

# FEED OUTLOOK

United States Department of Agriculture

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## HIGHLIGHTS

- Initial Projections for 1997/98: Feed Grain Supply and Use To Increase
- Corn Crop Projected Up 6 Percent to 9.8 Billion Bushels, Sorghum To Decline
- Domestic Corn Use Projected Record High, Exports To Grow in 1997/98
- Larger Supplies and Higher Stocks Expected To Reduce Feed Grain Prices

## HIGHER CARRYIN AND LARGER CORN CROP TO INCREASE FEED GRAIN SUPPLIES

U.S. feed grain production in 1997 is projected at 278 million metric tons, up 4 percent from 1996's 267 million. This would be the second consecutive increase after the sharp drop in feed grain production of 1995. Larger corn production accounts for nearly all of the prospective gains. Oats production is also projected to increase, while sorghum is expected to decline, and barley to be about unchanged.

Carryin stocks for 1997/98 are forecast at 27.5 million tons, almost double the very low total of the year before. Feed grain supplies are projected to increase 8 percent to 308.5 million tons, the highest since 1994/95. The increase in supply and likelihood of further gains in stocks will put downward pressure on prices.

Feed grain demand will be strong in 1997/98, and gains are expected in both the U.S. and export markets. Total disappearance is projected to rise 5 percent to 269 million metric tons, the second highest following 1994/95 when production was record high. Ending stocks of feed grains are projected to rise 43 percent to 39.5 million tons. No stocks are expected to be held by the Government.

Globally, the outlook shows another increase in coarse grain supplies and use in 1997/98, but on a smaller scale than in 1996/97. World production is expected to show little change as U.S. gains offset declines in foreign production. Lower prices will provide less of an incentive to plant feed grains in many countries and there will be some loss of acreage to oilseeds. World ending stocks are initially projected to increase slightly, with world production remaining above consumption.

## CORN PRODUCTION PROJECTED AT 9.8 BILLION BUSHELS FOR 1997

Corn production is projected at 9,840 million bushels, up from 9,293 million in 1996, because of higher yields and increased acreage. If realized, this would be second to the 10.1 billion bushels produced in 1994. As of May 11, 71 percent of the crop had been planted in the major producing States, well above the average of 50 percent, reflecting favorable conditions. Progress was particularly striking in the eastern Corn Belt, where wet weather interfered with planting last year.

The average corn yield is initially projected at 131 bushels an acre, about 3 bushels above a long-term simple trend. This reflects the effects of excellent planting progress of this year's crop.

Early plantings tend to be beneficial for crop development and potential corn yields, allowing more of the critical growing stages to occur during periods of typically more favorable weather, thereby reducing the risk of crop stress.

Normal weather and growing conditions are assumed for the remainder of the season. July conditions are generally the most critical. The yield projection incorporates historical statistical relationships of corn yields with mid-May plantings progress, July weather, and trend. (See [Feed Outlook](#), FDS-0396, March 13, 1996, page 4, for a further description of an earlier version of the historical statistical relationship for corn yields).

Based on farmers' intentions reported in [Prospective Plantings](#), planted area of corn is expected to increase about 2 million acres in 1997 to 81.4 million acres. Harvested acres are projected at 75.1 million acres, assuming the average difference between planted and harvested of the last 3 years. Most of the difference consists of corn cut for silage. Some analysts believe the rapid pace of planting and favorable conditions will push corn plantings even higher. While this is plausible, the prices of soybeans, the major crop competing with corn for acres, have strengthened relative to corn in the last few weeks. Estimates of actual plantings will be provided in USDA's [Acreage](#) report released on June 30.

#### CORN ENDING STOCKS TO INCREASE DESPITE HIGHER USE

Total disappearance of corn is projected at 9.4 billion bushels in 1997/98, up from 8.8 billion forecast for 1996/97, and matching the record of 1994/95. Larger supplies and lower prices will contribute to strong demand. Domestic use of corn is initially forecast at a record high, reflecting 5-percent gains in both food, seed, and industrial (FSI) use and feed and residual use. Feed and residual use of corn is projected at 5,600 million bushels, up from the 5,325 million forecast in 1996/97. FSI use is projected at 1,760 million bushels, up 90 million from 1996/97, and topping the 1994/95 record of 1,704 million. Corn exports are forecast to rise 12 percent to 2,025 million bushels, but this would not be that high by historical measures.

