approximately 4,500 for grain service) is expected to be adequate and that it has some covered hopper railcars in storage at this time. However, CSX is receiving inquiries regarding the availability of guaranteed railcars for October and November. CSX also reports that the availability of locomotive power

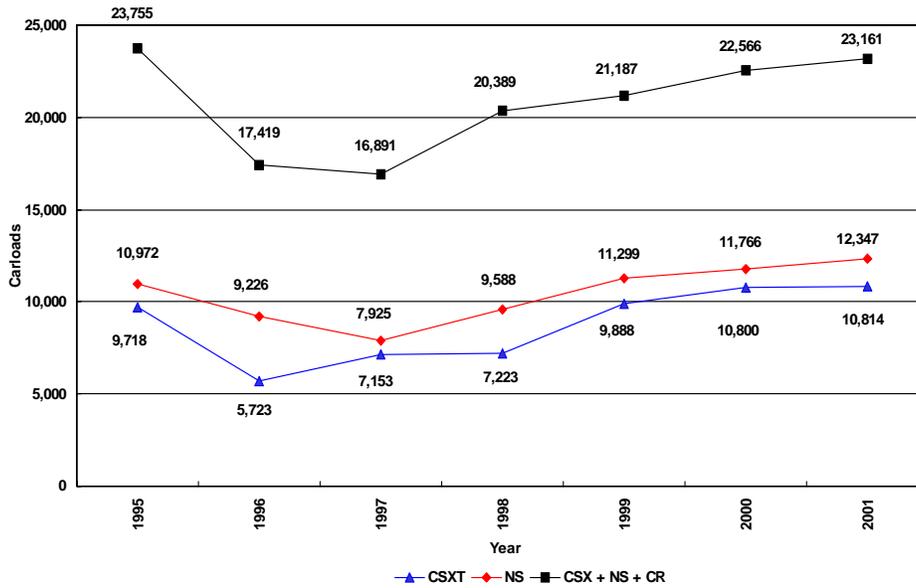
**Figure 9--Eastern Class I railroad carloads of grain originated  
(first 31 weeks of the year, 1995-2001)**



Source: Railroad Performance Measures, Association of American Railroads

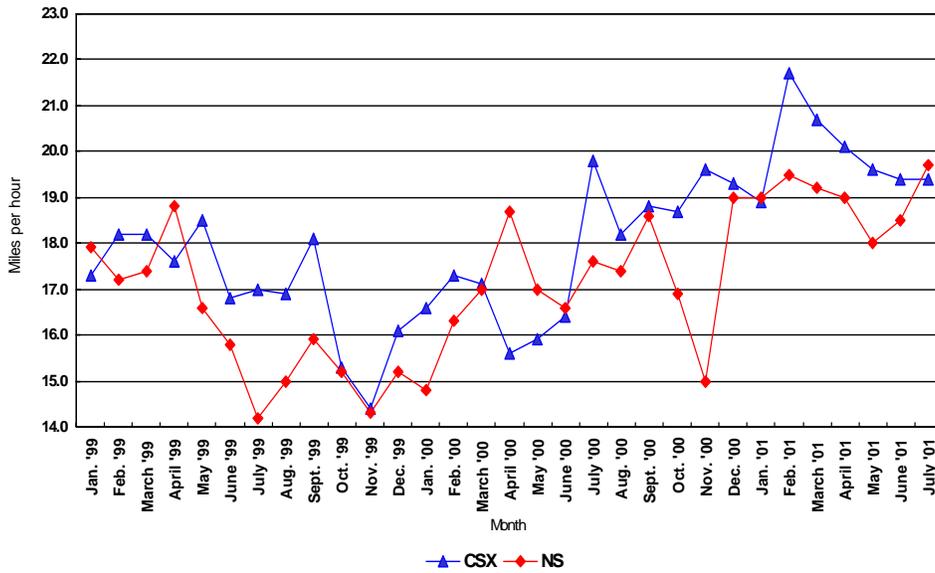
<sup>6</sup> All traffic comparisons exclude Illinois Central, which, in the fourth quarter of 2000, began to report its cars originated as part of those originated by Canadian National. This leaves only the comparison of current rail traffic on CSX and Norfolk Southern Railroad (NS) to that of CSX, NS, and Conrail in the periods before the split of Conrail in June 1999.

**Figure 10--Eastern Class I railroad carloads of grain originated  
(weeks 28 through 31, 1995-2001)**



Source: Railroad Performance Measures, Association of American Railroads

**Figure 11--Eastern railroad average monthly grain train speeds  
(weeks 28 through 31, 1995-2001)**



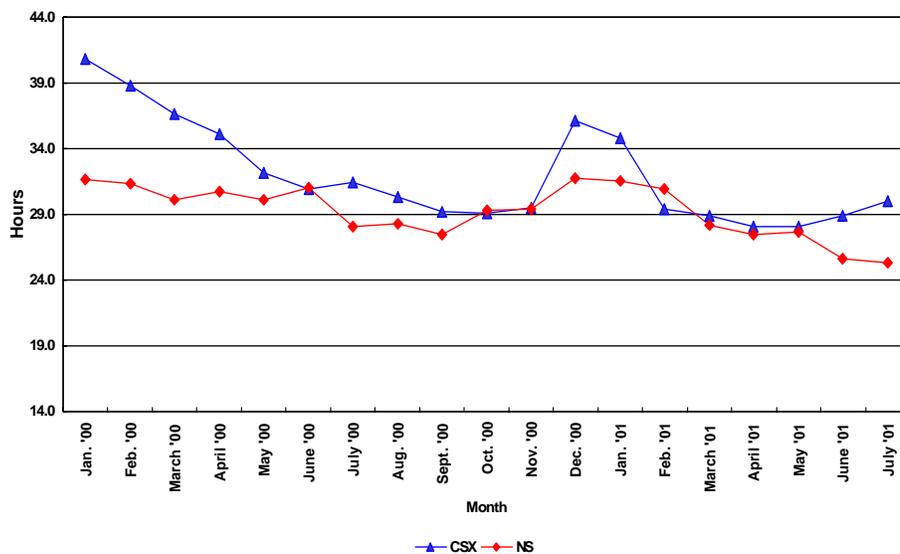
Source: Railroad Performance Measures, Association of American Railroads

and crews continues to be adequate. In addition, CSX reports good cycle times due in part to its emphasis on shuttle and unit trains. CSX has also been promoting its Express Load/Unload Program, which is available to grain elevators that guarantee to unload covered hopper railcars within 24 hours. CSX is currently getting about 2.6 turns per month on its shuttle trains.

CSX reports that operations across its system are fluid. CSX's average train speed has increased from 17.6 miles per hour in April 2000 to 21.6 miles per hour for the month of July 2001. The average speed of CSX's grain unit trains has increased from 15.6 miles per hour in April 2000 to 19.4 miles per hour during July 2001 (figure 11). These average train speeds are now faster than the pre-Conrail-split average train speeds of 18.9 miles during April 1999 and average grain train speeds of 17.6 miles per hour during April 1999.

In addition, the simple average of terminal dwell times for CSX has generally been improving. CSX's simple average of terminal dwell times for July 2001 was 30 hours, compared to an average of 35.1 hours during April 2000 and an average of 31.3 hours in April 1999, which was prior to the split of Conrail (figure 12).

**Figure 12--Eastern railroad average terminal dwell times<sup>1</sup>  
(January 2000-July 2001)**



<sup>1</sup> Simple average of all terminals.  
Source: Railroad Performance Measures, Association of American Railroads

**Norfolk Southern.** Grain movements for the first 31 weeks of 2001 increased 6.3 percent on the Norfolk Southern Railroad (NS), compared to the comparable period in 2000 (96,147 carloads, versus 90,489) (figure 9). This rate of increase has weakened to 4.9 percent during the last 4 weeks (weeks 28 through 31, which correspond to the period of July 8 through August 4, 2001) as compared to the same period in 2000 (12,347 railcars, compared to 11,766) (figure 10).

NS reports strong demand for the gathering of grain in its Midwest region and that the demand for the transportation of grain to feedlots in the Southeast has slightly increased. However, NS reports that there has been little or no demand for the transportation of grain to poultry feeders in the Delaware-Maryland-Virginia region due to carryovers from last year's large crops. Movements to grain and soybean processors have been down slightly. Due to increases in demand for shuttle

and unit trains, NS now has 10 trains, each having 75 to 85 railcars, dedicated to shuttle movements and 70 trains, each having 50 railcars, dedicated to unit-train movements.

NS has a supply of approximately 5,500 covered hoppers assigned to agriculture. NS has reduced its covered hopper railcar fleet by about 500 railcars, but most of these had been in fertilizer service. NS reports that it currently has grain cars in storage, and, due to vastly improved cycle times, expects its grain-hauling capacity to be adequate and does not expect any grain car shortages this Fall.

NS lines are much less congested since the number of railcars on line have decreased from 219,539 in April 2000 to only 195,372 on July 13, 2001. The average train speed has increased from 20.2 miles per hour in April 2000 to 23 miles per hour for July 2001. The average train speed for grain unit trains was 19.7 miles per hour for July 2001 (figure 11). The simple average of the terminal dwell times has also decreased from 30.7 hours in April 2000 to 25.3 hours for July 2001 (figure 12). The simple average of the terminal dwell times for April 1999, which was before the split of Conrail, was 28.3 hours.

Marvin Prater (202) 690.6290 [marvin.prater@usda.gov](mailto:marvin.prater@usda.gov)

## Truck

Trucks are the indispensable link in the supply chain. The modal share for agricultural goods, whether measured in tons, value, or ton-miles, indicates that trucks remain the dominant mode of choice for transporting agricultural products to market.

In spite of this, there are factors that may alter the way motor carrier services are provided to the agricultural economy. The weaker U.S. economy, high fuel costs, expensive liability insurance rates, and changing asset valuations have lowered trucking industry profits. These dynamics are forcing many smaller, independent, and owner-operator trucking firms into bankruptcy.

**Bankruptcies.** Bankruptcies in 2000 for the motor carrier industry hit record levels.<sup>7</sup> Unfortunately, this trend shows no sign of abating in 2001, according to Bob Costello, Chief Economist for the American Trucking Associations (ATA).<sup>8</sup> On one hand, the majority of large truck fleet operators can cover the increased costs and changes that are causing trucking firm bankruptcies. On the other hand, small fleets and owner-operators (with small fleets and smaller margins) may not be prepared to overcome these difficulties. As motor carrier bankruptcies rise, not only will shipping options decline for farmers, but prices throughout the agricultural supply chain may also rise.

**Fuel Costs.** Fuel costs have recently trended downward. However, the volatile fuel prices at the pump during most of last year may have had a ripple effect on the motor carrier industry. The ATA has shown a high correlation between fuel price hikes and the rise in trucking firm bankruptcies.<sup>9</sup> Price fluidity creates uncertainty for trucking firms and is difficult for any fleet manager to address. Smaller fleets that serve the farm economy have attempted to institute shipping fuel surcharges. However, due to strong competition in the trucking industry, it is not clear whether these measures will insulate them from the effects of high fuel prices.

**Insurance Rates.** Insurance rates have substantially increased for most fleets in recent months. Typically, insurance providers underwrite fleets through premiums and income from invested premiums. However, insurance firms are currently requesting higher fees (premiums) to offset their weak investment portfolio income.<sup>10</sup> In addition, while the number of claims remains relatively stable, the damage costs per claim have increased.<sup>11</sup> Those firms that cannot afford higher premiums may wait for better business conditions before buying additional trucks or may leave the trucking industry altogether.

**Asset Valuation.** A manufacturing boom for trucks, tractors, and trailers occurred from the mid-1990s to 1999. However, bankruptcies and loan deficiencies have resulted in more than 500,000 used truck and trailer units sitting idle. This accumulation of capital goods has depressed the market for sales of both used and new equipment. It also lowers the book value of a firm's assets. Trucking companies in a precarious financial position from higher costs and increased competition may be pushed into bankruptcy by thinning asset valuations. Lowered valuation also tends to cause firms to wait longer for truck replacement. These older units have higher maintenance costs, which affect the firm's profitability.

## Fuel Price Trends

Diesel fuel prices began to rise in early August, after a 10-week decline. While this is not unusual, it does signal possible future increases in fuel prices. Oil stocks are beginning to tighten, and refiners are shifting distillate production to address the home heating oil market demand for this winter.

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<sup>7</sup> Reiskin, Jonathan, "Carrier Failures Reach Record..." *Transport Topics*, p.1 (1/8/2001).

<sup>8</sup> Telephone interview, 7/11/01.

<sup>9</sup> Reiskin, Jonathan, "Carrier Failures Reach Record..." *Transport Topics*, p.14 (1/8/2001).

<sup>10</sup> Interview with Donald Broughton, Chief Transportation Analyst, AG. Edwards, 7/11/01.

<sup>11</sup> Interview with Robert Hartwig, Chief Economist and Vice President, Insurance Information Institute, 7/11/01.

On-highway diesel price data show the national average at \$1.37 per gallon as of August 13, 2001 (figure 13). This price is still lower than those in May, when prices reached \$1.53 per gallon. Earlier in the year, diesel truck fuel experienced price fluctuations that saw high prices in mid-February, lower prices in early April, and a return to higher prices at the end of May. Increased production at existing facilities and resumed production at off-line refineries increased the supply available to truckers, and, thus, fuel prices dropped.

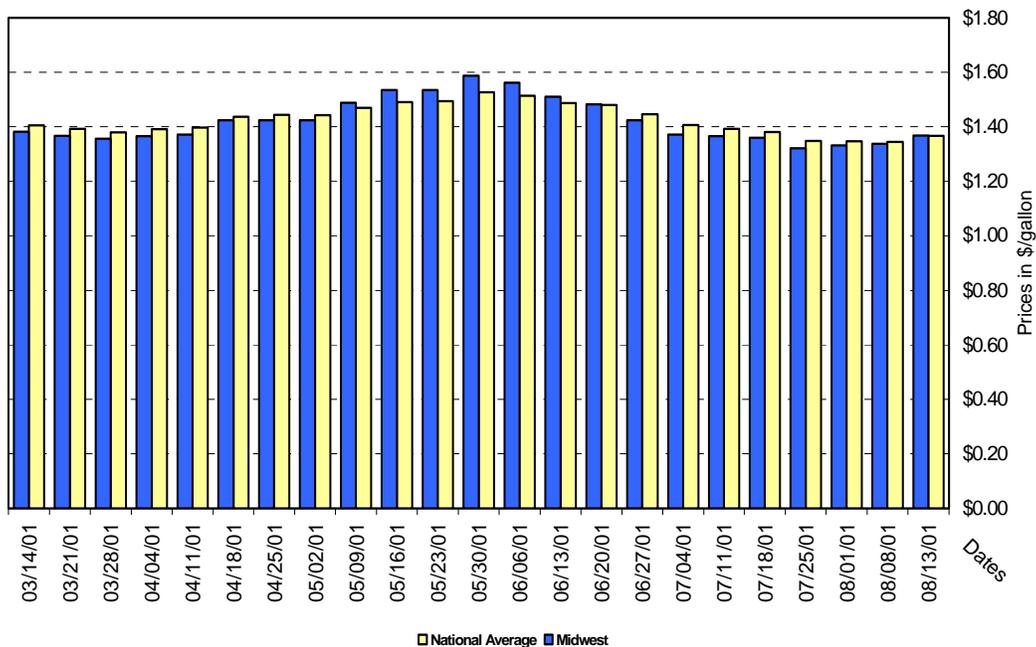
The Midwest was suffering from diesel prices that were 10 cents per gallon above the national average at the end of May. Both the national and Midwest prices have since dropped, but the Midwest prices have now inched up to match the national average (figure 13).

Gulf Coast diesel prices have risen and fallen with the national average price but have remained consistently lower than the national figure of \$1.32 per gallon (figure 14).

In the West, prices remain higher than the national figure. The California price for diesel fuel has hovered around \$1.60 per gallon for most of 2001 (figure 15). The recent 10-week drop in diesel fuel costs around the country also reflects a drop in the California price, where data indicate that diesel costs \$1.42 per gallon. However, continued high demand for fuel, distribution snags, and a strict regulatory regime will tend to keep California and the West Coast paying higher than average prices for diesel fuel.

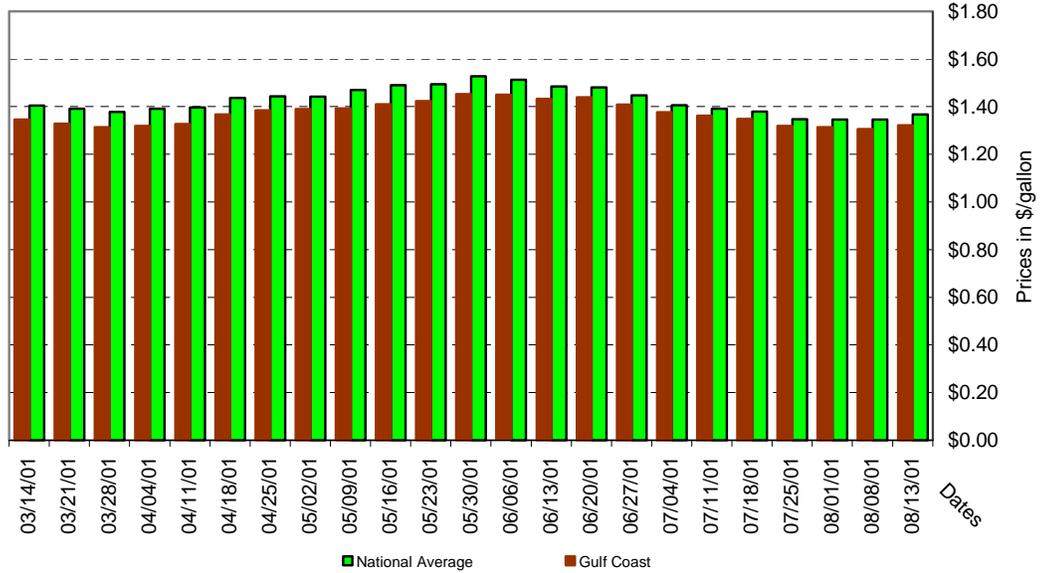
With the gradual switch in production capacity at refineries, distillate stocks will be diminished. Therefore, diesel fuel prices around the country are likely to experience some increase in prices for the remainder of the harvest season.

**Figure 13--Half-year “on-highway” diesel prices, (3/12/01 to 8/13/01)  
National and Midwest Comparison**



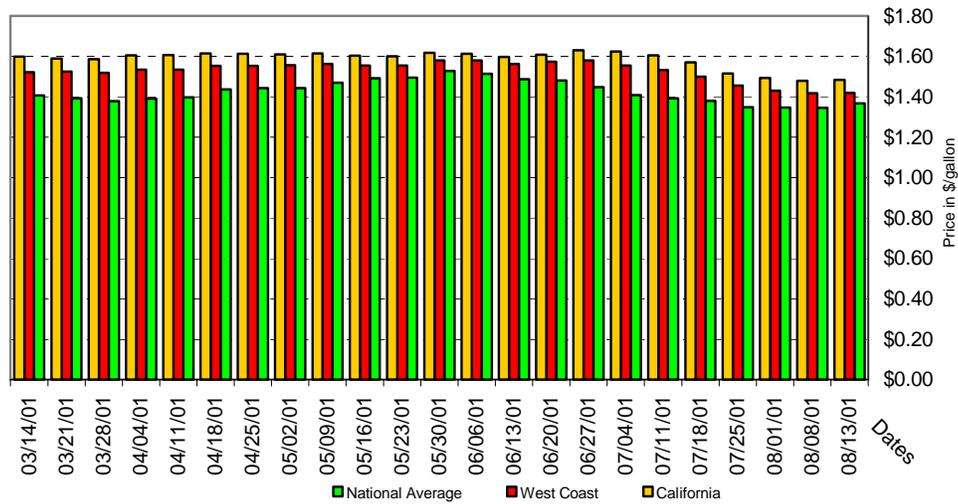
Source: United States Department of Energy, Energy Information Agency at eia.doe.gov

**Figure 14--Half-year “on-highway” diesel prices, (3/12/01 to 8/13/01)  
National and Gulf Comparison**



\*Source: United States Department of Energy, Energy Information Agency at eia.doe.gov

**Figure 15--Half-year “on-highway” diesel prices, (3/12/01 to 8/13/01)  
National, California, and West Coast Comparison**



\*Source: United States Department of Energy, Energy Information Agency at eia.doe.gov

## Appendix

Table A--Average train speed, January-July 2001							
Train type/railroad	January	February	March	April	May	June	July
Miles per hour							
<b>All U.S. trains:</b>							
Burlington Northern Santa Fe	25.8	24.5	25.3	24.3	24.1	24.1	24.3
CSX Transportation	20.9	21.5	21.4	21.2	21.1	20.9	21.6
Kansas City Southern Railway	24.2	23.8	22.1	22.7	25.1	25.2	25.6
Norfolk Southern	21.5	22.1	22.3	22.0	21.8	22.1	23.0
Union Pacific	25.9	24.3	24.2	24.3	24.4	24.3	25.0
Ave. all U.S. railroads	23.7	23.2	23.1	22.9	23.3	23.3	23.9
<b>U.S. grain trains:</b>							
Burlington Northern Santa Fe	23.0	21.6	21.6	21.5	21.7	22.2	22.1
CSX Transportation	18.9	21.7	20.7	20.1	19.6	19.4	19.4
Kansas City Southern Railway	24.1	23.8	22.9	22.8	23.5	22.6	23.4
Norfolk Southern	19.0	19.5	19.2	19.0	18.0	18.5	19.7
Union Pacific	23.2	21.8	21.8	22.3	22.8	22.4	21.9
Ave. all railroads	21.6	21.7	21.2	21.1	21.1	21.0	21.3
<b>All Canadian trains:</b>							
Canadian National	23.6	22.4	23.7	24.4	24.6	24.8	25.2
Canadian Pacific	26.8	26.0	26.1	26.9	24.6	26.1	26.7
Ave. all Canadian railroads	25.2	24.2	24.9	25.7	24.6	25.5	26.0

Notes: Average train speed is calculated by dividing train-miles by hours operated for the and excludes time spent in terminals (dwell time).  
line-haul portion of the movement

For information and specific definitions for individual railroads, see [www.railroadpm.org](http://www.railroadpm.org).

Source: Association of American Railroads, Railroad Performance Measures

**Table B--Average dwell times for selected terminals by railroad, January-July 2001**

<b>Railroad/selected terminal/city and State</b>	<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>
<b>Burlington Northern Santa Fe:</b>							
Barstow, CA	27.0	27.0	28.0	29.0	29.0	28.0	26.0
Fort Worth, TX	31.0	33.0	31.0	29.0	32.0	29.0	29.0
Houston, TX	18.0	17.0	15.0	17.0	16.0	17.0	18.0
Kansas City-Argentine, KS	28.0	28.0	26.0	26.0	25.0	28.0	29.0
Minn./St. Paul-Northtown, MN	27.0	33.0	29.0	31.0	26.0	26.0	28.0
Pasco, WA	21.0	21.0	20.0	22.0	22.0	24.0	20.0
<b>CSX Transportation:</b>							
Cincinnati, OH	29.3	26.9	25.0	24.8	24.4	26.1	28.1
Corbin, KY	28.3	23.6	20.7	21.8	26.4	24.5	30.8
Hamlet, NC	32.3	29.2	28.7	30.1	28.8	30.4	29.7
Louisville, KY	36.8	34.1	32.8	31.9	32.1	31.1	31.8
Nashville, TN	35.5	27.5	30.2	29.7	29.2	29.2	29.6
<b>Kansas City Southern Railway:</b>							
Kansas City, MO	25.0	20.0	20.0	21.0	20.0	22.0	17.0
Shreveport, LA	35.0	35.0	35.0	43.0	31.0	24.0	26.0
<b>Norfolk Southern:</b>							
Chattanooga, TN	31.7	30.5	27.8	26.4	25.5	25.5	24.7
Columbus, OH	30.2	33.3	26.4	26.8	26.7	27.9	26.6
Knoxville, TN	38.0	33.8	34.3	36.9	31.9	29.6	27.8
Linwood, NC	33.5	31.1	31.7	29.0	30.4	26.3	26.4
Macon, GA	28.8	25.8	26.6	25.6	25.7	26.9	26.8
<b>Union Pacific:</b>							
Houston-Englewood, TX	34.1	27.5	34.7	29.5	30.8	41.8	35.7
Houston-Settegast, TX	34.9	24.9	30.5	30.1	32.3	35.9	36.4
Roseville, CA	35.0	30.9	29.5	29.7	33.2	30.3	29.7
Kansas City-Neff, MO	35.2	31.4	39.2	36.2	36.1	32.3	37.1
North Platte-East, NE	26.4	30.9	25.8	27.7	27.0	29.8	26.2
North Platte-West, NE	28.0	27.7	26.9	36.1	29.3	33.6	26.8
Fort Worth-Centennial, TX	30.9	26.1	32.5	34.8	27.5	31.5	30.6

Notes: Dwell time is the total time, on average, that a car spends at a terminal location. A terminal can be a single or multiple yard facility.

For information on additional terminals and specific definitions for individual railroads, see [www.railroadpm.org](http://www.railroadpm.org).

Source: Association of American Railroads, Railroad Performance Measures

### **Additional Sources of Information:**

More detailed information on grain and oilseed production and stocks is available from the National Agricultural Statistics Service in:

Crop Production,

<http://jan.mannlib.cornell.edu/reports/nassr/field/pcp-bb>

Grain Stocks,

<http://jan.mannlib.cornell.edu/reports/nassr/field/pcp-bb>

Small Grains Summary,

<http://jan.mannlib.cornell.edu/reports/nassr/field/pcp-bbs>

More detailed information on grain and oilseed supplies and use is available from the Economic Research Service in:

Feed Outlook,

<http://usda.mannlib.cornell.edu/reports/ersor/field/fds-bb>

Wheat Outlook,

<http://usda.mannlib.cornell.edu/reports/ersor/field/ocs-bb>

Oil Crops Outlook,

<http://usda.mannlib.cornell.edu/reports/ersor/field/ocs-bb>

The latest and most detailed grain and oilseed supply and demand information is available from the World Agricultural Outlook Board in:

<http://www.usda.gov/oc/waob/wasde/wasde.htm>

For additional information on grain, rail, and ocean freight transportation see:

USDA-AMS, *Grain Transportation Report*,

<http://www.ams.usda.gov/tmd/grain.htm>

U.S. Surface Transportation Board,

<http://www.stb.dot.gov>

Association of American Railroads,

<http://www.aar.org>

CSX Transportation,

<http://www.csx.com>

Kansas City Southern,

<http://www.kcsi.com>

Norfolk Southern,

<http://www.nscorp.com>

Union Pacific,

<http://www.up.com>

American Shippers,

<http://www.americanshipper.com>