United States Department of Agriculture

Agricultural Marketing Service

August 1999

Grain Transportation Prospects

USDA/STB Grain Logistics Task Force

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The Grain Transportation Prospects is a product of the Department of Agriculture (USDA) and Surface Transportation Board (STB) Grain Logistics Task Force (GLTF). The members of the GLTF 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; Mack N. Leath, Economic Research Service, USDA; Brian D. McKee, Grain Inspection, Packers and Stockyards Administration, USDA; Jerry D. Norton, Agricultural Marketing Service, USDA; Robert Riemenschneider, Foreign Agricultural Service, USDA; Jim Schaub, Office of Chief Economist, USDA; and Frederic A. Vogel, National Agricultural Statistics Service, USDA.

Summary

Prospects for the U.S. grain and soybean crops have improved since the first USDA projections for 1999/2000 production in May. July projections for combined grain (excluding rice) and soybean production put this year's crop at 15,958 million bushels, up 2 percent from earlier expectations and 1 percent above last year's total. The largest expected carry-in stocks in 6 years will put 1999/2000 available grain and soybean supplies at 19,581 million bushels, up 4 percent from 1998/99 and at their highest level in more than a decade. Grain and soybean use in 1999/2000 is also projected up, at a record 15,803 million bushels, up 2 percent from 1998/99. Use is expected to increase in 1999/2000 because of stronger domestic demand for processing and milling. Wheat and soybean exports are expected to rise in 1999/2000, while corn exports are expected to match 1998/99 levels. Increases in domestic and export demand suggest increased demand for transportation over the next year. Stronger exports in recent months have already boosted demand for barge and rail transportation.

Large grain and soybean supplies will increase demand for storage capacity again in 1999/2000. Current projections suggest that this fall's storage and handling situation could be a difficult one. Using grain and soybean beginning stocks plus production as a proxy for peak storage demand, it is clear that storage will be tight again this fall. Beginning stocks plus production for 1999/2000 exceed storage capacity by 199 million bushels. Beginning stocks plus production in 1998/99 was 318 million bushels less than storage capacity. The worst storage shortfalls are likely to be in those areas where storage capacity traditionally has been the shortest, such as the Central Plains and Western Corn Belt. With large grain and soybean acreage again this year, the Eastern Corn Belt may also see a more serious storage crunch at harvest. Additional harvest-time capacity can be made available through temporary storage, but even with this addition to capacity, the 1999/2000 fall harvest is shaping up to be a storage headache for farmers and elevator operators.

Stronger exports of grain and soybeans in the last few months have increased transportation demand. Texas Gulf ports have experienced stronger wheat exports for several months, increasing rail demand in that market. Increased exports at Pacific Northwest (PNW) ports are also up from year-ago levels for corn and Hard Red Winter and Hard Red Spring wheat. These commodities move predominantly by rail to the PNW. Increases in rail shipments to the PNW since March have resulted because of changes in ocean freight rates to the Far East. Ocean freight rates for the Gulf and the PNW to the Far East had favored shipments of export corn from the Gulf throughout 1998 and into early 1999. Modest increases in ocean freight rates at the Gulf since March have increased the rate differential, boosting PNW corn exports. Generally stronger corn exports in the past few months have also increased demand for barge freight and, subsequently, barge rates, providing greater incentive for exporting corn to the Far East via PNW ports. Weekly inspection numbers suggest that the increase in PNW export corn demand is continuing. This should push westbound rail shipments of corn from the western corn-producing areas above year-ago levels over the next few months.

Premiums in the secondary market for September, October, and November car service guarantees on the western railroads are currently trading at levels substantially below year-ago levels. Although this would seem to suggest reduced expectations for rail demand in the Western United States during the fall, the value of service guarantees in the secondary market are also influenced by the amount of capacity the railroads put into their own guarantee programs. The Burlington Northern Santa Fe and the Union Pacific railroads have put more fleet capacity into their guaranteed service programs for the fall, putting downward pressure on the value of shipper-offered guarantees in the secondary market.

Increased demand for export corn and soybeans at Mississippi River export facilities in Louisiana have kept barge shipments running ahead of year-ago levels and above the 5-year average since the beginning of calendar year 1999. Expectations for barge demand for the fall shipping season also remain high. Barge rates in the spot market have been running above year-ago levels since the beginning of July. August and October barge rates are being quoted at values that suggest a higher than normal rate structure for the third and fourth quarters of calendar year 1999.

Barge rates in the coming weeks will also be affected by planned and unexpected lock repairs. In mid-July, barge traffic on the Upper Mississippi River was delayed by lock repairs at Locks and Dam (L&D) No. 27, just north of St. Louis, MO. Further complicating the traffic situation on the Mississippi River, the main chamber at Melvin Price (MP) L&D, 15 miles upstream from L&D 27, is scheduled to close on August 6 to repair damages stemming from a tow accident. Repairs on the MP main chamber are expected to take a month.

The biggest development in rail transportation this summer has been the operational takeover of Conrail (CR) by CSX Transportation (CSXT) and Norfolk Southern (NS), which began June 1. The operational implementation of the CR transaction was not without its problems, and shippers in all traffic sectors were disappointed by a transition that was expected to be better planned and more problem free. Information Technology (IT) and crew calling problems, combined with an unexpected increase in traffic to slow yard and terminal operations and reduce train cycle times significantly. Although the most serious problems were on the former CR lines, some shippers on the original CSXT and NS systems were also adversely affected, many of whom were livestock producers in the Southeast, whose feed grain and feed ingredient stocks ran dangerously low.

The eastern rail situation appears to have improved substantially since early July. As of the third week in July, cars on line were significantly reduced, terminal and line-of-road operations were more fluid, system train speeds had increased, and average dwell time was decreasing noticeably. The focus now will be on how well CSXT and NS are able to handle the substantial increases in traffic expected during the peak fall shipping season.

This report is compiled by USDA's Agricultural Marketing Service. It contains information provided by the Surface Transportation Board and by USDA's Agricultural Marketing Service, Economic Research Service, Farm Service Agency, Foreign Agricultural Service, and National Agricultural Statistics Service. It is approved for release by the World Agricultural Outlook Board. For questions concerning this report, contact Jerry D. Norton, USDA-Agricultural Marketing Service, 202-690-1303, "jerry.norton@usda.gov". Unless otherwise referenced, information in the report is based on data from the July 12, 1999, *World Supply and Demand Estimates* and *Crop Production* reports and the June 30, 1999, *Grain Stocks* and *Acreage* reports.

Grain Market Situation

Grain and Soybeans

Prospects for the U.S. grain and soybean crops have improved since the first USDA projections for 1999/2000 production in May. July projections for combined grain (excluding rice) and soybean production put this year's crop up 2 percent from earlier expectations and 1 percent above last year's total. Despite a smaller wheat crop, an anticipated larger corn crop and a potential record soybean crop will combine with the largest expected carry-in stocks in 6 years to put available grain and soybean supplies at their highest level in more than a decade. Projected record use in 1999/2000 as a result of higher anticipated domestic and export demand suggest increased demand for transportation over the next year. Stronger exports in recent months have already boosted demand for barge and rail transportation. Large grain and soybean supplies, will boost demand for storage capacity again in 1999/2000. Current projections suggest that this fall's storage and handling situation could be as difficult for farmers and elevator operators as at any time in recent memory.

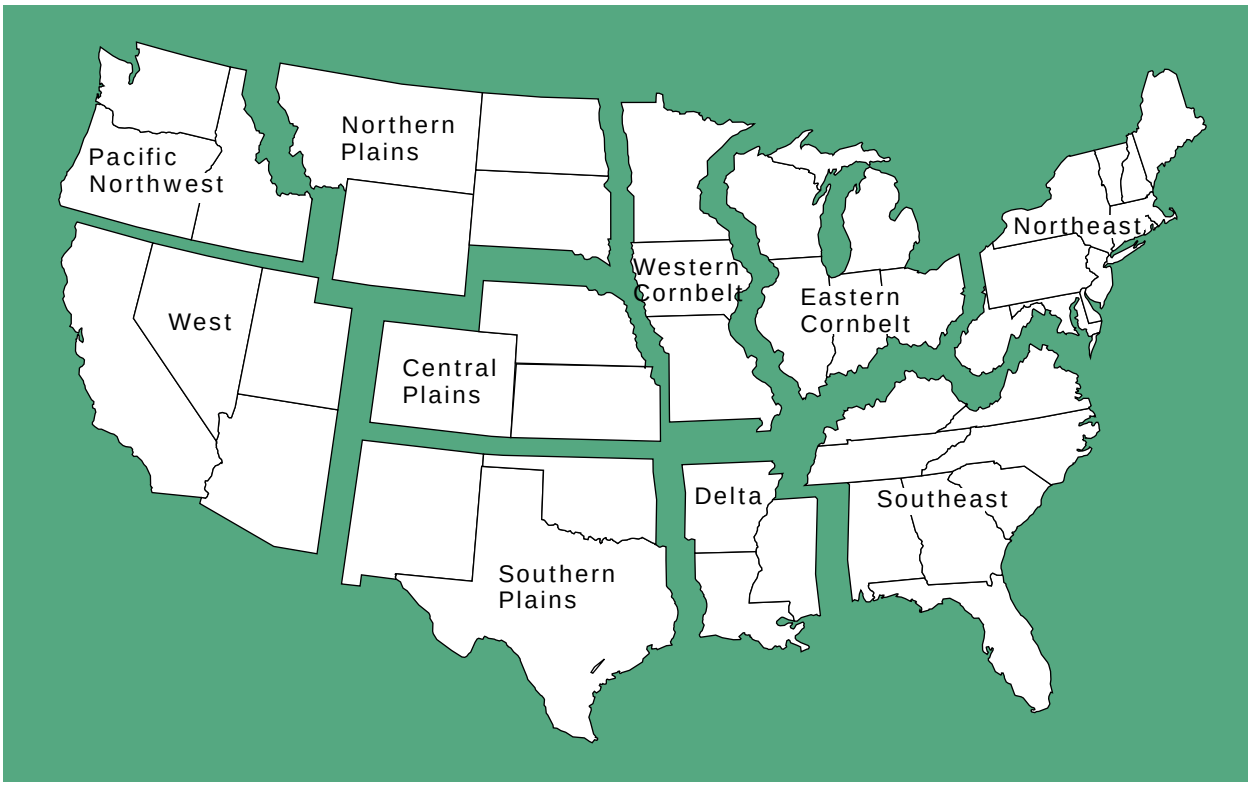
Supplies. July projections for the 1999/2000 corn, sorghum, barley, oat, wheat, rye, and soybean crops put this year's grain (excluding rice) and soybean production at 15,958 million bushels, down just 1 percent from 1998/99. Carry-in stocks are projected up 36 percent at 3,372 million bushels. This is down 66 million bushels from those projected in May because of higher than expected export use during the final months of 1998/99. Even with this reduction, 1999/2000 beginning stocks will be up again for the third straight year. With imports projected at 252 million bushels, down 4 percent from 1998/99, available grain and soybean supplies for 1999/2000 are expected to total 19,581 million bushels, up 4 percent from the previous year and the highest level since 1987/88. Ending stocks for 1999/2000 are projected up 12 percent at 3,779 million bushels. At this level, 1999/2000 will be the fourth straight year in which ending stocks have increased and the largest carryout since 1987/88.

Planted grain and soybean acreage for 1999/2000 was reported at 235 million acres in the June 30 Acreage report (figure 1, table 1). This is down 2 percent from the 240 million acres planted to grains and soybeans in 1998/99. The June survey-based numbers were also up just slightly (482,000 acres) from those based on farmer intentions from the March Prospective Plantings report. The increase in the June acreage over that reported in March resulted from increased soybean planting, which more than offset reductions in corn and wheat acres. Eastern and Western Corn Belt grain and soybean acreage in 1999/2000 is virtually unchanged from 1998/99. The largest acreage reductions from 1998/99 were in the Northern Plains, down 1.8 million acres, and the Southeast and Southern Plains, both down 1.1 million acres. Reductions in southern grain and soybean plantings reflect increases in cotton acreage throughout the South for 1999/2000.

Use. July projections put this year's grain and soybean use at a record 15,803 million bushels for 1999/2000, up 2 percent from 1998/99. Domestic use for 1999/2000 is projected at 11,566 million bushels, up 65 million bushels from the previous record in 1998/99. Feed and residual use for 1999/2000, however, is projected down 2 percent at 6,564 million bushels. Increased domestic use in 1999/2000 is expected as the result of increased processing, milling, and seed use, together expected to total 5,002 million bushels, up 4 percent from 1998/99. Export use for 1999/2000 is projected up 6 percent from 1998/99. At 4,237 million bushels, 1999/2000 exports would be the highest since 1995/96 when exports totaled 4,582 million bushels. July export projections for 1999/2000 are up from the first projections in May by 85 million bushels, or 2 percent, because of stronger than expected exports in recent months. For January-March export inspections of grains and soybeans were up 6 percent over the same period in 1998. Export inspections for April-May were up 48 percent over those during the same period last year. Outstanding export sales (sold but unshipped) for corn and soybeans suggest this increased level of demand will continue over the next several months, increasing grain transportation demand in the 1999/2000 marketing year.

World Trade. Global wheat trade in 1999/2000 is projected at 100 million tons, 1 million above the 1998/99 level. World production is forecast to be 575 million tons, down 13 million from the previous year. Among the major exporters, crop decreases are expected to occur in the United States, the European Union, and Canada, while crops in Australia and Argentina are projected up 1.5 and 1 million tons, respectively. Production is down in several import markets, including Pakistan, Iran, and most of North Africa, while the wheat crop in the former Soviet Union is expected to rebound. Global consumption is expected to be 2 million tons below the previous year and, for the second consecutive year, is projected to exceed production, drawing down ending stocks by 13 million tons. The global stocks-to-use ratio is expected to be 21 percent.

Figure 1—U.S. grain production regions



Source: USDA-AMS

Table 1—U.S. grain and soybean acres planted, 1994-99

Region	1994	1995	1996	1997	1998	1999	Percent of 1998	Percent of 5-yr. avg.
	-1,000 acres -							
Northeast	6,117	6,087	6,145	6,364	6,422	6,264	98	101
Southeast	14,781	13,331	14,342	14,451	14,208	13,125	92	92
Delta	8,960	8,717	10,017	9,737	9,845	9,155	93	97
Eastern Corn Belt	53,680	52,295	54,490	54,948	54,968	54,911	100	102
Western Corn Belt	47,848	46,228	48,509	49,307	49,807	49,820	100	103
Southern Plains	20,829	20,329	22,507	21,581	22,092	21,009	95	98
Central Plains	39,530	38,523	41,046	40,521	39,768	39,424	99	99
Northern Plains	35,265	32,396	37,960	36,737	34,379	32,575	95	92
Pacific Northwest	6,783	6,758	7,233	7,051	6,925	6,752	98	97
West	2,293	2,286	2,566	2,483	2,458	2,181	89	90
United States	236,086	226,950	244,815	243,180	240,872	235,216	98	99

Note: 1999 acreage estimates are from the June 30, 1999, *Acreage* report.

Source: USDA-NASS

World coarse grain production in 1999/2000 is projected at 885 million tons, while consumption is forecast at 881 million. Global trade in 1999/2000 is projected up slightly at about 1 million tons to 93 million. This boost is due to higher import demand for corn and barley, which is forecast at 66 and 16 million tons, respectively. In 1999/2000, coarse grain imports are projected to rise about 1.5 million tons in the Middle East and almost 500,000 in Asia, while little growth is expected elsewhere.

With production forecast above consumption in 1999/2000, world carryout stocks are projected to rise by 4 million tons. Stocks are forecast to grow in the United States, (up nearly 6 million tons) and China (up 7.5 million tons), and this more than offsets reductions in Canada, Russia, and the European Union (EU).

Global oilseed production is projected at a record 301 million tons, up 3 million tons from last month and 9.3 million tons from last year. U.S. production, at 91.1 million tons, is up 6.2 million tons from 1998/99 and accounts for much of the gain. Foreign production is forecast at 209.9 million tons, up 3.2 million tons, or 1.5 percent for the year. Foreign gains are concentrated in rapeseed and in Southeast Asia's crops of copra and palm kernel. World palm oil production is projected to reach a record level at 20.6 million tons, or 7 percent above 1998/99, as tree yields continue to recover from El Nino drought conditions in 1997/98 and the early part of 1998/99. Record global rapeseed production, projected at 13.4 million tons, includes significant gains in almost all major producing countries except Canada, where a modest decline to 7.3 million tons is forecast. China, the EU, Australia, and India are expected to have record rapeseed crops.

Large global supplies, sharply lower oilseed product prices, and likely improvements in economies in Asia, Latin America, and Eastern Europe bode well for consumption growth for both protein meals and vegetable oils in 1999/2000. Some improvement is anticipated in China's consumption as well, following the slowdown in 1998/99, while EU consumption will remain strong. Both global protein meal use and vegetable oil disappearance are projected to grow by 5 percent.

Stocks and Storage. The June 30 *Grain Stocks* report put June 1 grain and soybean stocks in all positions at 5,752 million bushels, up 24 percent from a year earlier and 42 percent above the 5-year average (table 2). Of the total, 54 percent were reported as held on farm. On-farm stocks were up 638 million bushels, or 26 percent, from their levels on June 1, 1998. Off-farm stocks were up 468 million bushels, or 29 percent, from year-ago levels. These are the largest June 1 total and on-farm stocks since 1988 and largest off-farm June 1 stocks since 1989.

June 1 stocks were up over year-ago levels in every region except the Pacific Northwest (PNW). The largest year-to-year increase was in the Western Corn Belt where stocks were up 452 million bushels, or 31 percent. Large year-to-year increases were also reported in the Central Plains, where stocks were up 237 million bushels, or 30 percent; the Eastern Corn Belt, where stocks were up 221 million bushels, or 16 percent; the Northern Plains, where stocks were up 91 million bushels, or 21 percent; and the Southern Plains, where stocks were up 59 million bushels, or 44 percent. In the Eastern Corn Belt, Western Corn Belt, and Central Plains, on-farm stocks accounted for 50, 65, and 47 percent, respectively, of total stocks. In the Northern Plains, 76 percent of stocks were on farm. Off-farm storage accounted for the majority of June 1 stocks in the Southern Plains, where 97 percent of all stocks were held off farm.

Increases in June 1 stocks since 1996 have driven up June 1 storage capacity utilization in every region except the West (table 3). June 1 storage utilization was at its highest level since 1988 for both on-farm and off-farm storage capacity. As of June 1, 30 percent of total U.S. grain storage capacity, as reported December 1, 1998, was in use. Of the total, 28 percent of on-farm capacity and 33 percent of off-farm capacity were in use. The highest utilization rates were in the Western Corn Belt, Central Plains, and Eastern Corn Belt, where 39, 32, and 31 percent, respectively, of all storage capacity was in use on June 1.

With the 1999/2000 combined grain and soybean crop expected to be the third largest ever, large June 1 stocks raise serious concerns about the ability of the grain storage and handling system to deal with the fall harvest. Anecdotal information suggests that construction of additional storage capacity has continued in 1999; however, this new capacity will not show up until December 1, 1999, storage capacity is reported. Additions to capacity during 1998 added only 1 percent or 220 million bushels to existing storage.

Using grain and soybean beginning stocks plus production as a proxy for peak storage demand it is clear that this year's storage situation will be as serious as at any time in recent memory (figure 2). Beginning stocks plus production for 1999/2000 exceed storage capacity, as reported December 1, 1998, by 199 million bushels.

Table 2—U.S. grain and soybean stocks by position, June 1, 1993-99

Region	1993			1994			1995		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	47	32	78	33	32	65	35	30	65
Southeast	47	70	117	29	60	89	37	73	110
Delta	3	43	47	3	32	35	4	35	39
Eastern Corn Belt	797	804	1,601	523	686	1,209	729	773	1,502
Western Corn Belt	1,147	692	1,839	541	579	1,120	1,162	681	1,843
Southern Plains	13	167	180	9	119	128	9	106	115
Central Plains	414	485	899	243	363	606	340	414	754
Northern Plains	330	118	448	265	114	379	308	118	427
Pacific Northwest	18	75	93	16	93	108	8	71	79
West	2	17	19	2	18	20	1	14	15
Unallocated	96	38	134	60	38	98	80	58	138
United States	2,913	2,541	5,454	1,723	2,134	3,857	2,714	2,373	5,087

Region	1996			1997			1998		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	20	29	49	41	36	77	29	35	64
Southeast	16	66	82	27	58	85	25	53	78
Delta	2	30	32	2	26	28	0	34	34
Eastern Corn Belt	355	502	857	501	453	954	653	684	1,337
Western Corn Belt	471	531	1,001	742	499	1,241	944	531	1,475
Southern Plains	6	90	95	9	90	99	2	132	135
Central Plains	110	313	423	309	334	643	356	426	782
Northern Plains	125	94	219	272	109	381	329	105	434
Pacific Northwest	8	73	80	11	81	92	24	103	128
West	1	14	15	1	16	17	0	24	25
Unallocated	48	53	101	73	48	122	114	39	154
United States	1,161	1,793	2,954	1,988	1,748	3,738	2,478	2,168	4,646

Region	1999			Percent of 1998			Percent of 5-yr. avg.		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels								
Northeast	32	42	74	111	120	116	102	131	117
Southeast	20	60	80	82	113	103	75	97	90
Delta	0	49	49	100	144	144	0	157	147
Eastern Corn Belt	772	786	1,558	118	115	116	140	127	133
Western Corn Belt	1,247	680	1,927	132	128	131	162	121	144
Southern Plains	4	189	194	191	143	144	63	176	170
Central Plains	483	536	1,020	136	126	130	178	145	159
Northern Plains	401	125	525	122	119	121	154	115	143
Pacific Northwest	22	107	129	91	104	101	168	127	133
West	1	6	7	600	24	28	101	33	38
Unallocated	133	55	188	116	140	122	177	117	154
United States	3,116	2,636	5,752	126	122	124	155	129	142

Source: USDA-NASS

Table 3—U.S. grain storage capacity utilization, June 1, 1994-99

Region	1994			1995			1996		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	percent			*percent*			*percent*		
Northeast	12	21	15	14	21	16	8	19	12
Southeast	5	17	10	7	21	12	3	19	9
Delta	2	8	6	2	9	7	1	8	6
Eastern Corn Belt	17	32	24	24	37	29	12	24	17
Western Corn Belt	16	34	22	35	40	36	14	31	20
Southern Plains	3	10	9	3	10	8	2	8	7
Central Plains	15	22	19	20	26	23	7	20	13
Northern Plains	16	26	18	19	26	20	8	21	11
Pacific Northwest	6	24	16	3	19	12	3	19	12
West	0	12	13	0	10	11	0	10	11
United States	15	25	19	24	28	26	10	22	15

Region	1997			1998			1999		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	percent			*percent*			*percent*		
Northeast	18	24	20	13	24	17	14	29	20
Southeast	5	17	10	5	16	9	4	18	10
Delta	1	7	5	0	9	6	0	13	9
Eastern Corn Belt	17	22	19	23	33	27	26	37	31
Western Corn Belt	23	29	25	30	31	30	39	39	39
Southern Plains	4	10	8	1	15	12	2	23	18
Central Plains	19	22	21	22	29	25	29	35	32
Northern Plains	17	25	19	21	24	22	25	28	25
Pacific Northwest	4	21	14	10	27	20	9	28	21
West	0	11	12	0	17	18	0	4	5
United States	18	22	20	23	27	25	28	33	30

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

Source: USDA-NASS

Beginning stocks plus production in 1998/99 was 318 million bushels less than storage capacity, as reported December 1, 1997.[1] In fact, at no time during the 13-year period shown in figure 2 has the storage situation been as tight as it may be if current production projections are realized.

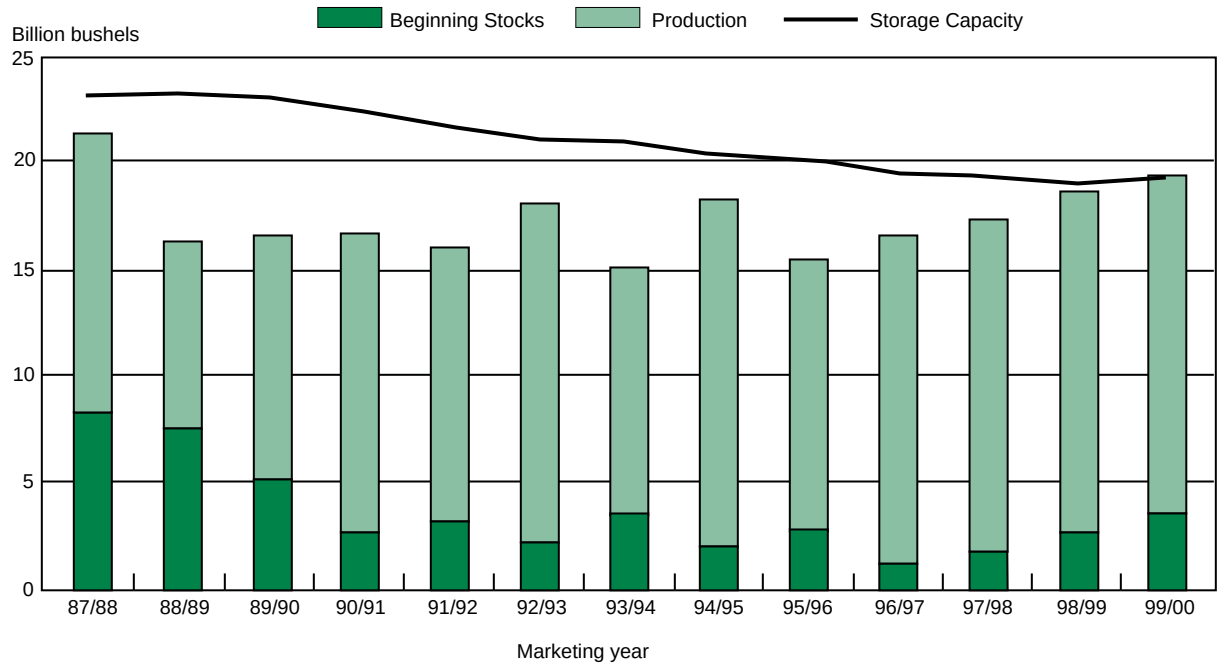
The worst storage shortfalls are likely to be in those areas where storage capacity has been traditionally the shortest, such as the Central Plains and Western Corn Belt. With large grain and soybean acreage in the Eastern Corn Belt again this year, this region may also see a more serious storage crunch at harvest. Additional harvest-time capacity can be made available through temporary storage facilities, but even with this addition to capacity, the 1999/2000 fall harvest is shaping up to be a storage headache for farmers and elevator operators.

Wheat

Higher yields for Hard Red Winter (HRW) and Soft Red Winter (SRW) wheat have improved the prospects for this year's (June 1) U.S. wheat crop over the past few weeks. While still down from a year ago, this year's wheat production, combined with larger carry-in stocks, will push available supplies above last year's

[1]Beginning year stocks plus production provide an indication of the likely harvest-time pressure on grain handling and storage capacity. This measure, however, should not be taken to suggest that the combined volume of beginning stocks and production is available at any one time in the marketing year. The marketing year for the small grains crops (wheat, barley, oats, and rye) begins June 1, and the marketing year for the fall row-crops (corn, soybeans, and sorghum) begins September 1.

Figure 2—U.S. grain and soybean production, beginning stocks, and storage capacity, 1987/88-1999/2000



Note: Storage capacity is based on on-farm and off-farm capacity as of December 1 the preceding year. The marketing year for wheat, barley, oats, and rye begins June 1. The marketing year for corn, soybeans, and sorghum begins September 1. Beginning stocks and production for 1999/2000 based on July 13, 1999, projections.
Source: USDA-NASS

level and to their highest level since 1987/88. Stronger export demand for wheat since April has helped pushed demand for rail transportation in the Western United States above year-ago levels for several months now. Consistent with projected increases in wheat exports for the 1999/2000 marketing year, wheat exports have continued to run ahead of year-ago levels since the beginning of the marketing year on June 1. Increasing wheat exports should add to rail demand over the next few weeks, particularly for shipments from the HRW-producing areas to the Texas Gulf.

Supplies. July production forecasts for all classes of wheat put the 1999/2000 wheat crop at 2,333 million bushels, down 9 percent from last year. With beginning stocks on June 1 estimated at 945 million bushels and imports for the marketing year projected at 100 million bushels, total supplies are projected at 3,378 million bushels, up just 5 million bushels from 1998/99. At this level, however, available supplies will be at their highest level since 1987/88 when total supplies reached 3,945 million bushels. Ending wheat stocks for the current marketing year are projected to drop 3 percent or 32 million bushels from last year's carryout. This will be the first reduction in ending stocks since 1995/96. At 913 million bushels, projected ending stocks for 1999/2000 would still be the second largest since 1987/88.

Wheat production for 1999/2000 is expected to be down from 1998/99 in all the major winter and spring producing regions (table 4). The largest percentage decrease is forecast for the Southern Plains, where production is expected to be down 19 percent over last year. The largest volume decrease is forecast for the Central Plains, where production will be down 72 million bushels from 1998/99, a decrease of 11 percent. Production is also forecast to be down 16 percent in the PNW and 4 percent in the Northern Plains. Despite the year-to-year drop in production in the Southern and Central Plains, this year's crops in the two regions are still expected to exceed the 5-year averages by 13 and 8 percent, respectively. Only the Northeast, Southeast, and Delta regions are forecast to have larger wheat crops in 1999/2000. The increase in local wheat production in the Southeast appears to have provided some relief, especially during July, for local livestock and poultry feeders who have been struggling to keep supplies of Eastern Corn Belt grains moving into feed mills. Congestion and other operational problems have slowed rail traffic in the Eastern United States since June 1 as CSX Transportation (CSXT) and Norfolk

Table 4—U.S. winter wheat production, 1994-99

Region	1994	1995	1996	1997	1998	1999	Percent of 1998	Percent of 5-yr. avg.
				Million bushels				
Northeast	32	38	34	39	34	35	104	100
Southeast	128	110	117	125	101	109	108	94
Delta	49	56	84	51	57	62	110	105
Eastern Corn Belt	196	227	150	212	206	205	100	104
Western Corn Belt	124	121	157	137	139	131	94	97
Southern Plains	224	188	173	298	343	278	81	113
Central Plains	584	477	404	662	681	609	89	108
Northern Plains	627	595	715	556	607	582	96	94
Pacific Northwest	293	318	367	339	317	267	84	82
West	63	53	77	61	64	55	85	86
United States	2,321	2,183	2,277	2,481	2,550	2,333	91	99

Note: 1999 production forecast is from the July 12, 1999, *Crop Production* report.
Source: USDA-NASS

Southern (NS) have struggled to merge former Conrail (CR) operations into their own systems.

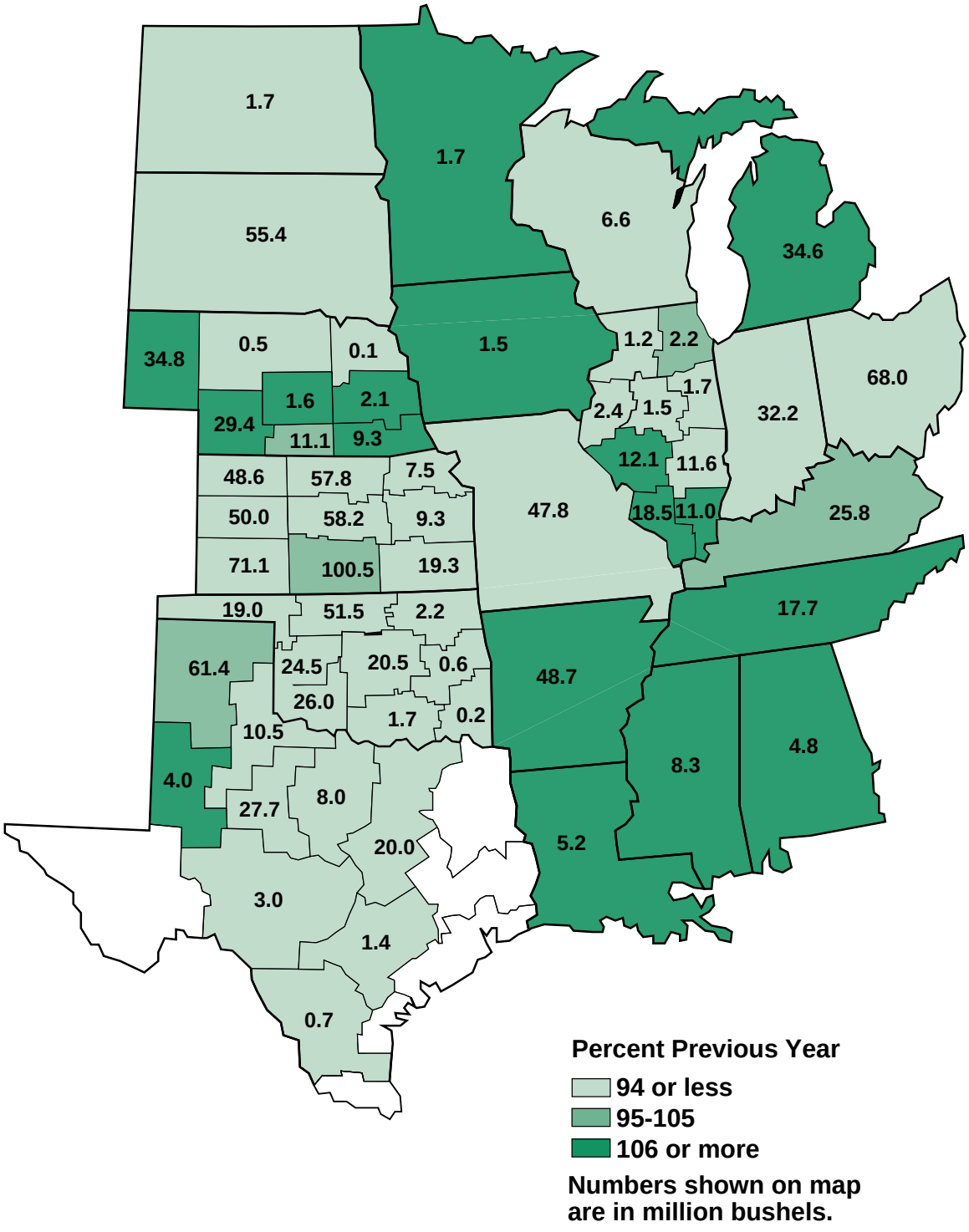
Prospects for the 1999/2000 winter wheat crop increased throughout the harvest despite higher than normal precipitation levels that slowed harvesting progress in Kansas and contributed to concerns about HRW wheat quality. The average yield for all winter wheat is forecast at a record 47 bushels per acre, up from the previous record of 46.9 bushels in 1998/99. Despite a reduction of 11 percent in harvested acres over last year, this year's winter wheat crop, at 1,673 million bushels, will be the fourth largest winter wheat crop since 1990/91 when winter wheat production totaled 2,024 million bushels. HRW wheat production for 1999/2000 is forecast at 1,031 million bushels, down 13 percent from last year. SRW wheat production is forecast at 443 million bushels, up 485,000 bushels, or just one-tenth of one percent. White Winter wheat production is forecast to be down 22 percent from last year at 199 million bushels. Regional increases in winter wheat production were limited to the Delta and Southeast regions, as well as in southern and west-central Illinois; Michigan; western, south-central, and southeastern Nebraska; and central West Texas (figure 3).

The first survey-based forecast for spring wheat other than durum from the July *Crop Production* report puts the 1999/2000 other spring wheat crop at 527 million bushels, down just 1.2 million bushels from 1998/99. This increase in other spring wheat is despite an 18-percent decrease in production in North Dakota, the largest producer of other spring wheat. Increases in production, particularly in Montana and, to a lesser extent, Idaho and Washington, account for the small increase in total production over last year (figure 4). With 64 percent of the spring wheat crop reported in good to excellent condition as of July 25, the same rating as last year at this time, this year's crop would appear to be in pretty good shape despite late planting in parts of North Dakota because of excessive moisture. As of July 25, 88 percent of the crop was reported to be headed, compared with 98 percent for the same week in 1998 and a 5-year average of 93 percent.

Use. Wheat use for 1999/2000 is projected at 2,465 million bushels, up 2 percent from 1998/99. Domestic use of all classes of wheat is projected at 1,315 million bushels, down 5 percent from last year. Food use is projected up 1 percent, or 10 million bushels, for the current marketing year, but feed and residual use is projected down 22 percent, or 82 million bushels. Continuing low corn prices will make wheat less attractive for livestock feeders over the next several months. Export use is projected at 1,150 million bushels, up 10 percent from 1998/99. U.S. wheat exports, however, will face substantial competition from other major exporting countries. Production prospects have increased in recent weeks for the European Union, Kazakstan, and Australia. These increases, combined with increases in production in the United States and China, are pushing world wheat production above year-ago levels as projections for world wheat consumption continue to decline.

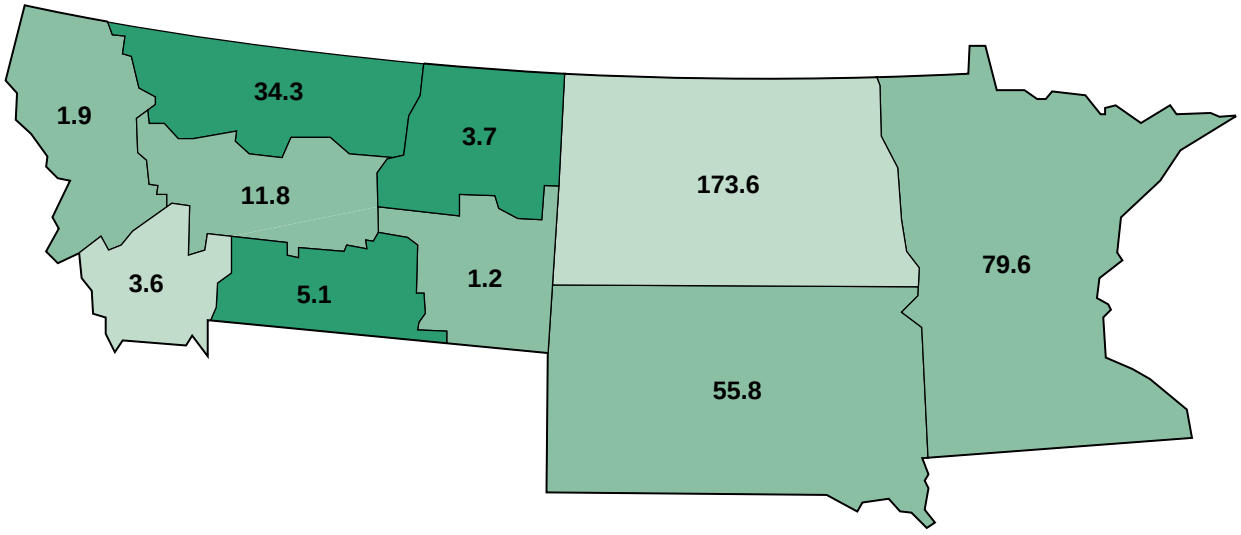
U.S. wheat exports have strengthened sharply over year-ago levels since January, increasing rail demand in

Figure 3—U.S. 1999/2000 winter wheat production forecast for selected States/districts, July 1, 1999



Source: USDA-NASS

Figure 4—U.S. 1999/2000 spring wheat production forecast for selected States/districts, July 1, 1999



Source: USDA-NASS

the Western United States. Export inspections of all wheat were down 2 percent during the January-March period as compared to the same months in 1998. During the April-June period, inspections were up 41 percent over 1998. Texas Gulf ports have experienced stronger wheat exports for several months now, increasing rail demand in that market. Inspections at Texas Gulf facilities were up 12 percent during January-March and up 53 percent during April-June as compared to last year. Export inspections at PNW ports were also up since the first of the year, particularly for HRW and Hard Red Spring (HRS) wheat. Export inspections at PNW facilities were up 20 percent during January-March and up 21 percent during April-June for HRW and HRS wheat when compared with inspections last year during the same periods. HRW and HRS wheat move predominantly by rail from the Northern Plains to export facilities in Oregon and Washington along the Columbia River.

Despite stronger exports in recent months, outstanding export sales (sold but unshipped) of all wheat for the 1999/2000 marketing year totaled 139.9 million bushels as of July 22, down 5 percent from the same week last year. For the same week, outstanding export sales of SRW and HRW wheat were up 73 and 7 percent, respectively. Outstanding export sales of white wheat were down 44 percent from last year, and outstanding sales of HRS wheat were down 1 percent from a year ago.

Stocks and Storage. The June 30, 1999, *Grain Stocks* report put June 1 wheat stocks in all positions at 945 million bushels, up 31 percent from a year earlier and 81 percent above the 5-year average (table 5). Of the total, on-farm stocks were reported at 278 million bushels, and off-farm stocks were reported at 667 million bushels, up 24 and 34 percent, respectively, from year-ago levels. June 1 total and off-farm stocks were their highest since 1988 when they reached 1,261 and 736 million bushels, respectively. June 1 on-farm stocks were their highest since 1991 when they reached 341 million bushels.

June 1 wheat stocks were up over year-ago levels in the Eastern United States and down from year-ago levels in the Western United States with the exception of the Southern Plains. In the Eastern Corn Belt, June 1 stocks were up 51 percent over last year and 161 percent over the 5-year average. June 1 stocks were also up in the Southeast and Delta regions over year-ago levels and over the 5-year average. In the Southern Plains, stocks were up 64 percent over last year and 151 percent over the 5-year average. In the Northern and Central Plains, which reported the largest stocks, 254 and 224 million bushels, respectively, stocks were up 21 and 42 percent over last year. Stocks in the PNW were down 5 percent this year as compared to last, but 30 percent above the 5-year average for the region.

Nationwide, 71 percent of wheat stocks were held off farm in commercial storage facilities on June 1, 1999. In the Southern and Central Plains, respectively, 97 and 85 percent of the March 1 stocks were held off farm. Eastern Corn Belt and PNW stocks were also held predominantly in commercial storage with 96 and

Table 5—U.S. wheat stocks by position, June 1, 1993-99

Region	1993			1994			1995		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	0	10	10	0	9	9	0	10	10
Southeast	0	5	5	0	5	5	0	5	5
Delta	0	5	5	0	1	1	0	1	1
Eastern Corn Belt	2	33	34	2	38	40	1	36	37
Western Corn Belt	18	31	49	17	45	62	16	32	48
Southern Plains	2	49	50	2	51	54	1	46	47
Central Plains	18	78	95	19	87	106	15	75	90
Northern Plains	132	64	196	125	73	198	123	71	194
Pacific Northwest	10	60	70	8	72	80	4	55	59
West	0	8	8	1	8	9	0	8	8
Unallocated	3	5	8	2	4	6	3	4	7
United States	184	347	531	175	393	568	163	343	507

Region	1996			1997			1998		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	0	6	6	0	9	9	0	15	15
Southeast	0	5	5	0	5	5	0	7	7
Delta	0	3	3	0	2	2	0	5	5
Eastern Corn Belt	1	29	30	1	29	30	3	69	72
Western Corn Belt	5	31	36	21	23	44	18	35	53
Southern Plains	2	40	42	2	29	30	2	75	76
Central Plains	6	66	72	7	54	61	23	135	158
Northern Plains	55	48	103	115	58	172	153	56	209
Pacific Northwest	4	56	60	7	63	69	19	82	101
West	0	9	9	0	9	9	0	15	15
Unallocated	2	9	10	2	11	13	6	5	11
United States	75	301	376	155	289	444	224	498	722

Region	1999			Percent of 1998			Percent of 5-yr. avg.		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels								
Northeast	0	18	18	0	116	116	0	180	180
Southeast	0	12	12	0	168	166	0	221	219
Delta	0	7	7	0	147	147	0	272	270
Eastern Corn Belt	5	104	108	176	150	151	334	258	261
Western Corn Belt	24	47	70	130	134	133	154	141	145
Southern Plains	4	121	125	224	163	164	224	252	251
Central Plains	34	190	224	147	141	142	242	228	230
Northern Plains	186	68	254	122	121	121	163	111	145
Pacific Northwest	13	83	96	71	101	95	161	126	130
West	1	4	6	600	29	37	522	45	56
Unallocated	11	15	25	175	290	228	355	226	266
United States	278	667	945	124	134	131	175	183	181

Source: USDA-NASS

86 percent, respectively, reported as off-farm. In the Northern Plains, 73 percent of June 1 stocks were held on farm.

Futures market prices include carrying incentives for wheat (out-month contracts trading at premiums to the nearby contracts). Prices for March HRW wheat were 29.75 cents per bushel above prices for September wheat on the Kansas City Board of Trade on July 28. On the same day, March SRW wheat on the Chicago Board of Trade was 30.5 cents above September. March HRS contracts were 26.25 cents above September (4.4 cents per bushel per month) on the Minneapolis Grain Exchange at the market's close on July 30. With the interest cost to carry wheat running 2-2.5 cents per bushel per month, the market is signaling to store and carry wheat forward. Price incentives to hold wheat will place additional pressure on storage capacity, especially as the fall crops begin to be harvested.

Corn

Despite a reduction in planted corn acreage from March intentions, good weather through early July has raised the prospects for this year's corn crop. July projections put the 1999/2000 (September 1) corn crop on track to be the third largest ever. Dryer and hotter conditions in recent weeks in the Eastern Corn Belt may have dampened yield expectations somewhat, but an expected carry-in that is the largest in more than a decade is projected to leave 1999/2000 supplies up from those in 1998/99, and at their highest levels since 1987/88. Feed and export use for 1999/2000, projected at the current year's level combined with a projected increase in processing, is expected to raise total corn use in 1999/2000 to a record level. Increased use will add to transportation demand over the coming months; however, these increases, in conjunction with a larger carry-in and expected production, will not be sufficient to keep ending stocks from growing again in 1999/2000 for the fourth straight year. These larger supplies will add substantially to harvest-time storage pressure.

Supplies. USDA's July projections for the 1999/2000 corn crop put production at 9,650 million bushels, down 111 million bushels, or 1 percent, from 1998/99. With the current year's ending stocks estimated at 1,744 million bushels, up 33 percent from a year earlier, total supplies for the 1999/2000 marketing year are projected at 11,404 million bushels, up 3 percent from projected 1998/99 available supplies. At this level, 1999/2000 available corn supplies would be the largest since 1987/88. Ending stocks for 1999/2000 are projected at 1,994 million bushels, up 14 percent from those estimated for the current year. If realized, 1999/2000 will be the fourth consecutive year in which carryout stocks have increased.

Improved prospects for 1999/2000 corn production through early July have been the result of good-to-excellent growing conditions, which put the crop's condition rating at its highest level ever for early July. Weather conditions and soil moisture continue to be favorable in most of the major growing areas; however, heat and lack of rainfall in the eastern half of the United States beginning in July have reduced crop ratings in several key producing States, including Illinois, Indiana, and Ohio. As of July 25, 70 percent of the 1999/2000 corn crop was reported in good-to-excellent condition. This is up from 68 percent for the same week in 1998 but down from the previous week's rating of 72 percent. These reductions in crop condition overall are the result of reduced crop ratings for the Eastern Corn Belt.

The corn crop is maturing behind last year's pace but ahead of the 5-year average. As of July 25, 75 percent was reported as silking, down from 77 percent last year, but up from the 5-year average of 57 percent. With the exception of Wisconsin, the Eastern Corn Belt crop is running ahead of last year and the 5-year average. In the Western Corn Belt and Central Plains, the crop is generally running behind last year but ahead of the 5-year average.

The June 30 *Acreage* report puts this year's planted corn acreage at 77.6 million acres, down 3 percent from last year and at its lowest level since 1995 (table 6). This survey-based acreage estimate is also down from the 78.2 million acres farmers indicated that they intended to plant to corn in the March 31 *Prospective Plantings* report. Corn acreage was reported down in every region except the PNW. Of the major corn-producing regions, 1999 acreage, as compared to that for 1998, was down 1 percent in the Eastern Corn Belt and down 2 percent in the Western Corn Belt and Central Plains. The largest regional reductions in corn acreage, both percentagewise and volumewise, were in the Delta and Southeast, where dry weather and disease problems have made corn production less attractive in the past few years. Corn acres in the Delta region dropped 38 percent this year as compared to 1998, a decrease of 565,000 acres. Southeast corn acreage also dropped substantially, down 485,000 acres from 1998, a decrease of 10 percent. Crop conditions in the Southeast have improved moderately in recent weeks

Table 6—U.S. corn acres planted, 1994-99

Region	1994	1995	1996	1997	1998	1999	Percent of 1998	Percent of 5-yr. avg.
				-1,000 acres -				
Northeast	3,515	3,474	3,682	3,805	3,725	3,687	99	101
Southeast	4,900	4,190	4,910	4,670	4,670	4,185	90	90
Delta	710	625	1,405	1,080	1,485	920	62	87
Eastern Corn Belt	27,650	25,000	26,100	27,250	25,950	25,750	99	98
Western Corn Belt	22,300	20,250	22,850	21,900	22,450	22,000	98	100
Southern Plains	2,473	2,383	2,430	2,335	2,810	2,430	86	98
Central Plains	11,850	11,100	12,000	12,740	12,980	12,750	98	105
Northern Plains	4,710	3,635	4,890	4,725	5,025	4,800	96	104
Pacific Northwest	298	291	345	325	360	427	119	132
West	515	531	617	707	732	662	90	107
United States	78,921	71,479	79,229	79,537	80,187	77,611	97	100

Note: 1999 acreage estimates are from the June 30, 1999, *Acreage* report.
Source: USDA-NASS

with spotty summer showers, but feeders are still facing a substantially reduced local corn harvest starting in August. This suggests an earlier than normal start to the fall shipping season again this year for eastern railroads. This could add to system congestion on CSXT and NS at a time when the two railroads are still working to return service to premerger levels for grain and feed shippers in the Eastern Corn Belt and poultry and hog feeders in the Southeast.

Use. Total corn use for the 1999/2000 marketing year is projected at 9,410 million bushels, up 65 million bushels, or 1 percent, from that estimated for 1998/99. If realized, 1999/2000 corn use would be a record, surpassing 1994/95's total use of 9,352 million bushels. Increased domestic use for 1999/2000 is expected to account for the 65-million-bushel increase in total use. At 7,485 million bushels, domestic use is projected up just less than 1 percent from that estimated for 1998/99. This would also be a record. Feeding use for 1999/2000 is projected to remain at the 1998/99 record level of 5,575 million bushels. It is expected that reductions in cattle-on-feed numbers and hog production in 2000 will be offset by increases in broiler, turkey, and egg production, keeping feed demand at current year levels. Expanded processing demand is expected to account for higher domestic use as production of high fructose corn syrup and ethanol are projected up in 1999/2000. Food, seed, and industrial uses are projected at 1,910 million bushels, up 4 percent from 1998/99. As with feeding demand, export demand is expected to remain at the 1998/99 level for the coming marketing year. At 1,925 million bushels, 1999/2000 corn exports would still be at a level as high as any time since 1994/95. U.S. corn export prospects have improved in recent months for both the 1998/99 and the 1999/2000 marketing years. Forecasts for China's corn exports have been reduced because corn prices in China are above world prices, requiring large subsidies to move exports. Import demand is also up in Japan, South Korea, Mexico, Morocco, and Iran.

U.S. corn exports have been running ahead of year-ago levels for several months now with every indication that exports will remain strong in 1999/2000. Export corn inspections for January-March were up 24 percent over those for the same months in 1998. Inspections for April-June were up 57 percent over those during the same period last year. Outstanding export sales continue to show strong export demand for corn during the remainder of the 1998/99 marketing year and into the new crop year. Outstanding export sales (sold but unshipped) of corn for the 1998/99 marketing year totaled 269.7 million bushels as of July 22, up 65 percent from last year at this time. Outstanding sales for the 1999/2000 marketing year have increased substantially in recent weeks totaling 122.7 million bushels as of July 22, up 2 percent from last year at this time.

Corn exports from PNW export facilities have increased over year-ago levels since March. Ocean freight rates for the Gulf and the PNW to the Far East had favored shipments of export corn from the Gulf throughout 1998 and into early 1999. With the differential between Gulf and PNW ocean freight rates very small, corn exports from the PNW and demand for rail

transportation to move that corn into position had been well below normal levels for many months. Modest increases in ocean freight rates at the Gulf since March have increased the rate differential modestly, boosting PNW corn exports. Generally stronger corn exports in the past few months have also increased demand for barge freight and subsequently barge rates, providing greater incentive for exporting corn to the Far East via PNW ports. PNW corn export inspections for April-June were up 84 percent over those during the same months last year. Weekly inspection numbers suggest that the increase in PNW export corn demand is continuing. This should drive demand for westbound rail shipments of corn from the western corn producing areas.

Stocks and Storage. The June 30 *Grain Stocks* reported June 1 corn stocks in all positions at 3,616 million bushels, up 576 million bushels from 1998. This represents a 19-percent increase over year-earlier stocks and a 39-percent increase over the 5-year average for June 1 stocks (table 7). On-farm stocks, which accounted for 62 percent of the total, were up 427 million bushels, or 23 percent, from a year ago and 53 percent above the 5-year average. On-farm inventories, as of June 1, were the largest since 1988. Off-farm stocks were up 12 percent, or 149 million bushels, from year-ago figures and 20 percent above the 5-year average. Total corn stocks, as of June 1, were the highest since 1993.

Increases in June 1 corn stocks were reported in every region except the Southeast and West. The largest increases, among the major producing regions were in the Western Corn Belt and Central Plains, where June 1 stocks were up 28 percent over the previous year. The largest volume increase in stocks was in the Western Corn Belt, where stocks were up 308 million bushels from 1998 with 73 percent of this increase in stocks on farm. Central Plains stocks were up 140 million bushels with 71 percent of the increase held on farm. Eastern Corn Belt stocks were up 9 percent over those a year ago, an increase of 98 million bushels. Of the year-to-year increase, 84 percent was held on farm. Northern Plains June 1 corn stocks were also up 31 million bushels, or 23 percent, from the previous year. Despite stronger demand for corn in the last weeks of the current marketing year, 52 percent of this year's June 1 stocks are expected to be carried into the 1999/2000 marketing year, reducing available storage capacity for the new crop.

Carrying incentives built into the futures market prices for corn have increased in recent weeks signaling the market to store corn. Prices for March corn on the Chicago Board of Trade were 21.75 cents per bushel above September (3.6 cents per bushel per month) prices on July 28. With the interest cost to carry corn 1.6 cents per bushel per month, the market is signaling to store and hold grain. Stronger incentives to hold grain suggest that demand for corn transportation in the next few months is not likely to exceed normal seasonal levels. With large stocks and incentives to hold more grain, storage capacity will be extremely tight in many parts of the country during the fall months and moving into early winter. Increasing price spreads between contract months and weaker cash prices relative to futures prices (basis) may be necessary to ration storage capacity that will be at a premium if prospects for the current crops remain good.

Soybeans

Increases in soybean acreage since the March planting intentions put the 1999/2000 (September 1) soybean crop on track to be another record. Stronger exports of soybeans since March and continuing export sales are keeping export use above year-ago levels. Increases in exports of soybeans and meal, combined with stronger domestic demand for meal and oil, are expected to drive total U.S. soybean use in 1999/2000 to a new record. Higher use will add to grain transportation demand, particularly barge demand, over the coming months. Even with record use, soybean production will outpace demand, leaving stocks at record levels. Large soybean stocks will only add to demand for storage capacity in an already tight storage situation.

Supplies. Production projections, as of July, put the 1999/2000 soybean crop at a record 2,935 million bushels, up 6 percent from the previous record in 1998/99. Increased soybean use in recent weeks has lowered expected carry-in to 395 million bushels. Despite this, beginning stocks for the 1999/2000 marketing year will be up 98 percent from the previous year and at their highest levels since 1987/88. Total supplies for 1999/2000 will be up for the fourth straight year at a record 3,334 million bushels, an increase of 13 percent over 1998/99. Even with expected increases in soybean use, 1999/2000 ending stocks are projected to increase by 49 percent to a record 590 million bushels.

Prospects for the 1999/2000 soybean crop have increased in recent weeks with excellent growing conditions in most of the major producing areas and expanded soybean acreage reported in the June 30 *Acreage* report. With the exception of the more eastern parts of the Eastern Corn Belt, weather conditions and

Table 7—U.S. corn stocks by position, June 1, 1993-99

Region	1993			1994			1995		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	43	19	62	29	15	44	32	17	49
Southeast	39	46	84	24	32	56	24	41	65
Delta	0	11	11	0	11	11	0	11	11
Eastern Corn Belt	678	633	1,311	436	500	936	609	570	1,179
Western Corn Belt	936	476	1,412	418	361	779	952	437	1,389
Southern Plains	7	38	45	4	34	38	4	29	33
Central Plains	327	237	564	184	175	358	265	208	473
Northern Plains	107	16	123	61	12	73	120	16	136
Pacific Northwest	0	1	1	0	5	5	0	4	4
West	0	5	5	0	4	4	0	4	4
Unallocated	80	11	91	48	8	56	66	6	72
United States	2,217	1,493	3,709	1,203	1,157	2,360	2,072	1,343	3,415

Region	1996			1997			1998		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	18	20	38	39	25	64	27	18	45
Southeast	10	35	45	23	36	58	25	33	57
Delta	0	7	7	0	9	9	0	12	12
Eastern Corn Belt	268	335	603	420	324	744	545	514	1,059
Western Corn Belt	337	321	658	603	334	937	761	349	1,110
Southern Plains	3	32	34	5	34	38	0	40	40
Central Plains	76	163	239	252	197	449	287	207	494
Northern Plains	30	13	43	99	24	123	112	20	132
Pacific Northwest	0	5	5	0	6	6	0	6	6
West	0	4	4	0	4	4	0	6	6
Unallocated	39	5	43	61	3	64	74	6	80
United States	780	938	1,718	1,501	996	2,497	1,830	1,210	3,040

Region	1999			Percent of 1998			Percent of 5-yr. avg.		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels								
Northeast	30	20	50	111	116	113	103	108	105
Southeast	20	32	52	82	97	91	96	90	92
Delta	0	20	20	0	159	159	0	193	193
Eastern Corn Belt	628	529	1,157	115	103	109	138	118	128
Western Corn Belt	987	430	1,417	130	123	128	161	120	145
Southern Plains	0	43	43	0	108	108	0	129	118
Central Plains	387	247	634	135	119	128	182	130	157
Northern Plains	142	21	163	127	104	123	168	122	160
Pacific Northwest	0	9	9	0	140	140	0	165	165
West	0	1	1	0	10	10	0	12	12
Unallocated	63	8	71	86	133	89	110	141	113
United States	2,257	1,359	3,616	123	112	119	153	120	139

Source: USDA-NASS

soil moisture have remained favorable for the 1999/2000 average yield to approach the record 41.4 bushels per acre set in 1994/95. As of July 25, 65 percent of the 1999/2000 soybean crop was reported in good-to-excellent condition. This is up from 64 percent for the same week in 1998, but down from the previous week's rating of 67 percent in good-to-excellent condition. These reductions in the U.S. crop condition overall are the result of reduced crop ratings in the Eastern Corn Belt since early July.

The soybean crop is progressing at a pace slightly ahead of last year's crop and substantially ahead of the 5-year average. As of July 25, 74 percent was blooming, up from 72 percent for the same week last year. This compares to 60 percent for the 1994-98 average. The crop is running ahead of last year in the Eastern Corn Belt but behind last year in the Western Corn Belt and Central Plains.

Survey information from the *Acreage* report puts 1999/2000 total soybean area at 74.2 million acres, an increase of 1.1 million acres above that reported in the March 31 *Prospective Plantings* based on farmer intentions. At 74.2 million acres, this year's planted area is another record, up 1 percent from the previous record in 1998/99 (table 8). Soybean acreage is up in the major soybean-producing areas of the Eastern and Western Corn Belts. It is also reported up in the Central and Northern Plains, but down in the Delta and Southeast regions. Strong feeding demand in the poultry- and hog-producing areas of the Delta and Southeast should boost demand for rail-delivered Eastern and Western Corn Belt soybeans and soybean meal over the next several months.

Use. July projections put 1999/2000 soybean use at a record 2,744 million bushels, up 5 percent from 1998/99. Domestic use is also projected to be a record at 1,814 million bushels, up 2 percent from the current year. Lower soybean prices and stronger than anticipated feeding demand for soybean meal are expected to push crushing demand to a record in 1999/2000. At 1,655 million bushels, domestic crush would be up 2 percent from that estimated for the current marketing year. Export use for 1999/2000 is projected at a record 930 million bushels, up 18 percent from 1998/99. Reduced plantings in South America and China are expected to boost U.S. export volumes and world market share in 1999/2000.

Since March, soybean exports have outpaced those from a year earlier, increasing 1998/99 exports from earlier anticipated levels. At an estimated 785 million bushels, the current year's soybean exports will still be below those during the 4 previous marketing years. As of July 22, accumulated marketing-year export sales were at 762.9 million bushels, down 12 percent from the same week last year. However, year-to-year comparisons show soybean export inspections for the March-June 1999 period up 34 percent over the same months in 1998. As of July 22, outstanding export sales (sold but unshipped) of soybeans for the current marketing year (1998/99) totaled 65 million bushels, up 45 percent from the same week last year. Outstanding export sales for the coming marketing year (1999/2000) totaled 58.1 million bushels as of the same week, 70 percent higher than the same week last year. Together these measures of current and near-term export demand suggest increased transportation demand for soybean shipping over the next few months.

Table 8—U.S. soybean acres planted, 1994-99

Region	1994	1995	1996	1997	1998	1999	Percent of 1998	Percent of 5-yr. avg.
				-1,000 acres -				
Northeast	1,255	1,245	1,120	1,268	1,305	1,255	96	101
Southeast	5,615	5,000	5,415	5,767	5,660	5,310	94	97
Delta	6,500	6,370	6,450	7,150	6,800	6,550	96	98
Eastern Corn Belt	20,510	21,130	22,370	22,610	23,850	24,500	103	111
Western Corn Belt	19,100	19,800	19,600	22,000	22,500	23,300	104	113
Southern Plains	520	540	590	760	910	840	92	127
Central Plains	5,050	5,200	5,100	6,000	6,350	7,050	111	127
Northern Plains	3,070	3,210	3,550	4,450	5,000	5,400	108	140
United States	61,620	62,495	64,195	70,005	72,375	74,205	103	112

Note: 1999 acreage estimates are from the June 30, 1999, *Acreage* report.
Source: USDA-NASS

Stocks and Storage. June 1 soybean stocks in all positions were reported in the June 30 *Grain Stocks* at 850 million bushels, up 43 percent, or 256 million bushels, from a year earlier and 39 percent above the 5-year average (table 9). These are the largest ever June 1 soybean stocks. June 1 on-farm stocks, reported at 460 million bushels, accounted for 54 percent of the total and were up 45 percent, or 142 million bushels, from a year ago. On-farm stocks were also up 75 percent above their 5-year average. June 1 off-farm stocks, at 390 million bushels, were up 114 million bushels, or 42 percent, over 1998 and 11 percent above the 5-year average.

The largest increases in June 1 soybean stocks were in the Eastern and Western Corn Belts, which together accounted for 75 percent of U.S. soybean stocks on June 1. In the Eastern Corn Belt, stocks were up 79 million bushels, 43 percent over last year and 30 percent above the 5-year average. Eastern Corn Belt on-farm stocks were up 33 million bushels, 33 percent above year-ago levels and 53 percent above the 5-year average. Western Corn Belt stocks were up 121 million bushels, 47 percent over 1998 and 51 percent over the 5-year average. On-farm stocks in the Western Corn Belt were up 69 million bushels, 46 percent over last year and 77 percent over the 5-year average. Central Plains soybean stocks for June 1 were up 19 million bushels, or 33 percent, for 1999. The increase in Central Plains soybean stocks was largely the result of increases in on-farm stocks that were up 18 million bushels over 1998. June 1 on-farm stocks in the Central Plains were up 73 percent above year-ago levels and 115 percent above the 5-year average. These large soybean stocks will tie up much-needed storage capacity and add to storage and handling problems for farmers and elevator operators when the fall harvest begins.

Futures market prices for soybeans, that were encouraging storage several weeks ago, are now providing price incentives to market soybeans. Prices for March soybeans on the Chicago Board of Trade were 21.5 cents per bushel above September prices on July 28. The interest cost alone to carry soybeans forward from September to March would run around 20 cents a bushel. In mid-July there was even a slight premium in the market for old-crop over new-crop soybeans. If these disincentives to hold soybeans remain in the market, old-crop and new-crop soybeans should keep moving into domestic and export use at a much stronger pace than a year ago.

Table 9—U.S. soybean stocks by position, June 1, 1993-99

Region	1993			1994			1995		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	0	1	1	0	7	7	0	1	1
Southeast	8	19	27	6	21	27	13	26	39
Delta	3	22	25	3	18	21	4	20	24
Eastern Corn Belt	103	117	220	75	125	201	110	152	262
Western Corn Belt	160	133	293	84	126	210	172	156	328
Southern Plains	0	5	5	0	2	2	0	4	4
Central Plains	22	42	64	15	35	50	24	48	72
Northern Plains	19	7	26	10	6	16	20	8	28
Unallocated	6	18	23	3	19	22	6	27	33
United States	320	364	683	195	360	555	349	443	792

Region	1996			1997			1998		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels			*Million bushels*			*Million bushels*		
Northeast	0	1	1	0	1	1	0	1	1
Southeast	6	25	31	4	17	21	0	13	13
Delta	2	19	21	2	14	16	0	16	16
Eastern Corn Belt	78	125	202	72	89	162	100	85	184
Western Corn Belt	116	140	255	103	100	203	153	105	257
Southern Plains	0	2	2	0	0	0	0	1	1
Central Plains	16	43	59	18	29	47	24	35	59
Northern Plains	13	8	22	13	7	20	23	8	31
Unallocated	4	25	29	5	25	30	19	13	32
United States	234	389	623	216	284	500	318	276	594

Region	1999			Percent of 1998			Percent of 5-yr. avg.		
	On Farms	Off Farms	Total	On Farms	Off Farms	Total	On Farms	Off Farms	Total
	Million bushels								
Northeast	0	2	2	0	256	256	0	113	113
Southeast	0	16	16	0	124	124	0	77	60
Delta	0	20	20	0	126	126	0	114	103
Eastern Corn Belt	133	131	263	133	154	143	153	113	130
Western Corn Belt	222	156	378	146	148	147	177	124	151
Southern Plains	0	1	1	0	123	123	0	72	72
Central Plains	42	36	78	173	105	133	215	95	136
Northern Plains	25	12	37	109	144	118	158	151	156
Unallocated	39	16	55	205	129	175	521	75	190
United States	460	390	850	145	142	143	175	111	139

Source: USDA-NASS

Transportation Situation

Ocean Freight Rates

Second quarter (April-June) ocean freight rates for the two key grain routes, U.S. Gulf to Japan and PNW to Japan, were marginally higher as compared to the same period last year. Rates from the Gulf averaged $17.47 per metric ton (mt) during the second quarter, up 3.7 percent from the second quarter last year and up 11.6 percent from first quarter 1999. Rates from the PNW for second quarter 1999 averaged $11.32 per mt, up only 1-cent per mt from first quarter 1998, and up $1.14 per mt from first quarter 1999. The 5-year average rate per mt on a vessel carrying approximately 55,000 mt of heavy grain (e.g., corn and soybean) from the Gulf was $23.91 per mt and from the PNW $14.01 per mt. During the first half (January-June) of 1999, ocean rates from the Gulf have averaged $16.56 per mt, down 31 percent from the 5-year average, and $10.75 per mt from the PNW, down 23 percent from the 5-year average (table 10).

The 5-year average suggests that rates will be lower during the third quarter (July-September) of this year. Each year, third quarter rates for the Gulf and PNW routes typically fall 4.5 percent from those in the second quarter reflecting the seasonal slowdown in cargo shipping. Since the end of the second quarter, rates for grain shipments from the Gulf have fallen 5 cents per mt, to $17.42 per mt. PNW rates have also fallen since the second quarter. So far for the third quarter, PNW rates are averaging $10.99 per mt, down 3 percent from the same weeks last year. Rates from the Gulf during early July are down 25 percent from the third quarter 5-year average of $23.09 per mt while rates from the

Table 10—Average daily ocean grain freight rates to Japan by quarter, 1994-99

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					
1994	20.59	22.31	24.40	29.54	24.21
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	15.65	17.47	17.42		16.85
5-yr avg.	24.78	24.20	23.09	23.58	23.91
Pacific Northwest					
1994	12.32	12.32	12.95	16.35	13.49
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	10.18	11.32	10.99		10.83
5-yr avg.	14.43	13.95	13.31	14.35	14.01
Spread					
1994	8.27	9.99	11.45	13.19	10.72
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	5.47	6.15	6.43		6.02
5-yr avg.	10.34	10.26	9.78	9.22	9.90

Notes: 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

PNW are down 21 percent from the third quarter 5-year average of the $13.31 per mt. Rates for August are being reported between $15.50 and $15.75 per mt from the Gulf and $10.78 per mt from the PNW. Rates for September and October are being reported at $17.22 and $18.21 per mt, respectively. The recent increases in fall rates may be the first sign that ocean freight rates are finally moving into a range more consistent with historical levels.

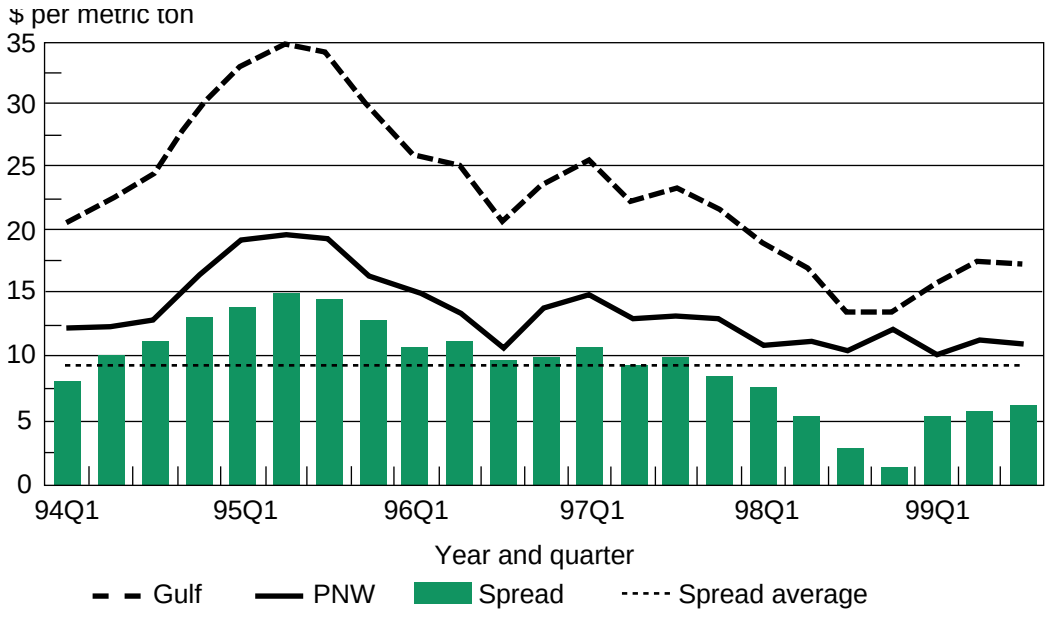
The rate spread between the Gulf and PNW is an important factor in determining how export grain traffic is split between the export ranges. Smaller rate spreads favor shipments from the Gulf while larger spreads favor shipments from the PNW. Despite a slight increase in the rate spread during the second quarter of this year, the spread that has prevailed for several months now has tended to favor Gulf shipments. Through the first 7 months of calendar year 1999, the spread has averaged $6.02 per mt, down 39 percent from the 5-year average of $9.90 per mt. The current spread is $6.43 per mt, $0.28 per mt greater than in the second quarter when rates for the two routes moved in opposite directions. This is the widest spread since first quarter 1998. Corn export inspections from the PNW to Japan during the second quarter totaled 30.6 million bushels, up 181 percent from those for the second quarter of the previous year, and 31 percent from those in the preceding quarter. The PNW's share of corn export inspections to Japan rose from 9 percent during second quarter 1998 to 19 percent in second quarter 1999. The rise in PNW export corn inspections to Japan in the second quarter reflects the more favorable rate spread ($6.15 per mt) during the second quarter (figure 5).

Barge

The amount of grain shipped by barge continues to show significant increases as compared to last year. During the first half of calendar year 1999, barge shipments of grain (including oilseeds) on the Mississippi River were reported at 873 million bushels, a 25-percent increase from last year and a 17-percent increase over the 5-year average.[2] Second quarter barge movements averaged 38.1 million bushels per week, up 40 percent over last year and 32 percent higher than the 5-year average (table 11). This surge of inland waterway shipments has been caused by an increase in demand for corn and soybeans by Mississippi River Gulf exporters. Recent traffic disruptions on the Mississippi River, however, will have an adverse effect on barge shipments in the next few weeks.

[2] Grain barge shipments are monitored by USDA from 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 Arkansas Norrell Lock are considered to be the total volume of barged grain since each lock is the last one on its respective river. A typical covered grain barge is 195 feet long by 35 feet wide, with a 1,500-ton or 52,500-bushel capacity.

Figure 5—Ocean grain freight rates to Japan, Gulf vs. Pacific Northwest, 1994-99



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-Average weekly barge grain shipments by quarter, 1994-99

Year	1st quarter (Jan-Mar)	2d quarter (Apr-Jun)	3d quarter (Jul-Sep)	4th quarter (Oct-Dec)	Annual (Jan-Dec)
			- 1,000 bushels -		
1994	24,521	25,406	29,699	38,083	29,427
1995	32,097	28,752	40,706	44,462	36,504
1996	29,971	35,459	25,811	39,847	32,772
1997	26,383	27,024	28,138	39,864	30,352
1998	25,932	27,198	30,391	37,545	30,267
1999	29,074	38,105	36,486		
5-yr. avg.	27,781	28,768	30,949	39,960	31,864

Notes: Data for 3d quarter 1999 based on shipments through July 17, 1999. All averages based on shipments through Mississippi L&D 27, Ohio L&D 52, and Norrell L&D on the Arkansas River.

Source: U.S. Army Corps of Engineers

In late July, barge traffic on the Upper Mississippi River began to be delayed by lock repairs at Locks and Dam (L&D) No. 27, the last lock on the Mississippi River, just above St. Louis, MO. L&D 27 was scheduled to have its main 1,200-foot chamber closed for repairs starting June 7. Due to high water conditions at that time, the work was postponed until July 13. During the main lock closure, traffic continued through L&D 27's smaller auxiliary chamber; however, barges had to wait days instead of hours to transit the lock. During the main chamber closure, 219 tows were delayed an average of 28 hours per tow. The main chamber was reopened on July 22. As of July 26, the backlog at L&D 27 had been eliminated and transit times through the site had returned to normal.

Despite the closure of the main chamber at L&D 27, barge shipments continue to increase, averaging 40.3 million bushels per week for the first 3 weeks of July. This is up 15 percent from the same weeks in 1998 and 15 percent higher than the 5-year average for these weeks. Congestion problems on the Mississippi River are likely to continue over the next few weeks. The main chamber at Melvin Price (MP) L&D is scheduled to close on August 6 to repair damages stemming from a tow accident. MP L&D at Alton, IL, is about 15 miles upstream from L&D 27 and also has a smaller auxiliary chamber, which can handle traffic when the main chamber is closed. Repairs on the main chamber at MP are expected to take a month.

Generally, grain barge rates peak in the fall while reaching their lowest levels in the late spring and early summer. Spot market barge rates for grain shipped from Minneapolis-St. Paul to Mississippi River Gulf ports averaged 182 percent of tariff for the second quarter of 1999 (table 12). Barge rates are quoted in terms of differentials from barge tariff benchmarks.[3] The tariff rate from Minneapolis-St. Paul to the Gulf is $6.19 per ton; therefore, the spot market rate quoted is 1.82 times $6.19, or $11.27 per ton. The Minneapolis-St. Paul rates for this year show the typical second quarter drop and a subsequent gradual increase until the later peak shipping season. July 1999 rates were reported at 277 percent of tariff, a 15 percent increase over last year's third quarter rates and a 28 percent increase over the 5-year average. Barge rates for grain shipped from St. Louis, to the Gulf were 107 percent of tariff during the second quarter of 1999, similar to last year's rates and the 5-year average. July 1999 rates were reported at 161 percent of tariff, 19 percent lower than the average for third quarter 1998 and about the same as the 5-year average.

Barge companies offer freight at spot market rates for the current week, 1 month out, and 3 months out. In late July, August 1999 barge rates (1 month out) were quoted at 271 and 191 percent of tariff for Minneapolis-St. Paul and St. Louis, respectively. October 1999 rates (3 months out) were quoted at 320 percent of tariff for Minneapolis-St. Paul and 265 percent of tariff for St. Louis. These future values suggest a rate structure for this year's third and fourth quarters that is above the 5-year average. This is an indication that barge

[3] 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 12—Average weekly barge rates by quarter, 1994-99

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:				
1994	152	129	171	265
1995	253	221	347	347
1996	no rates	180	151	236
1997	165	146	179	249
1998	164	166	241	325
1999	213	182	257	
5-yr. avg.	184	168	217	284
St. Louis to New Orleans:				
1994	96	85	140	214
1995	205	155	263	197
1996	180	99	106	148
1997	118	90	122	140
1998	93	106	199	189
1999	123	107	161	
5-yr. avg.	139	106	165	178

Notes: Twin Cities 100 percent tariff rate is $6.19 per ton. St. Louis 100 percent tariff rate is $3.99 per ton.
Data for 3d quarter 1999 based on rates reported through July 28, 1999.
Source: USDA-AMS

companies anticipate more demand for barge services throughout the rest of the year. Future rates may also be affected by planned and unexpected lock repairs, which slow downbound and upbound traffic.

Rail

By far the most important development in the second quarter of 1999 was the long-awaited takeover of the CR system by NS and CSXT. Although some problems were anticipated (See *Grain Transportation Prospects*, June 1999) the severity of the problems the two carriers incurred were much greater than expected.

The Conrail Takeover. The CR transaction was approved by the Surface Transportation Board (Board) in July 1998 and became effective on August 22, 1998. The Board's decision required certain aspects of the transaction to be in place prior to "Day 1" (June 1); e.g., infrastructure improvements, labor implementing agreements, crew management and customer service staffing and training, and equipment allocation.

After more than 2 years of planning, the implementation of the transaction began with the assumption of operations by CSXT and NS on June 1. The June 1 date was set to coincide with an expected downturn in traffic levels. However, the operational implementation of the transaction was not without its problems, and shippers in all traffic sectors were disappointed by a transition that was expected to be better planned and more problem free. More specifically, Information Technology (IT) problems resulted in incorrect waybills and caused shipments to be misrouted. This quickly resulted in congestion in major yards. Crew calling problems, particularly on NS, caused crews to be unavailable for assignments because the call volume so exceeded anticipated levels that it was impossible for employees to notify crew callers in the northern region of their acceptance of assignments after they were called. NS had to add both employees and telephone lines to improve access to crew callers. NS has also made numerous adjustments to its IT systems aimed at correcting waybill data problems. In addition, the expected downturn in traffic levels did not occur. In fact, traffic levels in most sectors increased over 1998 levels for the 4-week period ending July 3, particularly in the auto industry which has a high concentration of facilities on the former CR.

The effect of the crew calling and IT problems on yard and terminal operations and on train cycle times was

significant. Trains were necessarily held outside of clogged terminals, and crew and locomotive resources were quickly depleted. In some cases shippers had to divert traffic to alternative modes to keep production lines supplied. This had an adverse effect also on the Shared Assets Areas (SAA), which were unable to move trains to the respective line haul carrier due to billing discrepancies and the crew and locomotive deficit. In addition, some shippers on the original CSXT and NS systems were also adversely affected, many of whom were livestock producers in the Southeast whose feed grain and feed ingredient stocks ran dangerously low.

As of the third week in July, the Board indicated that substantial improvements had been realized in all aspects of the operations of CSXT and NS. Cars on line were significantly reduced, terminal and line-of-road operations were more fluid, system train speeds had increased, average dwell time was decreasing noticeably, and the reliability of information for both the railroads and their customers was greatly improved. Also, the Board's Office of Compliance and Enforcement (OCE) reports that it is continuing, and in fact has intensified, its monitoring of the implementation of the CR transaction. Additional reporting has been required having to do with blocked sidings and mainlines, interchange, trains held for cause (e.g., power, crews, or congestion), and in response to a request by the Federal Railroad Administration for information on the out-of-service ratio for locomotives.

The objective now is for the railroads to maintain these improvements while continuing to work to bring an acceptable level of service to all customers. Also, the Board and the railroads are paying special attention to the SAA's, because, as the line haul carriers flush their systems of congesting cars, surges may occur in the numbers of shipments destined for the SAA's that can result in congestion in those areas. Having resolved many of the problems experienced during the initial implementation period, the near-term success of the transaction will now be judged by how well CSXT and NS are able to handle the substantial increases in traffic during the peak fall shipping season expected to begin about August 15, which will last at least through October and possibly into November.

Rail Grain Demand. The market for rail-delivered grain strengthened during the second quarter of 1999. Although grain carloadings rose 11 percent in the second quarter of 1999 compared to year-ago levels, the second quarter of 1998 was very weak period. More telling was the fact that, while grain carloadings typically fall by more than 10 percent from the first to second quarter, this year carloadings dropped just over 6 percent, the smallest dip over the past 5 years.

Renewed economic growth in Asia and a reduction in Chinese grain exports helped boost U.S. exports of grains and oilseeds in the second quarter. Second-quarter grain shipments to ports on the Texas Gulf were up 106 percent over year-ago levels and up 50 percent over the average that prevailed from 1995-1997. And while export shipments to the PNW were down 14 percent from the 1995-1997 average, second quarter volume was up 69 percent from year-ago levels. In light of recent increases in ocean freight rates and maintenance work on key locks and dams on the Mississippi river, it is likely that steady traffic to the PNW will continue for the rest of the summer.

Premiums in the secondary market for September, October, and November car service guarantees on the western railroads have fallen dramatically in recent weeks suggesting, at least in part, reduced expectations for rail demand in the Western United States during the fall. Premiums are also substantial below year-ago levels for car guarantees. Guaranteed freight on Burlington Northern Santa Fe (BNSF) as of mid-July was at $26 per car for September, $47 per car for October, and $36 per car for November in the secondary market. Last year at this time, car service guarantees on BNSF were running $158 per car for September, $190 per car for October, and $172 per car for November. Premiums for guaranteed service on Union Pacific (UP) are also down from last year. Currently, UP car service guarantees in the secondary market are going at $52 per car for September, $66 per car for October, and $52 per car for November. Last year at this time guaranteed car service on UP was trading for $208 per car for September, $236 per car for October, and $161 per car for November. The value of service guarantees in the secondary market, however, is not just influenced by expectations of future transportation demand, it is also affected by transportation supply factors. These include service guarantees offered by the railroads themselves using railroad-owned equipment.

Secondary market values are for car service guarantees held by shippers who have their own grain cars pooled into BNSF and UP grain car fleets. Prices of railroad-offered versus shipper-offered guarantees tend to track each other as would be expected, except when prices become negative in the secondary market. This is because the railroads do not accept offers for service guarantees at levels negative to the base price. The railroads can affect prices in the secondary market,

however, by their allocation of fleet capacity among types of service. For the September-November period this year compared to last, BNSF has indicated that it will allocate 95 percent more capacity to its own guaranteed service, known as the Certificate of Transportation (COT) program. UP estimates that it will allocate 5 percent more capacity this year during September-November to its guaranteed service program, referred to as the Grain Car Allocation System (GCAS). The additional railroad-offered service guarantees are putting downward pressure on the value of shipper-offered guarantees in the secondary market. As of July 27, BNSF reported that it had sold 62 percent of its September-November COT's. UP, which at present is only offering guarantee service through September, reported that it had sold 68 percent of its September capacity, as of July 16.

Eastern Railroads

CSX Transportation. In the weeks leading up to its takeover of CR, CSXT's grain business was running even with year-ago levels, roughly 2,300 carloads per week. After the takeover, however, loadings and cycle times fell and cars on line increased as CSXT struggled to integrate its new assets (table 13). For example, grain-train speeds have declined from 18.5 miles per hour (MPH) in May to 16.8 MPH in June, and terminal dwell times increased markedly (tables 14 and 15).[4] While recent data suggest that key performance measures are improving rapidly, the complexity of the takeover has stressed CSXT's operational capabilities, and it may be that CSXT remains vulnerable to additional and unforeseen shocks.

Norfolk Southern. In the weeks preceding the CR takeover, grain traffic on NS lines was increasing relative to year-ago levels. During April and May of 1999, NS originated 2,637 carloads per week, up 4.6 percent from the 2,519 carloads per week NS handled in the comparable 1998 period. After an initial dip related to the takeover, grain shipments remained strong in the latter part of June and early July. By most accounts, NS's service problems following the CR takeover were even more severe than CSXT's; its train speeds have fallen while terminal dwell times and cars-on-line increased worrisomely.[5] Fortunately, performance data in recent weeks suggest that NS service problems are easing.

Based on grain carloadings on both the NS and CSXT systems, it seems that, after an initial stumble, both railroads have been increasing the volume of grain traffic on their systems. During the problems, however, southeastern feeders and processors have been forced to work off much of their existing inventory. So long as NS and CSXT can keep cycle times within reason, inventories can start to rebuild over the next few weeks and months. But if additional problems should develop, feeders and processors in the Southeast may find themselves scrambling to find grain and feed products again.

Illinois Central. Illinois Central's (IC) agricultural business has been strong and steady throughout 1999. Shipments in the second quarter of 1999 were up 8 percent over year-ago levels and up 48 percent over the 1995-1997 average.

IC should continue to enjoy strong agricultural demand in the weeks ahead, due to a tow accident in the main lock of MP L&D, a key choke point on the Mississippi River north of St. Louis. Efforts are underway to repair the lock, but repairs are not expected to be completed until the end of August. Shipping on IC may prove increasingly attractive for some shippers as maintenance delays slow transit times and drive up freight rates for barges.

Western Railroads

Burlington Northern Santa Fe. Grain shipments in the second quarter of 1999 returned to normal levels from the extremely weak conditions that prevailed a year ago. During the second quarter, BNSF moved an average of 7,527 cars per week, up 8.5 percent from the 6,940 carloads per week moved in the second quarter of 1998. That BNSF's traffic levels have returned to "normal" levels is suggested by the fact that second quarter traffic was off only 2 percent from the 1995-1997 average.

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[4]Because data on cars on line and train speeds include those CR assets absorbed by CSXT on June 1, comparisons may not be truly reflective of changes on the original portions of the CSXT system over the period. They do, however, indicate changes in operational performance on the railroad since the CR takeover. Dwell times, however, are reported for the same terminals before and after the CR operational takeover.

[5]Because data on cars on line and train speeds include those CR assets absorbed by NS on June 1, comparisons may not be truly reflective of changes on the original portions of the NS system over the period. They do, however, indicate changes in operational performance on the railroad since the CR takeover. Dwell times, however, are reported for the same terminals before and after the CR operational takeover.

Table 13—Freight cars on line, January-June 1999

Car type/railroad	January	February	March	April	May	June
			Number of railcars			
All freight cars:						
CSX Transportation	199,529	205,218	203,147	201,876	201,120	244,923
Norfolk Southern	149,170	150,706	150,090	152,363	151,115	238,792
Illinois Central	32,642	32,358	31,957	32,170	32,776	30,459
Burlington Northern Santa Fe	211,231	210,575	208,100	209,069	207,278	203,781
Kansas City Southern Railway	33,692	32,907	32,398	29,126	30,626	31,151
Union Pacific	316,349	315,945	310,389	310,389	312,357	306,353
All railroads	942,613	947,709	936,081	934,993	935,272	1,055,459
Covered hoppers:						
CSX Transportation	48,864	51,400	51,563	50,667	49,304	57,535
Norfolk Southern	31,225	31,864	31,183	31,468	31,237	45,725
Illinois Central	11,229	10,930	10,635	10,575	10,867	10,130
Burlington Northern Santa Fe	64,291	64,045	63,397	63,672	62,771	60,498
Kansas City Southern Railway	6,939	9,113	9,281	8,618	8,811	9,079
Union Pacific	103,434	102,190	101,177	99,982	98,214	96,154
All railroads	265,982	269,542	267,236	264,982	261,204	279,121

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 CR system cars absorbed by CSXT and NS on June 1, comparisons may not be truly reflective of changes on the original portions of the CSXT and NS systems.

Source: Association of American Railroads, Railroad Performance Measures

Table 14—Average train speed, January-June 1999

Train type/railroad	January	February	March	April	May	June
			Miles per hour			
All trains:						
CSX Transportation	18.4	17.9	17.7	18.9	19.2	18.7
Norfolk Southern	16.1	20.6	20.8	18.8	20.2	18.4
Illinois Central	22.5	23.2	23.9	25.0	24.6	25.6
Burlington Northern Santa Fe	23.4	24.5	24.9	24.9	24.9	24.8
Kansas City Southern Railway	23.0	23.6	23.3	23.2	22.6	22.3
Union Pacific	24.1	24.7	24.6	25.2	23.7	24.4
All railroads	21.4	22.4	22.5	22.7	22.4	21.8
Grain trains:						
CSX Transportation	17.3	18.2	18.2	17.6	18.5	16.8
Norfolk Southern	17.9	17.2	17.4	18.8	16.6	15.8
Illinois Central	20.4	21.8	21.2	22.0	22.4	21.9
Burlington Northern Santa Fe	20.1	20.3	20.9	21.3	21.4	22.3
Kansas City Southern Railway	21.5	19.1	18.9	19.6	18.9	16.3
Union Pacific	21.9	22.4	22.8	23.4	24.6	25.0
All railroads	20.1	20.3	20.6	21.1	21.4	20.8

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 CR system absorbed by CSXT and NS on June 1, comparisons may not be truly reflective of changes on the original portions of the CSXT and NS systems.

Source: Association of American Railroads, Railroad Performance Measures

Table 15—Average dwell times for selected terminals by railroad, January-June 1999

Railroad/selected terminal/ city and State	January	February	March	April	May	June
	Miles per hour					
CSX Transportation:						
Cincinnatti, OH	35.8	34.7	31.1	26.9	26	31.9
Corbin, KY	21.0	20.4	20.5	20.4	16	20.5
Hamlet, NC	32.7	32.4	30.9	32.8	27	28.1
Louisville, KY	42.1	44.0	36.0	32.5	32.4	32.6
Nashville, TN	34.8	41.8	39.1	34.7	32.9	36.5
Norfolk Southern:						
Chattanooga, TN	26.6	31.0	31.0	33.8	36.6	36.4
Columbus, OH	15.3	17.8	19.4	22.2	17.3	32.9
Knoxville, TN	30.4	32.4	27.7	31.4	33.7	36.7
Linwood, NC	26.9	30.5	30.2	37.8	32.5	29.5
Macon, GA	25.8	30.3	29.1	35.0	37.7	39.0
Illinois Central:						
Memphis, TN	11.8	11.8	12.2	14.1	16.5	14.1
Burlington Northern Santa Fe:						
Barstow, CA	29.0	29.0	29.0	30.0	28	29
Fort Worth, TX	26.0	23.0	26.0	20.0	24	20
Houston, TX	14.0	12.0	14.0	15.0	15	16
Kansas City-Argentine, KS	30.0	26.0	25.0	26.0	26	27
Minn./St. Paul-Northtown, MN	33.0	28.0	30.0	25.0	27	27
Pasco, WA	25.0	24.0	24.0	23.0	23	23
Kansas City Southern Railway:						
Kansas City, KA	18.0	24.0	22	21	26	27
Shreveport, LA	34.0	35.0	35	36	37	36
Union Pacific:						
Fort Worth-Centennial, TX	39.9	33.8	37.3	32.3	29.4	35.9
Houston-Englewood, TX	41.2	31.9	32	30.7	34.4	36.3
Houston-Settegast, TX	38.7	35.5	34.4	29.9	32.7	36.1
Kansas City-Neff, MO	36.0	32.0	29.2	31.5	34.9	29.5
North Platte-East, NE	37.5	33.1	31.4	36.2	38.2	29.1
North Platte-West, NE	34.5	36.2	24.9	35.1	35.8	24.4
Roseville, CA	31.7	33.1	30.3	28.3	34.5	42.7

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.

Source: Association of American Railroads, Railroad Performance Measures

Operationally, BNSF's system seems to be working quite smoothly. The performance measurement statistics released by BNSF have been excellent. As traffic volumes have picked up, BNSF has cut the number of stored covered hopper cars by more than 3,000, increasing the number of hoppers in its active fleet from approximately 27,000 at the end of the first quarter to just over 30,000 in recent weeks. Based on state-by-state grain car loading data, BNSF has begun to shift power and crews out of the Southern Plains into the Central Plains, which is consistent with the progress of the wheat harvest.

Union Pacific. Because year-ago comparisons are still tainted by the effects of its 1997-98 service failure, evaluating the current status of UP's operations is a bit difficult. In 1999, UP is the only Class I railroad that has reported higher grain carloadings every week when compared to 1998 levels. Second quarter 1999 traffic averaged 7,175 carloads per week, up 21 percent from the 5,924 carloads per week UP handled in the second quarter of 1998. Still, UP's traffic is down 13 percent from the 1995-1997 second quarter average of 8,247 carloads per week.

Based on state-by-state grain car loading numbers, UP also has been particularly busy in the Central Plains, which reflects the progress of the wheat harvest and stronger wheat export demand.

Kansas City Southern Railway. Kansas City Southern (KCS) has benefitted from stronger export demand for wheat. During the second quarter, grain traffic averaged 724 carloads per week, up 27 percent from the 570 carloads per week KCS averaged in second quarter 1998.

Additional Sources of Information

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/pgs-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/erssor/field/fds-bb

Wheat Outlook,
http://usda.mannlib.cornell.edu/reports/erssor/field/whs-bb

Oil Crops Outlook,
http://usda.mannlib.cornell.edu/reports/erssor/field/ocs-bb

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

World Agricultural Supply and Demand Estimates,
http://www.usda.gov/oce/waob/wasde/wasde.htm

More detailed information on grain and oilseed exports, trade, and outstanding sales is available from the Foreign Agricultural Service in:

Grains: World Markets and Trade,
http://www.fas.usda.gov/grain/circular/1998/98-08/graintoc.htm

Oilseeds: World Markets and Trade,
http://www.fas.usda.gov/oilseeds/circular/1998/98-08/toc.htm

Export Sales, http://www.fas.usda.gov/export-sales/esrd1.html

For additional information on grain and rail transportation see:

USDA-AMS, *Grain Transportation,*
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

Burlington Northern Santa Fe, http://www.bnsf.com

CSX Transportation, http://www.csx.com

Illinois Central, http://www.icrr.com

Kansas City Southern, http://www.kcsi.com

Norfolk Southern, http://www.nscorp.com

Union Pacific, http://www.up.com

The *Grain Transportation Propects* is available at the time of its release on the Internet at *www.ams.usda.gov/tmd/mta/mta special reports.htm.*