Ending stocks of corn are projected at 1,349 million bushels, up from 909 million forecast for 1996/97. This would be the second straight increase from the dramatically low 426 million bushels of 1995/96. This indicates a stock-to-use ratio of 14.3 percent in 1997/98, compared with 10.3 percent in 1996/97 and 5 percent in 1995/96.

#### FOOD, SEED, AND INDUSTRIAL USE OF CORN TO EXPAND

Food, seed, and industrial (FSI) use of corn in 1997/98 is forecast at 1.76 billion bushels, up from 1.67 billion in 1996/97. FSI use at this level would represent 19 percent of all corn used in 1997/98, the same percentage of use as in the prior 2 years. With lower prices likely, more corn is expected to be used to make ethanol than in the past 2 years. In first-quarter 1996/97, ethanol producers did not get back up to year earlier production because of relatively high corn prices and the process of restarting processing plants. As a result, some areas that would have used ethanol to blend for the winter oxygenate season, used competing oxygenates instead. This fall, there should be plenty of corn to produce ethanol and ethanol supplies should be plentiful enough to encourage ethanol blending for carbon dioxide reduction in the winter oxygenate season.

Corn used in sweeteners and starch in 1997/98 is expected to be up nearly 3 percent from the anticipated 980 million bushels used in 1996/97. High fructose corn syrup (HFCS) may be up 3 percent from 1996/97. New plant construction is not expected to boost HFCS production in 1997/98. In 1996/97, corn use for HFCS production is expected to be up 7 percent because of new plants, but HFCS prices have been forced down by the sharp increase in supplies. Increased demand for glucose and dextrose is also likely to be close to increases in population and corn use may expand by 2 percent from 1996/97's expected 240 million bushels. In 1997/98, starch production is expected to increase corn use by 2 percent as the economy stays strong and industrial uses of starch continue strong.

## LOWER SORGHUM PRODUCTION AND USE IN STORE

Sorghum production in 1997 is projected at 665 million bushels, down 17 percent from last year's large crop. Plantings are expected to fall 18 percent, accounting for virtually all of the decrease. The average sorghum yield is projected at 67.6 bushels per acre, based on the simple linear trend during 1960-96, and about equal to the 1996 yield.

Compared with last year, the lower acreage in 1997 reflects better growing conditions for wheat and cotton and limited prospects for replanting problem areas with sorghum. However, projected plantings of 10.9 million acres would still be higher than in 1993 to 1995, when plantings averaged 9.7 million acres. With the end of base acreage requirements under the 1996 farm legislation, there appears to be more interest in using sorghum in rotations with wheat.

After a very sharp rise in 1996/97 because of abundant supplies, sorghum use in 1997/98 is expected to drop. Total use is projected to decline 18 percent, with the major change occurring in feed and residual use, down 115 million bushels to 400 million. Exports are projected to drop moderately to 200 million bushels, largely because of lower imports by Mexico. Ending stocks are projected at 97 million bushels, up from 56 million in 1996/97, and the highest since 1992/93.

## BARLEY PRODUCTION AND USE TO SHOW LITTLE CHANGE

Growers reported they intended to seed 7.04 million acres for 1997, down 2 percent from the 7.17 million acres seeded a year ago. However, with the rising trend in barley yields, production could be about the same as last year's 397 million bushels. This assumes the same rate of harvested to planted acres as in 1994-96.

The 1997 barley crop is not being planted as promptly as in the last 5 years, but is running 3 percent above the same week in 1996. North Dakota, the State with the largest acreage, had completed 13 percent of intended plantings as of May 11, up from 11 percent last year, but down from the 5-year average of 44 percent. Montana, the second largest State, has 60 percent of the crop planted, compared with 50 percent last year and 69 percent in 1992-96. The potential impact of flooding in some parts of the Northern Plains is uncertain. Where planting has been delayed, there may be some shifts in varieties. While some intended barley acres may not be planted if delays persist, it is also possible that some wheat land could be switched to barley.

Total supply is expected to down 1 percent from 1996/97's 531 million bushels, even with additional imports. Imports, which all come from Canada, are expected to be up 5 million bushels from 1996/97 to 40 million and about equal to 1995/96. Disappearance is projected up 2 percent because of higher feed and residual use, which is expected to total 245 million bushels in 1997/98, up 10 million. Food, seed, and industrial use of barley is expected to remain steady at 172 million bushels in 1997/98, and exports are also forecast unchanged at 35 million bushels. