United States Department of Agriculture

Agricultural Marketing Service

November 2000

Grain Transportation Prospects

USDA/STB Grain Logistics Task Force

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This report was prepared by the Marketing and Transportation Analysis (MTA) group of the Agricultural Marketing Service, U.S. Department of Agriculture (USDA), in cooperation with the Surface Transportation Board Grain Logistics Task Force Working Group. The members of the interagency working group are: Gerald A. Bange, Chairperson, World agricultural Outlook Board, USDA; Melvin F. Clemens, Jr., Surface Transportation Board; Steve P. Gill, Farm Service Agency, USDA; Brian D. Mckee, Grain Inspection, Packers, and Stockyards Administration, USDA; Karla Martin, Agricultural Marketing Service, USDA; Mack Leath, Economic Research Service, USDA; Robert Riemenschneider, Foreign Agricultural Service, USDA; Jim Schaub, Office of Chief Economist, USDA; and Frederic A. Vogel, National Agricultural Statistics Service, USDA.

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Summary

The U.S. Department of Agriculture's (USDA) November forecast for the 2000/2001 corn, sorghum, barley, oat, wheat, rye, and soybean crops makes this year's grain and soybean production (excluding rice) 15,993 million bushels, up 4 percent from 1999/2000. Grain and soybean stocks are forecast at 4,861 million bushels, down 228 million bushels, or 4 percent, from 1999 and 20 percent above the 5-year average (1995-1999). This is the second largest grain and soybean stock level since 1993. Of all position stocks, off-farm stocks accounted for 59 percent of the total and were reported at 2,885 million bushels, down 3 percent from 1999 and 27 percent above the 5-year average. Whereas, September 1 on-farm stocks were reported at 1,976 million bushels, down 6 percent from the previous year and 11 percent above the 5- year average.

Total corn use for the 2000/2001 year is projected at 10,100 million bushels, up 576 million bushels from 1999/2000. Domestic use is up 238 million bushels from last year, projected at 7,825 million bushels. Since increased corn use and lower supplies in 2000/2001 have led to lower ending stocks this month, prices are higher.

The November 9 *World Agricultural Supply and Demand Estimates* report projects the 2000/2001 soybean total use will be slightly down from last year at 2,717 million bushels. In addition, the average price received by farmers is projected between $4.40 and $5.00 per bushel for 2000/2001.

In all positions, September 1 wheat stocks total 2.35 billion bushels, down 94 million bushels, or 3 percent, from a year earlier and 13 percent above the 5-year average (table 9). Of the total, on-farm stocks were reported at 808 million bushels, down 80 million bushels, or 7 percent, from last year, and off-farm stocks were reported at 1,543 million bushels, down 14 million bushels, or 1 percent, from 1999.

World wheat imports are projected at 105.1 million metric tons (MMT), down 2.9 million from 1999/2000. The smaller prospective imports are largely due to record crops in Pakistan and India and improved Russian production. Global wheat production is down 6 million tons from a year earlier because of reductions in China, Australia, Canada, and the United States. Global wheat consumption is expected to exceed production for the third consecutive year, and global ending stocks are projected to be the smallest since 1995/1996. However, price gains are expected to be limited because of continued relatively large supplies of the major foreign exporters. A record crop in the European Union (EU) is offsetting reductions in the other countries, and production in the major foreign exporters (Argentina, Australia, Canada, and the EU) will be up from a year earlier.

World coarse grain trade is projected to drop almost 3 million tons from a year earlier, but U.S. exports are expected to be up sharply because of reduced competition from China, Eastern Europe, and Argentina. While world coarse grain production is projected down sharply from last year, reductions in China and Eastern Europe is more than offset by larger crops in the United States, Russia, the EU, and Brazil. World coarse grain 2000/2001 stocks are expected to drop sharply as consumption expands to record levels and far outpaces global production. However, large U.S. corn stocks will limit price gains.

Although grain exporters experienced higher ocean rate spread rates in 2000, the ocean rate spreads between the Gulf and PNW still favors shipments from the Gulf. Through the first 3 quarters of 2000, the ocean freight rate spreads were below the average 5- and 10-year rates, making grain shipments from Gulf more favorable.

During the first 9 months of 2000, barge shipments of grain amounted to 1.24 billion bushels, or 35.4 million tons. This represents an 8-percent decrease over the same period during 1999 but a 3-percent increase over the 5-year average. Barge shipment of corn for the first through third quarters totaled 900 million bushels (25.2 million tons) and represented 72 percent of all grain and oilseed barge shipments. Total soybean barge shipments were reported at 230 million bushels (6.9 million tons), a 10-percent increase over last year and a 22-percent increase over the 5-year average.

With anticipated crop production of approximately 10 billion bushels of corn and 2.77 billion bushels of soybeans this comes at a time when the Nation's farmers are experiencing the fourth year in a row of depressed grain prices. Low prices are almost certain to guarantee scarce storage space for fall corn and soybeans as producers and grain elevator operators will continue their reluctance to release grain to market.

While the major rail carriers are confident of providing adequate service, a sudden rise in grain prices could cause a surge in grain marketing efforts and an increase in the demand for rail transportation activity. Although, the Class I railroads serving North America have indicated that no substantial problems are anticipated in providing transportation services during the fall harvest

and peak shipping season, both Union Pacific (UP) and Burlington Northern Santa Fe (BNSF) railroads have increased demurrage charges. These are defined as penalties, for shippers who hold cars beyond the allotted free time to load them.

Demurrage charges are being increased in order to encourage faster turnaround times for grain cars. The new UP charges, which were the first increase in over 8 years and took effect October 1, 2000, increased demurrage charges 50 percent, from $50 to $75 per day. Also effective October 1, BNSF's demurrage charges apply to Sundays, which previously had been a demmurage-free day. BNSF's new demurrage charges apply to whole grain and grain products including corn and soybeans, the two main fall crops.

Despite some notable obstacles in the overall service delivery that may affecting regional grain deliveries during the late harvest season, the truck situation is healthy. The key drivers for these hurdles are found in diesel fuel prices and an on-going labor shortage affecting the motor carrier industry.

A combination of factors contributed to the recent spike in diesel fuel prices affecting the grain transportation industry. These factors include: a vigorous national economy, a rebounding Asian economy, a recent cut in production by and uncertainty of peace talks in the Middle East. As a result of these factors, higher than normal diesel fuel costs occurred in 1999 and now in 2000.

Grain Market Situation

Grain and Soybeans

Grain (excluding rice) and soybean production for 2000/2001 is forecast at 16 billion bushels, up 4 percent from last year. While wheat production is down 3 percent from 1999/2000, corn and soybean production is forecast 7 and 5 percent (respectively) higher. These large crops will result in an almost certainty to guarantee scarce storage space in some areas for fall corn and soybeans as low prices and large government payments mean producers will continue their reluctance to release grain to market. In response to the expected storage crunch, the U.S. Department of Agriculture (USDA) has authorized the use of temporary and emergency storage for all commercial warehouses that participate in the Uniform Grain and Rice Storage Agreement (UGRSA) and store wheat, corn, and other feed grains and oilseeds that are USDA-owned or are pledged to USDA under loan. In addition, USDA has taken steps to facilitate an increase in on-farm storage capacity. As a result, earlier this year (May 2000), USDA announced that it will begin making 7-year, low-cost loans to farmers to help build or upgrade commodity storage and handling facilities.

Supplies. The November production forecast for the 2000/2001 corn, sorghum, barley, oat, wheat, rye, and soybean crops totals 15,993 million bushels, up 4 percent from 1999/2000. Beginning stocks for 2000/2001 are approximately 4,861 million bushels, and imports are projected at approximately 240 million bushels.

Combined grain and soybean production for 2000/2001 is forecast to be up 570 million bushels from 1999/2000. In every region, except the Delta, Southern Plains, Central Plains, and West, production forecasts are up. The Northeast region has the largest forecast percentage increases from 1999/2000, with a 50-percent (138 million bushels) increase from last year (figure 1, table 1). However, this increase is only 21 percent above the 5-year average (1995-1999) for the region. Of total production, the Eastern and Western Corn Belts are expected to account 31 and 27 percent, respectively, for 2000/2001. In the Northern Plains, grain and soybean production is forecast up 182 million bushels, 14 percent above the previous year and 10 percent above the 5-year average. Grain and soybean production for the Pacific Northwest (PNW) is forecast to increase by 69 million bushels, 18 percent above last year's production.

The Central Plains represents the largest reduction from 1999/2000 production with 422 million bushels, followed by the Southern Plains with 121 million bushels. However, the reduction only represents 8 and 5 percent, respectively, of the 5-year average for the regions. The Delta region is forecast to expect a 6 percent reduction from the 5-year average.

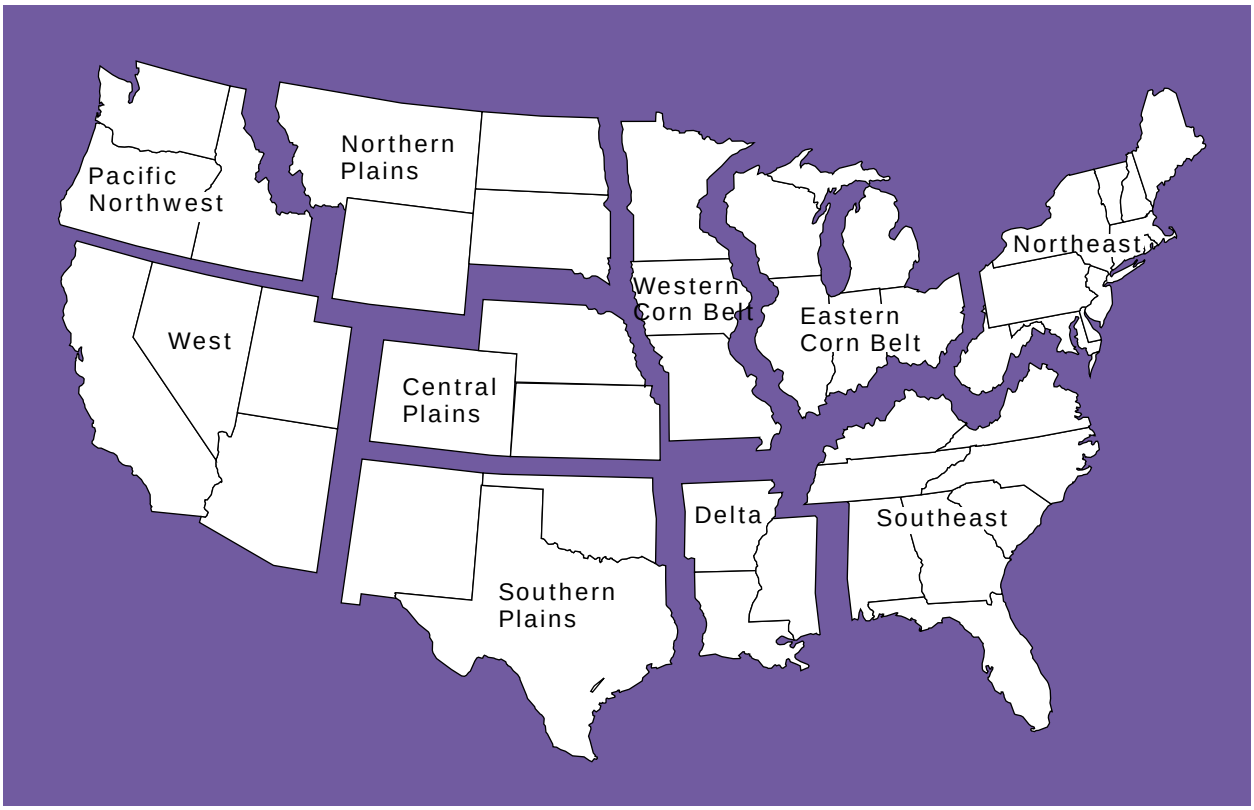
Use. November projections for total grain and soybean use in 2000/2001 is approximately 16,280 million bushels, up 450 million bushels, or 3 percent from 1999/2000. Whereas, domestic use for 2000/20001 is projected at approximately 11,726 million bushels, up 2 percent, but down 172 million bushels from the previous year.

World Trade. World wheat imports are projected at 105.1 million metric tons (MMT), down 2.9 million from 1999/2000. The smaller prospective imports are largely due to record crops in Pakistan and India and improved Russian production. Global wheat production is down 6 million tons from a year earlier because of reductions in China, Australia, Canada, and the United States. Global wheat consumption is expected to exceed production for the third consecutive year, and global ending stocks are projected to be the smallest since 1995/1996. However, price gains are expected to be limited because of continued relatively large supplies of the major foreign exporters. A record crop in the European Union (EU) is offsetting reductions in the other countries, and production in the major foreign exporters (Argentina, Australia, Canada, and the EU) will be up from a year earlier.

World coarse grain trade is projected to drop almost 3 million tons from a year earlier, but U.S. exports are expected to be up sharply because of reduced competition from China, Eastern Europe, and Argentina. While world coarse grain production is projected down sharply from last year, reductions in China and Eastern Europe more than offset larger crops in the United States, Russia, the EU, and Brazil. In addition, world coarse grain 2000/2001 stocks are expected to drop sharply as consumption expands to record levels and far outpaces global production. However, large U.S. corn stocks will limit price gains.

Stocks and Storage. September 1 grain and soybean stocks, as reported in the September 29 *Grain Stocks* report and updated in the November 9 *Crop Production* report, are 4,861 million bushels, down approximately 228 million bushels, or 4 percent, from 1999 and 20 percent above the 5-year average (table 2). This is the second largest grain and soybean stock number since 1993. Off-farm stocks accounted for 59 percent of the total and were reported at 2,885 million bushels, down 3 percent from 1999 and 27 percent above the

Figure 1—U.S. grain production regions



Source: USDA-AMS

Table 1—U.S. grain and soybean production, 1994/95-2000/2001

Region	1994/95	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/2001	Percent of 1999/2000	Percent of 5-yr. avg.
	Million bushels								
Northeast	375	326	394	341	361	273	411	150	121
Southeast	795	642	770	703	584	556	694	125	107
Delta	360	290	475	403	338	348	347	100	94
Eastern Corn Belt	4,998	3,804	4,034	4,493	4,605	4,530	4,914	108	114
Western Corn Belt	4,200	3,304	3,981	3,934	4,260	4,097	4,294	105	110
Southern Plains	692	597	649	828	717	808	687	85	95
Central Plains	2,745	2,078	2,767	2,898	3,087	2,945	2,523	86	92
Northern Plains	1,448	1,154	1,522	1,325	1,550	1,330	1,512	114	110
Pacific Northwest	405	441	497	478	459	376	445	118	99
West	128	110	150	143	139	114	109	96	1
Other States1 2	n/a	n/a	n/a	n/a	n/a	45	57	126	n/a
United States	16,147	12,746	15,240	15,546	16,097	15,423	15,993	104	107

Note: 1999 and 2000 production forecast is from the November 9, 2000, Crop Production report and the September 29, 2000, Small Grains 2000 Summary report.

[1] For 2000, Other States include Arizona, Alabama, California, Delaware, Georgia, Kentucky, Maryland, Mississippi, North Carolina, Pennsylvania, South Carolina, Tennessee, and Virginia (sorghum); Arizona, Florida, Idaho, Montana, Oregon, Utah, West Virginia, AND Wyoming (corn) and Florida and West Virginia (soybeans).

[2] For 1999, Other States include Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, AND Tennessee (sorghum).
Arizona, Florida, Idaho, Montana, Oregon, Utah, West Virginia, and Wyoming (corn) and Florida (soybeans)

Source: USDA-NASS

Table 2—U.S. grain and soybean stocks by position, September 1, 1994-2000

Region	1994 On Farms	1994 Off Farms	1994 Total	1995 On Farms	1995 Off Farms	1995 Total	1996 On Farms	1996 Off Farms	1996 Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	21	30	51	24	43	67	12	23	36
Southeast	14	80	94	15	74	89	6	48	54
Delta	1	43	44	1	40	42	1	37	38
Eastern Corn Belt	195	391	586	284	513	797	131	223	355
Western Corn Belt	282	346	628	475	603	1,077	226	211	437
Southern Plains	26	192	217	22	155	178	20	117	136
Central Plains	195	477	671	217	500	717	119	291	410
Northern Plains	774	197	972	672	185	856	675	177	852
Pacific Northwest	106	231	338	121	227	348	111	244	355
West	10	38	48	7	34	41	8	29	37
Unallocated	72	28	99	75	51	126	62	27	89
United States	1,695	2,053	3,748	1,914	2,424	4,338	1,371	1,426	2,798

Region	1997 On Farms	1997 Off Farms	1997 Total	1998 On Farms	1998 Off Farms	1998 Total	1999 On Farms	1999 Off Farms	1999 Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	22	37	60	16	41	57	18	47	65
Southeast	12	58	70	15	64	79	10	73	84
Delta	1	38	39	1	60	61	1	49	50
Eastern Corn Belt	187	290	477	244	472	716	299	586	885
Western Corn Belt	310	311	621	421	396	817	492	642	1,135
Southern Plains	24	213	237	26	303	330	26	318	344
Central Plains	221	508	729	235	620	855	291	734	1,025
Northern Plains	636	195	831	710	191	901	712	204	916
Pacific Northwest	131	259	390	129	270	399	121	242	363
West	6	39	45	3	47	50	2	47	49
Unallocated	79	43	122	127	37	165	134	39	174
United States	1,630	1,991	3,621	1,928	2,502	4,430	2,106	2,983	5,089

Region	2000 On Farms	2000 Off Farms	2000 Total	Percent of 1999 On Farms	Percent of 1999 Off Farms	Percent of 1999 Total	Percent of 5-yr. avg. On Farms	Percent of 5-yr. avg. Off Farms	Percent of 5-yr. avg. Total
	Million bushels								
Northeast	18	50	68	102	105	104	99	130	120
Southeast	10	74	85	101	101	101	89	117	113
Delta	1	56	56	89	114	114	66	124	123
Eastern Corn Belt	279	597	876	93	102	99	122	143	136
Western Corn Belt	539	578	1,117	109	90	98	139	134	136
Southern Plains	24	277	302	95	87	88	103	125	123
Central Plains	231	698	929	79	95	91	107	132	124
Northern Plains	636	211	847	89	103	92	96	111	99
Pacific Northwest	119	273	392	99	113	108	97	110	106
West	1	35	37	70	75	75	27	90	83
Unallocated	117	35	153	87	90	88	123	89	113
United States	1,976	2,885	4,861	94	97	96	111	127	120

Source: USDA-NASS

5-year average. September 1 on-farm stocks were reported at 1,976 million bushels, down 6 percent from the previous year but 11 percent above the 5- year average.

The Eastern and Western Corn Belts accounted for a combined 41 percent (18 and 23 percent, respectively) of the U.S. grain and soybean stocks. The Northern, Central, and Southern Plains accounted for 42 percent (17, 19, and 6 percent, respectively) of September 1 U.S. grain and soybean stocks. The Eastern Corn Belt has a September 1 stock for grain and soybeans of 876 million bushels, which is 9 million bushels short of the same period last year, or a 1-percent reduction in last year's stock and 36 percent above the 5-year average. On the other hand, the Western Corn Belt September 1 U.S. grain and soybean stock was 1,117 million bushels, a reduction of 18 million bushels from the previous year, a 2-percent decrease from previous-year stock but 36-percent above the 5-year average.

In the Eastern and Western Corn Belts, 68 and 52 percent, respectively, of September 1 stocks were held off farm in commercial facilities. In the Southern and Central Plains, 92 and 75 percent, respectively, of September stocks were held in commercial facilities. Contrarily, 75 percent of Northern Plains September stocks were held on farm with only 25 percent in commercial facilities. The Northeast, Southeast, Delta, and PNW experienced moderate increases of 4, 1, 14, and 8 percent, respectively, in September 1 grain and soybean stocks, compared to the 1999 level.

Based on the total U.S. storage capacity reported for December 1, 1999, 25 percent of the capacity was utilized by the September 1 grain and soybean stocks (table 3). This is 2 percent down from total storage capacity utilized a year ago. On-farm stocks accounted for 18 percent of on-farm storage capacity as of September, down 1 percent from last year. September 1 stocks held off farm accounted for 36 percent of

Table 3—U.S. grain storage capacity utilization, September 1, 1995-2000

1995 Region	1996 On Farms	1996 Off Farms	1996 Total	1997 On Farms	1997 Off Farms	1997 Total	1998 On Farms	1998 Off Farms	1998 Total
	percent			*percent*			*percent*		
Northeast	10	30	17	5	16	9	10	25	16
Southeast	3	21	10	1	14	6	2	17	8
Delta	1	11	7	1	10	7	0	11	7
Eastern Corn Belt	9	24	16	4	11	7	6	14	10
Western Corn Belt	14	35	21	7	12	9	10	18	13
Southern Plains	8	14	13	8	11	10	10	22	20
Central Plains	13	31	22	7	18	13	14	34	23
Northern Plains	41	41	41	42	40	42	40	44	41
Pacific Northwest	46	60	54	41	64	54	52	67	61
West	0	24	29	0	21	26	0	28	32
United States	17	29	22	12	17	14	15	25	19

Region	1998 On Farms	1998 Off Farms	1998 Total	1999 On Farms	1999 Off Farms	1999 Total	2000 On Farms	2000 Off Farms	2000 Total
	percent			*percent*			*percent*		
Northeast	7	28	15	8	33	17	8	34	18
Southeast	3	19	9	2	20	9	2	23	10
Delta	0	17	11	0	13	9	0	15	10
Eastern Corn Belt	8	23	14	10	28	17	9	28	17
Western Corn Belt	13	23	17	16	37	23	17	34	23
Southern Plains	12	35	30	12	38	33	11	33	28
Central Plains	15	42	28	18	48	32	14	45	29
Northern Plains	45	43	45	45	45	45	40	46	41
Pacific Northwest	53	70	63	49	63	58	49	72	63
West	0	34	36	0	34	36	0	25	26
United States	18	31	23	19	37	27	18	36	25

Note: Based on storage capacity as reported December 1 of the preceding year.

Source: USDA-NASS

commercial storage capacity, down 1 percent from this time last year. The highest September 1 storage utilization was reported for the PNW, with 63 percent of total storage capacity used. In the PNW, 72 percent of the off-farm storage capacity was utilized, while 49 percent of on-farm storage capacity was utilized. This is the highest off-farm storage capacity utilized in the PNW since 1994. September 1 storage capacity utilization in the Northern Plains was 41 percent of total storage capacity available as of December 1, 1999. In the Northern Plains, 46 percent of the off-farm storage capacity was utilized, while 40 percent of on-farm storage capacity was utilized. Central Plains September 1 storage utilization was 29 percent of the storage capacity available as of December 1, 1999. Central Plains off-farm storage utilization was 45 percent, and the on-farm storage utilization was 14 percent. In the Northeast, Southeast, and Delta regions, the total storage capacity utilization was 18, 10, and 10 percent, respectively, up 1 percent each from last year.

Corn

Record U.S. corn production is forecast for 2000/2001 at 10.1 billion bushels, with higher acreage planted (79.6 million acres and record yields, 137.7 bushels per harvested acre). Anticipated record-high domestic use and bright prospects will limit the stock's gain. Nevertheless, ending stocks are expected to be 1,679 million bushels.

Supplies. The 2000/2001 corn crop production forecast is 10,054 million bushels, up 7 percent up from 1999/2000, or 617 million bushels. September 1 beginning stocks are estimated at 1,715 million bushels, down 4 percent from last year. Total corn supplies for the 2000/2001 marketing year are projected at 11,779 million bushels.

The November 9 Crop Production report puts 2000/2001 corn production up in all the major producing areas (table 4). The production in the Eastern and Western Corn Belts is forecast 16 and 11 percent above the 5-year average, respectively. Production in the Northeast, Northern Plains, and Southeast is forecast up 119, 95, and 92 million bushels (70, 21, and 28 percent), respectively, from 1999/2000. In the same regions, forecasts show a 23- 32- and 11-percent increase, respectively, above the 5-year average.

The largest decrease in corn production is expected in the Central Plains where production is forecast to be down 151 million bushels, or 9 percent below 1999/2000, due to a prolonged drought in Nebraska and Kansas. Production is forecast up in the West region by 18 percent compared to 1999/2000 and up 5 compared to the 5-year average.

Use. Total corn use for 2000/2001 is projected at 10.1 billion bushels, up approximately 576 million bushels from 1999/2000. Domestic use is projected at

Table 4—U.S. corn production, 1994/95-2000/2001

Region	1994/95	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/2001	Percent of 1999/2000	Percent of 5-yr. avg.
	Million bushels								
Northeast	268	228	295	232	254	171	290	170	123
Southeast	457	370	461	395	324	326	418	128	111
Delta	72	59	155	118	108	89	99	111	94
Eastern Corn Belt	3,823	2,701	2,994	3,260	3,336	3,304	3,603	109	116
Western Corn Belt	3,103	2,309	2,920	2,793	3,087	2,996	3,142	105	111
Southern Plains	269	245	238	280	228	288	287	100	112
Central Plains	1,573	1,191	1,663	1,650	1,814	1,733	1,582	91	98
Northern Plains	422	241	428	394	528	444	539	121	132
Pacific Northwest	28	28	34	30	33	18	18	98	62
West	36	30	45	55	48	34	40	118	95
Other States1 2	n/a	n/a	n/a	n/a	n/a	36	37	105	n/a
United States	10,051	7,400	9,233	9,207	9,759	9,437	10,054	107	112

Note: 1999 and 2000 production forecasts are from the November 9, 2000, Crop Production report.

Source: USDA-NASSSource: USDA-NASS

[1]For 1999 and 2000, Other States include Arizona, Florida, Idaho, Montana, Oregon, Utah, West Virginia, and Wyoming.

7,825 million bushels, up 238 million bushels from last year. In addition, the season average price received by farmers is forecast between $1.70 and $2.10 per bushel for 2000/2001, compared to the price received by farmers in 1999/2000, estimated at $1.80 per bushel.

Stocks and Storage. The September 29 *Grain Stocks* report puts September 1 Corn stocks in all positions at 1,715 million bushels, down 72 million bushels from 1999. This represents a 4-percent decrease from a year earlier stocks and a 44-percent increase over the 5-year average for September 1 stocks (table 5). September stocks in all positions are the second largest since 1993 when they reached 2,113 million bushels. Off-farm stocks, which accounted for 54 percent of the total, were reported at 922 million bushels. This is down 68 million bushels, or 7 percent from 1999 but 48 percent above the 5-year average. On-farm stocks for September 1 totaled 793 million bushels, down 4 million bushels from 1999 but 39 percent above the 5-year average.

September 1 corn stocks were reported down for 2000 in all regions except the Eastern Corn Belt. The largest decreases were in the Central Plains, Western Corn Belt, Northern Plains, and Southern Plains, where September 1 stocks were down 44, 11, 8, and 6 million bushels, respectively. These decreases represent year-to-year reductions in corn stocks of 13 percent for the Central Plains, 1 percent for the Western Corn Belt, 8 percent for the Northern Plains, and 31 percent for the Southern Plains. The only increase in stocks was recorded in the Eastern Corn Belt with 6 million bushels, or 1 percent above 1999. September 1 stocks are well above the 5-year average for most of the regions except for the Delta and West regions where stocks are 76 and 7 percent, respectively, lower than the 5-year average.

On October 18, futures corn prices for the March contract on the Chicago Board of Trade were 11.25 cents per bushel above December prices (3.75 cents per bushel per month). On the same day, May prices were 18.5 cents per bushel above December prices (3.7 cents per bushel per month). This suggests that there are incentives for the producers to store corn. Last year at this time, the December-March and December-May spreads were 10.75 and 17.25 cents per bushel, respectively. The interest cost to carry corn from December to March is 5.2 cents per bushel (1.7 cents per bushel per month) and from December to May is 8.9 cents per bushel (1.78 cents per bushel per month).

Soybeans

This year's soybean production forecast is 2,777 million bushels projected for the 2000/2001 year, up 5 percent from last year. Also, the average farm price for soybeans has increased slightly at $4.40-5.00 per bushel, compared to $4.65 per bushel in 1999/2000.

Supplies. The November 9 *Crop Production* report forecasts 2000/2001 soybean production at 2.78 billion bushels, up 123 million bushels, or 5 percent above last year's production (table 6). The total supplies for 2000/2001, which include beginning stocks of 288 million bushels and a projected 3-million bushels in imports, amounted to 3,068 million bushels.

Production is forecast up in every region except the Delta, Southern Plains, and Central Plains. The Eastern Corn Belt is forecast to have the largest increase in production for 2000/2001. Eastern Corn Belt production is forecast up 89 million bushels, or 9 percent above the previous year's production and 14 percent above the 5-year average for the region. Soybean production in the Western Corn Belt, Southeast, Northern Plains, and Northeast region is forecast up by 13, 45, 20, and 18 million bushels (1, 43, 10, and 47 percent), respectively, from 1999/2000. Soybean production is forecast down 25 and 35 million (15 and 13 percent, respectively) for the Delta and Central Plains, compared to 1999/2000.

Use. The November 9 *World Agricultural Supply and Demand Estimates* report projects the 2000/2001 soybean total use is slightly down from last year at 2,717 million bushels. In addition, the average price received by farmers is projected between $4.40 and $5.00 per bushel for 2000/2001, compared to $4.65 per bushel in 1999/2000.

Stocks and Storage. September 1 soybean stocks in all positions were reported in the September 29 *Grain Stocks* report at 288 million bushels, down approximately 60 million bushels, or 17 percent, from a year earlier and 20 percent above the 5-year average (table 7). September 1 on-farm stocks were reported at 113 million bushels, down 32 million bushels, or 22 percent, from a year ago and 29 percent above the 5-year average. And, off-farm stocks, at 175 million bushels, were down 28 million bushels, or 14 percent below 1999 and 15 percent above the 5-year average. Stocks kept off farm accounted for 61 percent of the total stocks.

Table 5—U.S. corn stocks by position, September 1, 1994-2000

Region	1994			1995			1996		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	11	4	14	15	8	23	6	5	10
Southeast	8	14	23	9	17	25	3	9	12
Delta	0	3	3	0	1	1	0	0	0
Eastern Corn Belt	131	165	296	218	264	482	82	92	174
Western Corn Belt	138	165	303	321	378	699	62	73	135
Southern Plains	1	6	7	3	7	10	1	4	5
Central Plains	61	78	140	97	117	214	17	38	54
Northern Plains	24	9	33	51	15	66	11	4	14
Pacific Northwest	0	4	4	0	3	3	0	2	2
West	0	2	2	0	3	3	0	1	1
Unallocated	21	5	26	28	4	32	16	1	17
United States	395	455	850	741	817	1,558	197	229	426

Region	1997			1998			1999		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	13	8	21	11	7	18	13	9	21
Southeast	9	14	23	11	21	32	7	20	27
Delta	0	3	3	0	11	11	0	4	4
Eastern Corn Belt	128	99	227	181	233	414	222	291	512
Western Corn Belt	181	169	350	273	224	497	327	413	740
Southern Plains	1	7	7	0	11	11	0	17	17
Central Plains	83	87	169	92	138	229	138	198	337
Northern Plains	39	17	56	44	15	59	66	25	91
Pacific Northwest	0	1	1	0	2	2	0	5	5
West	0	2	2	0	3	3	0	3	3
Unallocated	23	1	24	29	4	33	25	5	30
United States	475	408	883	640	668	1,308	797	990	1,787

Region	2000			Percent of 1999			Percent of 5-yr. avg.		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels								
Northeast	12	8	19	92	90	91	102	109	104
Southeast	7	19	26	101	96	98	95	117	110
Delta	0	1	1	0	21	21	0	24	24
Eastern Corn Belt	207	311	518	93	107	101	125	159	143
Western Corn Belt	363	366	729	111	89	99	155	146	150
Southern Plains	0	11	11	0	69	69	0	125	114
Central Plains	118	175	293	86	88	87	139	151	146
Northern Plains	62	21	83	95	84	92	148	137	145
Pacific Northwest	0	3	3	0	52	52	0	104	104
West	0	2	2	0	68	68	0	93	93
Unallocated	24	5	29	96	99	96	100	170	107
United States	793	922	1,715	99	93	96	139	148	144

Source: USDA-NASS

Table 6—U.S. soybean production, 1994/95-2000/2001

Region	1994/95	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/2001	Percent of 1999/2000	Percent of 5-yr. avg.
	Million bushels								
Northeast	46	29	41	40	44	38	56	147	145
Southeast	179	139	170	163	143	105	150	143	104
Delta	205	152	202	213	155	164	139	85	78
Eastern Corn Belt	911	822	839	965	1,014	959	1,048	109	114
Western Corn Belt	840	775	790	908	952	915	928	101	107
Southern Plains	16	12	14	21	12	17	15	89	100
Central Plains	208	152	209	231	240	262	227	87	104
Northern Plains	110	94	115	147	180	193	213	110	146
Other States1 2	n/a	n/a	n/a	n/a	n/a	1	1	189	n/a
United States	2,515	2,174	2,380	2,689	2,741	2,654	2,777	105	110

Note: 1999 and 2000 production forecasts are from the November 9, 2000, Crop Production report.

[1] For 1999, Other States include Florida. 2 For 2000, Other States include Florida and West Virginia (soybeans).

Source: USDA-NASS

The largest decreases in September 1 soybean stocks were in the Eastern and Western Corn Belts. These two regions combined represent 72 percent of September 1 stocks. In the Western Corn Belt, stocks were reported at 133 million bushels, down 30 million bushels, or 18 percent, from last year and 24 percent above the 5-year average. Western Corn Belt off-farm stocks accounted for 61 percent of the region's total September 1 stocks. Eastern Corn Belt stocks were reported at 75 million bushels, down 17 million bushels, or 18 percent, from 1999 and 12 percent above the 5-year average. Off-farm stocks in the Eastern Corn Belt accounted for 59 percent of the region's total stocks. For the Delta region, the September 1 stock was recorded at 7 million bushels, down 2 million bushels from last year. A similar situation was recorded in the Southern Plains where the September 1 stocks of 1 million were kept off farm. Central and Northern Plains recorded September 1 stocks of 32 and 18 million bushels, respectively. In the Central and Northern Plains, 69 and 44 percent of September 1 stocks were kept off farm, respectively. While, the September 1 stocks in the Central Plains were down 2 percent from 1999 and 35 percent above the 5-year average, the stocks in the Northern Plains were up 3 percent from 1999 and 78 percent above the 5-year average.

Prices for March soybeans on the Chicago Board of Trade were 20.75 cents per bushel above November prices (5.2 cents per bushel per month) on October 18. May prices were 28 cents per bushel above November prices (4.7 cents per bushel per month). Last year at this time, these spreads were 19.5 cents per bushel for November-March and 24.5 cents per bushel for November-May. The interest cost to carry soybeans forward from November to March would be 15.47 cents per bushel (3.87 cents per bushel per month). To carry soybeans from November to May, the interest cost would be 23.55 cents per bushel (3.93 cents per bushel per month).

Wheat

Wheat production is estimated at 2.22 billion bushels, down 3 percent from the previous year (1999/2000). Ending stocks are projected at 892 million bushels. Total use has changed slightly as expanding exports affect decreasing domestic use. Projected domestic use is 1,276 million bushels, up 24 bushels from last year. Imports remain the same at 95 million bushels.

Supplies. The September 29 *Small Grains 2000 Summary* report and additional updates from the November 9, *Crop Production* report, put estimates for all classes of wheat at 2,223 million bushels, down 76 million bushels, or 3 percent, from 1999/2000. With September 1 beginning stocks reported at 950 million, total supplies (including imports) are projected at 3,268 million bushels, down 71 million bushels from 1999/2000.

Wheat production for 2000/2001 was up in the Delta, Western Corn Belt, Northern Plains, and PNW. In the PNW, forecasts show a 61-million bushel or 23-percent increase from 1999/2000 as the crop rebounded from the 1999 drought (table 8). The production in the

Table 7—U.S. soybean stocks by position, September 1, 1994-2000

Region	1994			1995			1996		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	0	0	0	0	1	1	0	0	0
Southeast	2	7	9	4	7	11	1	5	6
Delta	0	9	10	1	9	10	0	8	8
Eastern Corn Belt	19	49	68	31	67	98	19	36	54
Western Corn Belt	27	54	81	47	104	151	30	49	79
Southern Plains	0	1	1	0	2	2	0	0	0
Central Plains	5	15	20	11	21	31	5	13	18
Northern Plains	4	3	6	9	5	13	3	2	5
Pacific Northwest	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0
Unallocated	2	12	14	3	14	18	2	10	12
United States	59	150	209	105	230	335	60	124	183

Region	1997			1998			1999		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	0	0	0	0	0	0	0	1	1
Southeast	1	2	3	0	4	4	0	5	5
Delta	0	5	5	0	6	6	0	9	9
Eastern Corn Belt	13	26	39	22	32	54	39	53	92
Western Corn Belt	20	36	55	40	48	88	67	96	163
Southern Plains	0	0	0	0	0	0	0	0	0
Central Plains	5	10	15	7	16	22	10	23	33
Northern Plains	4	2	6	6	3	9	11	6	17
Pacific Northwest	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0
Unallocated	1	7	8	10	6	16	18	10	28
United States	44	88	132	84	115	200	145	203	348

Region	2000			Percent of 1999			Percent of 5-yr. avg.		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels								
Northeast	0	1	1	0	85	85	0	167	167
Southeast	0	0	0	0	8	8	0	7	6
Delta	0	7	7	0	75	75	0	94	91
Eastern Corn Belt	31	44	75	79	84	82	126	104	112
Western Corn Belt	52	81	133	78	85	82	128	122	124
Southern Plains	0	1	1	0	166	166	0	98	98
Central Plains	10	22	32	98	99	98	133	135	135
Northern Plains	10	8	18	91	125	103	155	217	178
Pacific Northwest	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0
Unallocated	10	11	20	53	102	71	140	110	122
United States	113	175	288	78	86	83	129	115	120

Source: USDA-NASS

Table 8—US wheat production, 1994/95-2000/2001

Region	1994/95	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/2001	Percent of 1999/2000	Percent of 5-yr. avg.
	Million bushels								
Northeast	32	38	34	39	34	37	37	101	102
Southeast	128	110	117	125	101	110	110	101	98
Delta	49	56	84	51	57	65	82	127	131
Eastern Corn Belt	196	227	150	212	206	215	212	99	105
Western Corn Belt	124	121	157	137	139	125	147	118	108
Southern Plains	224	188	173	298	343	284	213	75	83
Central Plains	584	477	404	662	681	621	479	77	84
Northern Plains	627	595	715	556	604	524	568	108	95
Pacific Northwest	293	318	367	339	317	263	324	123	85
West	63	53	77	61	64	56	51	91	82
United States	2,321	2,183	2,277	2,481	2,547	2,299	2,223	97	94

Note: 1999 and 2000 production forecast is from the Septeber 29, 2000, Small Grains 2000 Summary report.
2000 Maine and North Dakota forecasts are from the November 9, 2000, Crop Production report
Source: USDA-NASS

Northern Plains is forecast up 44 million bushels, or 8 percent above the previous year but 5 percent below the 5-year average. In the Western Corn Belt production is forecast up 22 million bushels, or 18 percent, from 1999/2000 and 8 percent above the 5-year average. Delta wheat production is forecast up 17 million bushels, or 27 percent, above 1999/2000 and 31 percent above the 5-year average. Wheat production is forecast down in the Central Plains, Southern Plains, West, and Eastern Corn Belt. In the Central Plains, production is forecast down 142 million bushels, or 23 percent, from 1999/2000 and 16 percent below the 5-year average. Wheat production in the Southern Plains is forecast down 71 million bushels, or 25 percent, from 1999/2000 and 17 percent below the 5-year average. Wheat production is forecast down 5 and 3 million bushels, respectively, in the West and Eastern Corn Belt. While the forecasts in these regions are 9 and 1 percent, respectively, below 1999/2000, the production in the West is forecast 18 percent below the 5-year average, and production in the Eastern Corn Belt is forecast 5 percent above the 5-year average.

Use. November 2000/2001 projections for total wheat use is 2,376 million bushels, down marginally (14 million bushels) from the 1999/2000 marketing year. Total domestic use is projected at 1,276 million bushels, down slightly from 1,300 million bushels the previous year. Exports have increased slightly to 1,100 million bushels, from 1,090 million bushels in the previous year.

Stocks and Storage. The September 30 *Grain Stocks* report records September 1 wheat stocks in all positions at 2.35 billion bushels, down 94 million bushels, or 3 percent, from a year earlier and 13 percent above the 5-year average (table 9). Of the total, on-farm stocks were reported at 808 million bushels, down 80 million bushels, or 7 percent, from last year, and off-farm stocks were reported at 1,543 million bushels, down 14 million bushels, or 1 percent, from 1999.

September 1 wheat stocks were up over year-ago levels and above the 5-year averages in the Northeast, Southeast, Delta, Western Corn Belt, and PNW. Despite a reduction in the their level of stocks, the Central and Northern Plains accounted for 48 percent of all September 1 stocks. The largest reduction in volume of stocks was in the Central Plains, where stocks were down 54 million bushels, or 9 percent below those in 1999 but 15 percent above the 5-year average. Northern Plains September 1 stocks were down 65 million bushels, or 6 percent, from a year ago and 1 percent below the 5-year average. In the Central Plains, 83 percent of all stocks were held off farm, while in the Northern Plains, 76 percent of all stocks were held on farm. The largest increase in the volume of September 1 stocks was in the PNW with an increase of 29 million bushels, or 10 percent, above the last year and 6 percent above the 5-year average. The Southeast September 1 wheat stocks were up 6 million bushels, or 12 percent, above the previous year and 29 percent above the 5-year average. In the PNW, 72 percent of all stocks were held in off-farm facilities. September 1

Table 9—U.S. wheat stocks by position, September 1, 1994-2000

Region	1994			1995			1996		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	0	22	22	0	29	29	0	16	16
Southeast	3	57	60	3	47	49	2	32	34
Delta	1	30	30	1	29	29	1	28	29
Eastern Corn Belt	16	147	163	12	166	179	11	79	90
Western Corn Belt	65	71	136	65	64	129	94	50	144
Southern Plains	21	175	196	16	130	146	18	108	126
Central Plains	107	350	457	86	320	406	83	222	305
Northern Plains	545	136	681	455	127	582	501	127	628
Pacific Northwest	73	191	264	76	198	274	84	208	292
West	3	27	30	2	23	25	4	21	25
Unallocated	27	4	31	28	4	32	27	6	33
United States	860	1,210	2,069	744	1,137	1,881	825	900	1,724

Region	1997			1998			1999		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	0	26	26	0	28	28	0	33	33
Southeast	3	39	42	4	38	42	3	47	50
Delta	1	31	32	1	42	43	1	34	35
Eastern Corn Belt	23	144	167	26	186	212	23	219	242
Western Corn Belt	73	62	135	71	79	150	73	85	157
Southern Plains	21	198	220	26	286	312	26	287	313
Central Plains	112	384	496	123	433	556	128	472	600
Northern Plains	436	132	568	501	132	633	520	133	653
Pacific Northwest	90	214	304	93	224	317	85	197	282
West	2	31	33	3	37	40	2	37	39
Unallocated	35	20	55	39	15	53	40	12	52
United States	794	1,282	2,076	886	1,500	2,385	888	1,557	2,445

Region	2000			Percent of 1999			Percent of 5-yr. avg.		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels								
Northeast	0	36	36	0	108	108	0	136	136
Southeast	3	53	56	100	112	112	109	131	129
Delta	1	48	48	89	138	137	94	144	143
Eastern Corn Belt	27	214	240	114	98	99	140	134	135
Western Corn Belt	87	84	171	115	99	106	115	123	119
Southern Plains	24	254	278	94	88	89	113	126	125
Central Plains	93	453	546	73	96	91	87	124	115
Northern Plains	445	143	588	91	107	94	96	110	99
Pacific Northwest	88	223	311	104	113	110	103	107	106
West	1	28	29	70	75	75	57	92	89
Unallocated	39	8	47	98	67	90	116	72	105
United States	808	1,543	2,351	93	99	97	99	121	113

Source: USDA-NASS

volumes of all stocks in the Delta and Western Corn Belts were up 37 and 6 percent, respectively, from 1999 and 43 and 19 percent, respectively, above the 5-year average.

On October 18, wheat prices for March futures contract for hard red winter (HRW) wheat were 13 cents per bushel (4.3 cents per bushel per month) above December prices on the Kansas City Board of Trade. May prices for HRW were 19.25 cents per bushel (3.9 cents per bushel per month) above those for December. Last year at this time, the December-March and December-May spreads were 15.75 and 24.75 cents per bushel, respectively. The interest cost to carry December HRW wheat into March is 7.74 cents per bushel (2.58 cents per bushel per month) and to carry it into May is 13.15 cents per bushel (2.63 per bushel per month). Futures prices on October 18 for March soft red winter (SRW) wheat on the Chicago Board of Trade were 17 cents per bushel (5.67 cents per bushel per month) above December, and May prices were 26.25 cents per bushel (5.25 cents per bushel per month) above December. Last year at this time, the December-March and December-May spreads were 15.5 and 24.75 cents per bushel, respectively. The interest costs to carry SRW wheat from December to March and from December to May are 6.67 and 11.5 cents per bushel (2.2 and 2.3 cents per month), respectively. Prices for the March futures contract for hard red spring (HRS) wheat was 14.25 cents per bushel (4.75 cents per bushel per month) above December on the Minneapolis Grain Exchange at the market's close on October 18. May HRS wheat's price on that day was 21.25 cents per bushel (4.25 cents per bushel per month) above December. Last year at this time, these spreads were 10 cents per bushel for December-March and 17.5 cents per bushel for December-May. The interest costs to carry HRS wheat from December to March and from December to May are 8.1 cents per bushel (2.7 cents per bushel per month) and 13.74 cents per bushel (2.75 cents per bushel per month), respectively. This indicates there are incentives to hold wheat into future months.

Transportation Situation

Ocean Freight

Ocean freight rates were relatively stable in October 2000. In spite of the fact that October rates are normally higher than September in previous years, grain exporters experienced modest decreases in their cost of ocean transportation. Higher crude oil prices are mainly to blame for this year's higher ocean freight rates. From February to October, ocean freight rates to Japan from the U.S. Gulf (Gulf) have increased by 20 percent while shipments from the PNW increased by approximately 10 percent. Grain shipments to Japan from the Gulf and PNW are key grain routes.

In the third quarter of 2000, the average ocean freight rates to Japan from the Gulf and PNW were $23.96 per metric ton (MT) and $16.03 per MT, respectively (table 10). These rates were sharply higher than in the past 4 years and the first and second quarters of 2000. Between 1988 and 1997 (before the influence of the Asia economic recession), third quarter ocean freight rates to Japan for a vessel carrying about 55,000 MT of heavy grain (e.g., corn, sorghum, and soybean) averaged $25.67 MT from the Gulf and $14.94 MT from the PNW (figure 2).

While the economic recession throughout Asia may have been the force behind the lower rates in 1998 and 1999, the higher ocean freight rates of 2000 could not be explained by possible booming economies of that part of the world. In the last 2 years, the depressed Asian economies lowered demand for bulk vessel shipments, thus increasing the number of vessels available for charter and decreasing ocean rates offered for the

Table 10—Average daily ocean grain freight rates to Japan by quarter, 1995-2000

Export range/ year	1st quarter (Jan-Mar)	2d quarter (Apr-Jun)	3d quarter (Jul-Sep)	4th quarter (Oct-Dec)	Annual (Jan-Dec)
	Dollars per metric ton				
Gulf					
1995	32.96	34.61	33.84	29.19	32.65
1996	25.91	24.93	20.58	23.78	23.80
1997	25.47	22.31	23.23	21.72	23.18
1998	18.95	16.85	13.41	13.65	15.71
1999	15.18	16.91	19.04	21.81	18.24
2000	21.47	22.99	23.96	24.93*	23.34
5-yr avg.	23.69	23.12	22.02	22.03	22.72
Pacific Northwest					
1995	19.00	19.49	19.16	16.30	18.49
1996	15.04	13.52	10.79	13.85	13.30
1997	14.72	13.09	13.25	13.06	13.53
1998	11.08	11.31	10.41	12.20	11.25
1999	9.74	10.88	11.10	13.92	11.41
2000	15.38	15.79	16.03	16.05*	15.81
5-yr avg.	13.92	13.66	12.92	13.87	13.60
Spread[1]					
1995	13.96	15.12	14.68	12.89	14.16
1996	10.87	11.41	9.79	9.93	10.50
1997	10.75	9.22	9.98	8.66	9.65
1998	7.87	5.54	3.00	1.45	4.47
1999	5.44	6.03	7.94	7.89	6.83
2000	6.09	7.20	7.93	8.88*	7.53
5-yr avg.	9.78	9.46	9.10	8.16	9.13

[1]Spread is based on the Gulf minus Pacific Northwest rates.

*Value is based on October rates.

Notes: 4th quarter 2000 rates are based on those reported through October 18, 2000.

Source: Baltic Exchange

transport of bulk commodities. The year 2000 started with higher oil prices, which increased the cost of all modes of transportation including ocean vessels. The higher ocean freight rates that started the second quarter of 1999 continued their positive trend through the third quarter of 2000. First quarter ocean freight rates between 1988 and 1997 averaged $24.70 per MT from the Gulf and $13.90 per MT from the PNW. Ocean freight rates during the second quarter for the same 10-year period were $23.29 and $13.02 per MT from the Gulf and PNW, respectively.

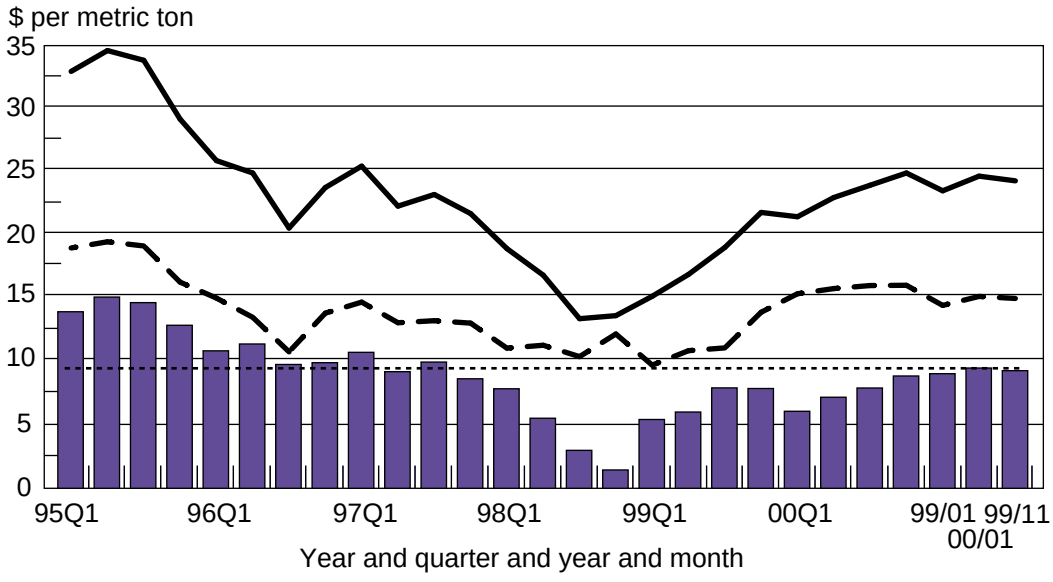
Although grain exporters have experienced higher ocean rate spread rates in 2000, the ocean rate spreads between the Gulf and PNW still favors shipments from the Gulf. Through the first 3 quarters of 2000, the ocean freight rate spreads were below the average 5- and 10-year rates, making grain shipments from Gulf more favorable.

Barge Situation

During the first 9 months of 2000, barge shipments of grain amounted to 1.24 billion bushels, or 35.4 million short tons.[1] This represents an 8-percent decrease over the same period during 1999 but a 3-percent increase over the 5-year average. Barge shipment of corn for the first through third quarters totaled 900 million bushels (25.2 million tons) and represented 72 percent of all grain and oilseed barge shipments. Total soybean barge shipments were reported at 230 million bushels (6.9 million tons), a 10-percent increase over last year and a 22-percent increase over the 5-year average. Soybean inspections for exports out of the Mississippi River are up 23 percent for the year, with significant annual increases to China and moderate increases to the European Union. Barge shipments of grain and oilseeds are monitored by USDA using specially prepared lock reports provided by the U.S. Army Corps of Engineers. The collective 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 one on its respective river. The Upper Mississippi River closes for winter when the last barges leave the Minneapolis-St. Paul, MN, area. According to an industry official, the last barges generally leave the Twin Cities area during the first week after Thanksgiving. The Upper Mississippi River typically reopens during mid-March to mid-April. In addition, the volume of barge movements typically begins a steady increase in October, which continues throughout November. Grain movements on the Upper Mississippi River abruptly decrease in early December with the winter closings of the upper portions of the river.

[1] One short ton equals 2,000 pounds.

Figure 2—Ocean grain freight rates to Japan, Gulf vs. Pacific Northwest, 1995-2000 and implied future rates (Oct and Nov 1999 and Jan 2001)



Note: Spread is based on the Gulf minus Pacific Northwest rates. 3d quarter 1999 rates are based on those reported through July 28, 1999.
Source: Journal of Commerce

Table 11 shows third quarter 2000 grain barge shipments at 33.8 million bushels per week, which was slightly above the 5-year average but below last year's third quarter. Data for fourth quarter 2000 through October 14 shows weekly barge traffic at 34.9 million bushels per week, 12 percent lower than an average fourth quarter. Barge company officials have indicated that grain barge shipments are currently slower than usual.

This could change with an increased demand for exports. USDA's October 2000 World Agricultural Supply and Demand Estimates projects corn exports for the 2000/2001 marketing year at approximately 2.28 billion bushels, a significant increase compared to the last several years. Therefore, foreign demand for corn could increase shipments on the Illinois and Ohio Rivers during early 2001 while the Upper Mississippi River is closed for the winter.

For the first 3 weeks of the fourth quarter of 2000, spot market barge rates for grain shipped from Minneapolis-St. Paul to Mississippi River Gulf ports averaged 222 percent of tariff (table 12). Barge rates are quoted in terms of differentials from barge tariff benchmarks.[2] The tariff rate from Minneapolis-St. Paul to the Gulf is $6.19 per ton; therefore, the spot market rate quoted is 2.22 times $6.19, or $13.74 per ton. The lower Minneapolis-St. Paul rates are expected with the lower demand for barge services. The rates are down 17 percent as compared to last year's fourth quarter and 22 percent lower that the 5-year average.

Barge rates for grain shipped from St. Louis, MO, to the Gulf were 194 percent of tariff during the first 3 weeks of the fourth quarter of 2000, a 19 percent increase over the fourth quarter 1999 and 16 percent higher than the 5-year average. The above average rates are unexpected with the current volumes but represent a tighter supply of barges in the St. Louis area.

Rail Situation

USDA has predicted record corn and soybean production for this fall's harvest. The Class I railroads serving North America, however, have indicated that no substantial problems are anticipated in providing transportation services during the fall harvest and peak shipping season. The anticipated crops of approximately 10.1 billion bushels of corn and 2.78 billion bushels of soybeans are up from 1999 yields for both crops. This would come at a time when the Nation's farmers are experiencing the fourth year in a row of depressed grain prices. Low prices are almost certain to guarantee scarce storage space for fall corn and soybeans as producers and grain elevator operators will continue their reluctance to release grain to market. While the major rail carriers are confident of providing adequate service, a sudden rise in grain prices could cause a surge in grain marketing efforts and an increase in the demand for rail transportation activity.

Class I railroads will continue to utilize various types of car allocation programs to distribute grain-hauling equipment this fall. The allocation programs are

[2] 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 United States 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 United States Department of Transportation. However, the barge industry continues to use the benchmarks as rate units.

Table 11 - Average weekly barge grain shipments by quarter, 1994-2000

Year	1st quarter (Jan-Mar)	2d quarter (Apr-Jun)	3d quarter (Jul-Sep)	4th quarter (Oct-Dec)	Annual (Jan-Dec)
	-1,000 bushels-				
1995	32,097	29,858	40,706	44,462	36,781
1996	29,971	36,549	25,811	39,847	33,045
1997	26,383	27,612	28,138	39,864	30,499
1998	25,932	27,601	30,391	37,790	30,428
1999	29,074	38,105	36,497	36,372	35,012
2000	29,732	33,384	33,823	34874*	xx
5- yr. Avg.	28,691	31,945	32309	39,667	33,153

Note: All averages based on shipments through Mississippi L&D 27, Ohio L&D 52, and Norrell L&D on the Arkansas River.

*Data for 4th Quarter 2000 based upon rates reported through October 14, 2000.

Source: U.S. Army Corps of Engineers.

Table 12 - Average weekly barge rates by quarter, 1994-2000

Region/year	1st quarter (Jan-Mar)	2d quarter (Apr-Jun)	3d quarter (Jul-Sep)	4th quarter (Oct-Dec)
		percent of tariff		
Minneapolis-St. Paul to New Orleans:		Tariff = $6.19 per ton		
1995	253	221	347	347
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	222*
5- yr. Avg.	198	179	238	285
St. Louis to New Orleans:		Tariff = $3.99 per ton		
1995	205	155	263	197
1996	180	99	106	148
1997	118	90	122	140
1998	93	106	199	189
1999	123	107	196	163
2000	145	110	201	194*
5- yr. Avg.	144	111	177	167

Note: *Data for 4th Quarter 2000 based upon rates reported through October 18, 2000.
Source: USDA-AMS

designed to give primary control of available car supplies to the carriers. The railroads then guarantee delivery of railcars to shippers on a predetermined fee basis with penalties for no delivery. Such programs also provide shippers with a means of maximizing the utilization of their private cars while guaranteeing themselves an adequate supply of cars. Also, to encourage faster turnaround times for grain cars, both Union Pacific (UP) and Burlington Northern Santa Fe (BNSF) railroads have increased demurrage charges, or penalties, for shippers who hold cars beyond the allotted free time to load them. The new UP charges, which were the first increase in over 8 years and took effect October 1, 2000, increased demurrage charges 50 percent, from $50 to $75 per day. Also effective October 1, BNSF's demurrage charges apply to Sundays, which previously had been a demmurage-free day. BNSF's new demurrage charges apply to whole grain and grain products including corn and soybeans, the two main fall crops. Rail shippers have objected to past attempts by railroads to increase demurrage charges and reduce the free time for loading cars mainly because of the difficulty in obtaining more precise information from the carries as to when empty cars would arrive at shippers' facilities. With the new demurrage rules, BNSF will advise shippers of the approximate time of arrival of unit grain trains.

Eastern Railroads

After nearly a year of poor service conditions, eastern railroads have promised better service through written plans to the Surface Transportation Board (STB) and verbal promises to customers, and they have also significantly improved their operations. Notwithstanding the confident service performance outlook expressed by Norfolk Southern (NS) and CSX Transportation (CSXT), some eastern rail users are not so optimistic over the ability of the two carriers to provide adequate fall peak shipping rail service. However, as of this date no peak-related problems have materialized, and shippers report having reduced their private grain fleets due to improved cycle times. This reservation was revealed in the National Grain and Feed Association's (NGFA) August 2000 survey of its members who are served by all the remaining Class I railroads and at least one regional carrier regarding anticipated rail service needs. The survey was conducted to obtain information to help rail users and railroads prepare for and deal with the demand for rail service during this fall's harvest. Seventy percent of the 30 respondents served by CSXT and 67 percent of the 39 respondents served by NS indicated that they did not expect their rail transportation needs this fall to be adequately satisfied. In an arti-

cle earlier this harvest season, NS stated that it is anticipating that service should remain at existing levels throughout the harvest. Cycle times will almost certainly be improved over the 1999 season. This fall, NS operates a 75-car shuttle train program, which focuses on feed mills and other grain end-users in the Southeast. This is NS' first attempt at operating dedicated unit grain trains across the system.

CSX Transportation

CSXT has put together "the most comprehensive Fall Peak plan in our history." The plan includes a strategy for dealing with hurricanes along the East Coast and the Gulf. During last fall's peak shipping season, CSXT was hit hard by Hurricane Floyd, especially on its Interstate 95 route, shutting out the carrier for about a week and a half. CSXT's hurricane contingency plan centers on overhead rerouting of traffic as adverse situations develop.

Having declared an end to the merger-related service problems which plagued CSXT in 1999, the carrier is preparing to handle more than normal grain shipments this year, including increased grain traffic during the fall peak season with its anticipated record corn crop. CSXT added an additional 175 leased locomotives to its fleet, which were put into service at the beginning of September. CSXT plans to have locomotives remain with grain trains while loading or unloading to facilitate speedier turn times. Like the western railroads, CSXT wants its grain customers to ship by unit trains made up of 65 railcars or more. In the near future, CSXT is looking to encourage even larger grain unit trains. In 1999, CSXT introduced its Express 90 program for unit trains of 90 cars. While some grain this fall is expected to move under the Express 90 program, CSXT does not anticipate maximum utilization of the program until grain shippers have acclimated their facilities to handle the large number of cars.

Table 13—Freight cars on line, January 2000-January 2001

Car type/railroad	January	February	March	April	May	June	July	August	September	October	November
					Number of railcars						
All U.S. freight cars:											
Burlington Northern Santa Fe	204,125	204,645	206,865	205,709	201,779	203,131	204,701	204,357	206,490	207,796	
CSX Transportation	266,913	266,883	268,606	270,927	265,233	260,638	256,883	253,008	249,186	248,005	
Kansas City Southern Railway	29,191	29,256	29,368	28,723	29,621	29,740	29,892	30,430	28,688	29,359	
Norfolk Southern	225,989	224,238	219,764	219,539	218,731	218,862	214,278	213,263	212,098	213,211	
Union Pacific	310,167	310,508	312,107	309,628	308,398	312,141	317,419	316,060	319,054	319,072	
All U.S. railroads	1,036,385	1,035,530	1,036,710	1,034,526	1,023,762	1,024,512	1,023,173	1,017,118	1,015,516	1,017,443	0
U.S. Covered hoppers:											
Burlington Northern Santa Fe	60,763	61,756	62,438	61,752	59,264	58,925	60,672	61,425	62,337	62,854	
CSX Transportation	65,397	65,553	65,780	66,023	63,981	62,449	61,345	60,485	60,084	61,269	
Kansas City Southern Railway	8,265	8,236	8,320	8,314	8,689	8,707	8,757	8,755	8,140	8,270	
Norfolk Southern	45,967	46,128	45,791	45,522	44,928	44,176	43,243	43,041	43,243	44,021	
Union Pacific	99,207	98,515	98,032	97,653	96,301	96,412	97,882	99,116	101,084	101,055	
All railroads	279,599	280,188	280,361	279,264	273,163	270,669	271,899	272,822	274,888	277,469	0
All Canadian freight cars:											
Canadian National	115,044	115,966	114,541	112,755	106,511	104,640	104,618	107,918	110,414	75,533	
Canadian Pacific	82,930	78,645	77,856	76,161	78,162	70,001	71,829	71,988	74,712	74,261	
All Canadian railroads:	197,974	194,611	192,397	188,916	184,673	174,641	176,447	179,906	185,126	149,794	0

Notes: The number of cars on line is a weekly average of the inventory of railroad and privately owned freight cars on each railroad's system.

For information and specific definitions for individual railroads, see www.railroadpm.org. Because data on cars on line include those Conrail system cars absorbed by CSX Transportation (CSXT) and Norfolk Southern (NS) on June 1, comparisons may not be truly reflective of changes on the original portions of the CSXT and NS systems. October numbers are based on data reported through October 20, 2000.

Source: Association of American Railroads, Railroad Performance Measures

The number of covered hopper cars on line increased in each of the four quarters of 1999 (table 13). Covered hopper cars on line (for all commodity types including grain) increased 27.2 percent between the first quarter (151,827 cars) and the last quarter (193,105 cars). There were 5,313 fewer covered cars on CSXT's lines in September (60,084) than there were in January (65,397). From July through September of the current year, during the early stages of the fall grain harvest, covered hopper cars on CSXT's lines decreased by 1,261 cars (2.1 percent) from 61,345 to 60,084. Although a slight reduction, a continuation of this trend through the end of the fall harvest would be positive for grain shippers as it indicates that traffic is moving through the rail system and being delivered to customers rather than sitting idle.

Average train speed, a barometer of how traffic is moving through a rail carrier's system, for 1999 on CSXT was 18.2 miles per hour (mph), slightly faster than the 18 mph considered average for the rail industry. The speed for CSXT grain trains was a little slower than the carrier's other trains in 1999, averaging 17 mph. For January through September of 2000, average speed for CSXT trains increased to 18.6 mph from 18.4 during the same period of 1999. CSXT grain trains for the first three quarters of 2000 improved from 18.1 mph in the first quarter to 19.8 mph in the third quarter (table 14). In addition, the average dwell time for CSXT has improved from a first quarter average of 38.5 hours to a third quarter average of 29.5 hours. These averages include scheduled holiday curtailments. This is the total time, on average, that a car spends at a terminal location (table 15). During 2000, CSXT dwell times have shown an improved trend.

Norfolk Southern

NS expects to handle about 6 percent more traffic during the fall of 2000 than it did during 1999's fall peak shipping season. The carrier has advised STB that the problems it experienced with the Conrail (CR) merger are a thing of the past; and it has ample crews, locomotives, and equipment to handle the increased traffic.

Table 14—Average train speed, January 2000-January 2001

Train type/railroad	January	February	March	April	May	June	July	August	September	October
				Miles per hour						
All U.S. Trains:										
Burlington Northern Santa Fe	26.4	27.0	26.7	26.9	26.2	25.8	25.5	25.5	25.5	25.0
CSX Transportation	18.4	18.2	17.9	17.6	17.6	18.6	19.7	19.6	20.0	19.9
Kansas City Southern Railway	25.3	24.9	25.2	25.7	25.5	24.2	24.4	23.2	23.9	21.9
Norfolk Southern	19.3	19.9	20.4	20.2	19.8	19.5	21.0	20.6	20.9	20.6
Union Pacific	26.0	26.1	26.0	26.2	25.9	25.9	24.9	24.1	23.9	24.0
Ave. All U.S. Railroads	23.1	23.2	23.2	23.3	23.0	22.8	23.1	22.6	22.8	22.3
U.S. Grain trains:										
Burlington Northern Santa Fe	23.4	23.8	22.7	23.6	22.6	22.9	22.6	22.3	22.3	21.7
CSX Transportation	16.6	17.3	17.1	15.6	15.9	16.4	19.8	18.2	18.8	24.5
Kansas City Southern Railway	23.1	23.2	23.6	25.2	24.7	21.6	23.1	22.5	26.2	23.0
Norfolk Southern	14.8	16.3	17.0	18.7	17.0	16.6	17.6	17.4	18.6	16.9
Union Pacific	23.9	24.3	24.6	24.7	24.7	24.7	23.7	22.1	22.1	23.8
Ave. All railroads	20.4	21.0	21.0	21.6	21.0	20.4	21.4	20.5	21.6	22.0
All Canadian Trains:										
Canadian National	24.3	24.5	24.9	25.3	25.2	24.5	25.7	25.0	24.9	25.1
Canadian Pacific	26.9	26.5	27.3	27.5	26.9	26.4	27.6	27.4	26.9	26.1
Ave. All Canadian Railroads	25.6	25.5	26.1	26.4	26.1	25.5	26.7	26.2	25.9	25.6

Notes: Average train speed is calculated by dividing train-miles by hours operated for the line-haul portion of the movement and excludes time spent in terminals (dwell time). For information and specific definitions for individual railroads, see www.railroadpm.org.

Because data on train speeds include those portions of the Conrail system absorbed by CSX Transportation (CSXT) and Norfolk Southern NS on June 1, comparisons may not be truly reflective of changes on the original portions of the CSXT and NS systems. October numbers are based on data reported through October 20, 2000.

Source: Association of American Railroads, Railroad Performance Measures

The number of covered hopper cars on line in NS' system increased in each quarter of 1999 with 94,272, 108,430, 142,821, and 145,225 cars, respectively, an average of 122,687 cars per quarter. Those numbers were indicative, perhaps more than anything else, of the service problems the carrier encountered with the CR takeover. In each of the first three quarters of 2000, covered hopper cars on line averaged 44,676. Going into the last quarter of 2000, the most active of the fall harvest season, NS' covered hopper cars' on-line performance through the third quarter represents a 63.6-percent improvement (or a 63.6-percent reduction in the number of cars) over 1999.

NS has a supply of 6,000 covered hoppers available for the 2000 fall harvest. Earlier this year, NS began using 75-car dedicated feed train service to feed mills in the Southeast and other grain receivers. This should be wel-

Table 15—Average dwell times for selected terminals by railroad, January 2000-January 2001

Railroad/selected terminal/city and StateJanuary	February	March	April	May	June	July	August	September	October	
				Miles per hour						
Burlington Northern Santa Fe:										
Barstow, CA	27.0	26.0	26.0	27.0	28.0	29.0	28.0	30.0	27.0	29.7
Fort Worth, TX	18.0	21.0	24.0	23.0	23.0	28.0	26.0	27.0	28.0	27.3
Houston, TX	15.0	16.0	16.0	15.0	16.0	17.0	17.0	16.0	16.0	19.7
Kansas CIty-Argentine, KS	28.0	26.0	26.0	25.0	26.0	27.0	27.0	27.0	28.0	29.7
Minn./St. Paul-Northtown, MN	30.0	28.0	28.0	28.0	26.0	27.0	27.0	26.0	29.0	28.3
Pasco, WA	22.0	24.0	23.0	21.0	21.0	21.0	21.0	21.0	22.0	29.3
CSX Transportation:										
Cincinnatti, OH	41.2	36.9	32.7	31.0	27.5	25.6	27.4	26.0	27.7	26.2
Corbin, KY	24.4	25.7	22.2	24.1	22.3	18.9	26.4	23.1	24.8	25.3
Hamlet, NC	43.9	37.9	39.2	36.5	35.8	36.1	27.3	27.5	27.5	26.1
Louisville, KY	48.6	37.9	39.3	41.8	33.9	32.2	32.4	33.9	34.0	35.0
Nashville, TN	44.8	37.5	37.0	42.6	37.5	31.1	36.1	31.6	28.6	32.7
Kansas City Southern Railway:										
Kansas City, MO	18.0	21.0	20.0	17.0	16.0	17.0	18.0	22.0	23.0	24.7
Shreveport, LA	30.0	32.0	25.0	27.0	27.0	30.0	30.0	34.0	34.0	32.5
Norfolk Southern:										
Chattanooga, TN	32.2	31.9	28.9	38.1	33.6	32.2	28.6	26.4	28.7	28.4
Columbus, OH	28.9	29.8	25.0	26.8	28.6	35.3	30.3	33.8	32.6	34.4
Knoxville, TN	27.6	31.4	33.7	29.0	34.5	34.2	30.6	31.6	31.0	33.8
Linwood, NC	39.6	33.9	35.3	31.5	28.8	31.0	29.6	27.2	28.5	31.1
Macon, GA	31.1	29.4	29.4	28.9	26.6	28.7	26.1	27.4	25.7	28.9
Union Pacific:										
Houston-Englewood. TX	36.6	31.4	36.2	34.3	36.0	44.3	37.2	44.4	43.1	44.4
Houston-Settegast, TX	34.4	38.8	38.9	35.5	39.7	41.7	41.5	38.0	39.7	46.3
Roseville, CA	28.5	29.6	34.3	30.5	29.9	27.6	28.7	29.6	32.1	30.7
Kansas City-Neff, MO	35.1	32.9	37.2	31.4	31.4	32.9	34.1	33.2	32.1	37.5
North Platte-East, NE	28.7	26.4	27.0	29.1	28.6	23.5	25.2	24.4	25.3	26.3
North Platte-West, NE	27.8	30.5	33.8	38.5	36.0	24.5	25.0	26.8	25.5	28.2
Fort Worth-Centennial, TX27.5	29.7	31.9	35.3	30.0	33.7	36.3	33.1	33.2	35.6	

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.

October numbers are based on data reported through October 20, 2000.

Source: Association of American Railroads, Railroad Performance Measures

come news to Southeast livestock and poultry producers who encountered hardship and devastation in 1999 because of hurricane damage and rail service problems.

Even with CR integration problems, NS managed to load 112,645 cars of grain, up from 101,526 cars of grain (11 percent over the previous year). When comparing the consolidation of NS and CR, grain movement velocity from June through September of 1999 to the same period in 2000, NS has increased the speed of grain movements from 14.9 mph to 17.6 mph.

Western Railroads

Grain car loadings on western railroads through the end of September of this year were down 8 percent (621,247 versus 667,891), compared to the same period in 1999. Press accounts in early October, suggesting concern by some carriers of major tieups on the Nation's rail network if grain prices suddenly rise, has not materialized. With farmers holding on to much of their grain production, bidding activity for guaranteed grain cars on the two major Western railroads, BNSF and UP, has been slow heading into November.

November 2000 marks 1 year since STB issued its oversight decision. Having recovered from the service problems that led to massive freight tieups and congestion over much of its rail system, UP has been concentrating on efforts aimed at improving service levels and a renewed focus on customer service. BNSF is also focusing on customer service.

Burlington Northern Santa Fe

Grain movement on BNSF has been down for the first three quarters of 2000 as the carrier loaded 314,702 cars compared to last year's 341,477 carloadings for the same time period. The strongest demand was January through March with 112,608 carloadings. The weakest demand occurred in the second quarter, April through June, with 89,558 carloadings. The second week in October has seen the strongest grain demand into the fall harvest with 10,094 carloadings, compared to 11,037 during the same period in 1999. Low corn and soybean prices should translate to more of BNSF's fleet of 29,000 grain cars being available for the fall harvest. Covered hopper cars on line ranged from a low of 58,925 in June to a high of 62,337 in September. Average speed for all BNSF freight trains from January through September of 2000 was 26.2 mph compared to 24.5 mph for the same period in 1999. BNSF's grain train speed for the first 9 months of 2000 improved by 1.7 mph over the same period in 1999 (21.3 mph compared to 22.9 mph). BNSF offers three guaranteed car service programs, of which the Shuttle Certificate of Transportation plan guarantees grain shippers the lowest rates for a 24-trip package.

Kansas City Southern

Grain carloadings on the Kansas City Southern (KCS) were down 19.2 percent for the first three quarters of 2000 with 21,123 cars loaded, compared to 26,147 for the same period in 1999. Heading into the fall harvest, September grain carloadings on KCS had not changed significantly from any other time during the third quarter with the exception of the week ending October 7 when 700 cars were loaded. From January through the second week in October, grain carloadings ranged from a low of 289 cars for the week ending June 24 to a high of 917 cars loaded for the week ending February 12. KCS has overhauled its main north-south line over which most of its grain traffic moves. Grain and other trains on KCS over the first three quarters were traveling at comparable speeds of 23.7 and 24.7 miles per hour. Grain trains maintained an average velocity of 26.2 miles per hour in September. The rehabilitation should improve service and turnaround times for KCS over last year when major delays occurred.

Union Pacific

Grain demand, which had been up throughout 1999, was down in each of the first three quarters of 2000. The strongest demand was recorded in the first quarter with 102,167 carloadings, similar to first quarter 1999 demand of 100,294. Third quarter carloadings, however, were down 15 percent and 16,083 cars from the same period in 1999, 90,610 versus 106,693. The number of freight cars on line ranged from a low of 308,398 in May to 319,072 in October (through October 20, 2000). Average train speed for all types of traffic have remained relatively consistent on UP from January through September, ranging from a low of 23.9 mph in September to a high of 26.2 mph in April. Grain train speeds for the first three quarters of 2000 have also remained comparatively consistent, ranging from a low of 22.1 mph in August and September to a high of 24.7 mph from April through June. UP's grain train speeds indicate good cycle times on grain cars. UP maintains a fleet of 30,000 railcars to move grain.

Truck Situation

The truck situation is healthy, despite some notable obstacles in the overall service delivery that may affecting regional grain deliveries during the late harvest sea-

son. The key drivers for these hurdles are found in diesel fuel prices and an on-going labor shortage affecting the motor carrier industry.

Diesel Fuel

Transportation systems as a whole experienced a year of volatile crude oil prices, and the motor carrier industry was no exception. High diesel prices squeezed trucking profits for hauling and marketing corn and soybean crops in 2000.[3] The situation was so significant that Federal Reserve Chairman Alan Greenspan, reminded his audience that oil "still has the potential to alter the forces governing economic growth in the United States…[and] policymakers will need to be on the alert for oil-driven, indeed energy-driven, risks to our expansion."[4]

A combination of factors contributed to the recent spike in diesel fuel prices affecting the grain transportation industry. In 1999, crude oil markets constricted as Organization of Petroleum Exporting Countries (OPEC) capped production, which limited the world supply of crude oil, and drove prices upward.[5] Meanwhile, the Asian Pacific economies arose from recession, thereby increasing demand on the world supply of crude oil.[6] As a result, world oil demand in 1999 surpassed the OPEC production quotas of crude and inventories declined. Generally, price volatility in crude oil occurs when inventories are low.[7] Also, the uncertainty of peace talks in the Middle East may have artificially spurred the current demand to hedge prices for future requirements.[8] As a result of all these factors, higher than normal diesel fuel costs occurred in 1999 and 2000. Similar fuel prices are still expected from October 2000 to March 2001. This holds true not only for the trucking industry, but also for the other modes transporting grain post harvest. For example, CSX Corporation announced that fuel prices will cost CSX Trains (CSXT) an additional $30 million until the end of the calendar year 2000. CSXT also reports that the total fuel bill increased by $265 million more than it paid in calendar year 1999.[9]

The U.S. Department of Energy (DOE) expects crude oil costs to average 65.2 cents a gallon (or $27.62 a barrel), which is still 10 cents higher than last year's winter average of 59.3 cents a gallon (or $25.11 a barrel).[10] This assumes normal winter conditions will prevail. If so, then gradual world crude production increases will assist transportation markets and help rebuild crude oil inventories back toward normal levels. However, the pace will be slow and incremental as inventories worldwide ease into higher production levels for 2001.[11]

DOE notes that national retail diesel prices for on-highway prices in 2000 remained near $1.65 a gallon. This price is 43 cents higher than prices in the previous year.[12] Moreover, these prices are higher than recent experience over recent times, noted in figure 3 illustrating diesel prices during early October 1997-2000.[13]

DOE divides the country into five Petroleum Administration for Defense Districts. PADDs).[14] While world prices for crude oil continue to drive much of the high prices in the current and near term markets for diesel fuel, forecasts call for a gradual remedy of world oil stocks reflected in slowly declining prices.[15] Therefore, the DOE expects on-highway diesel fuel prices to average $1.49 a gallon, 15 cents above last year.[16]

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[3] Reuters, Chicago, 9-22-00.
4 Barry, John M., Greenspan Sees Drop in Oil Prices, The Washington Post, 10-10-00, p.E1
[5] Mazur, Mark J., Statement of Mark J. Mazur, Acting Administrator for the U.S. Department of Energy, Energy Information Administration, Committee on Commerce, Sub-committee on Energy and Power, U.S. House of Representatives, 9-28-00, p.3.
[6] Logistics On-Line: Management and Distribution Report, 2000 Annual Report—Freight Rates:Brake Time? (July, 2000) at http://www.manufacturing.net/maga…/lm0700aroutlook.htm, acquired 10-23-00
[7] Ibid.
[8] Barry, John M., Greenspan Sees Drop in Oil Prices, The Washington Post, 10-10-00, p.E1
[9] JOC On-line, CSX Transportation Sets Fuel Charge, Journal of Commerce, 9-22-00, p.1. See also www.joc.com/20000922/sections/logis/w62677.shtml (acquired 9-25-00).
[10] DOE, Energy Information Administration (EIA), Short-Term Energy Outlook, Winter Fuels Outlook:2000-2001 at http:www.eia.doe.gov/emeu/pub/winfuel.html, p.8 (acquired 10-18-00).
[11] Mazur, Mark J., Statement of Mark J. Mazur, Acting Administrator for the U.S. Department of Energy, Energy Information Administration, Committee on Commerce, Sub-committee on Energy and Power, U.S. House of Representatives, 9-28-00, p.1.
[12] Logistics On-Line: Management and Distribution Report, 2000 Annual Report—Freight Rates:Brake Time? (July, 2000) at http://www.manufacturing.net/maga…/lm0700aroutlook.htm, acquired 10-23-00
[13] DOE's Energy Information Administration (EIA). The EIA manages and analyzes distillate stocks through a framework known as the Petroleum Administration Defense District (PADD).
[14] See http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/weekly_on_highway_diesel_prices/current/html/padddef.html
[15] Ibid. 4.
[16] Ibid. p.7.

Meanwhile, large trucking firms and other transport modes are trying to offset the costs of higher diesel prices by implementing surcharges. For instance, large truck firms have instituted 5 to 8 percent surcharges.[17] Likewise, train services and inter-modal service providers set forth a surcharge based on the current average price of a barrel of crude.[18] Smaller truckers have also lobbied for diesel price relief with Congress. Their efforts may succeed; present legislation, known as the Motor Carrier Fuel Cost Equity Act of 2000, now seeks to recover costs for smaller truckers (also known as owner-operators). The bill, which passed the House of Representatives on October 10, 2000, seeks to implement equity in fuel prices by transferring fuel expenses to the shipper. These surcharges raise shipping costs by approximately a cent a bushel.

Labor Shortages

The current labor shortage, owing to the unabated 9-year American economic expansion, has also affected the trucking industry by injecting inflationary pressure on transportation services.[19] The United States Bureau of Labor Statistics survey indicated that the average cost to ship freight and packages by truck increased 2.9 percent in 1999.[20] In addition, the number of unemployed, 5.5 million, and the rate of unemployment, at 3.9 percent, represent a decline in available trucking labor for September.[21] The overall unemployment rate was 4.2 percent in 1999.[22] However, over the past year, the unemployment rate has averaged 4.0, and remained the lowest jobless rate in 30 years.[23]

As a result, finding and retaining qualified truck drivers has been difficult for those trucking firms hauling grain throughout the hinterland. This situation occurred despite a raise in hourly wages of 5.5 percent paid by the freight carrier industries. Also, annual measures show that hourly wages for truck drivers increased from just under $13.00 an hour in 1990 to approximately $15.50 an hour in 1999.[24] These trends show no sign of diminishing in the near term, as wages for hourly average earnings increased, from $16.12 in April 2000 to $16.27 in September 2000, noted in figure 4.

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[17] Logistics On-Line: Management and Distribution Report, Congress Considers Mandatory Fuel Surcharge(July, 2000) at http://www.manufacturing.net/maga…/lm0700aroutlook.htm, acquired 10-19-00

[18] JOC On-line, CSX Transportation Sets Fuel Charge, Journal of Commerce, 9-22-00, p.1. See also www.joc.com/20000922/sections/logis/w62677.shtml (acquired 9-25-00).

[19] Logistics On-Line: Management and Distribution Report, 2000 Annual Report—Freight Rates:Brake Time? (July, 2000) at http://www.manufacturing.net/maga…/lm0700aroutlook.htm, acquired 10-23-00

[20] Ibid.

[21] Industry at a Glance: Transportation and Public Utilities, Bureau of Labor Statistics (June 2000) at http://stats.bls.gov/iag/iag.tpu.htm.

[22] Ibid.

[23] Employment Situation Summary, Bureau of Labor Statistics, USDL-0084, http://stats.bls.gov/newsrels.htm, 10-06-00.

[24] Ibid.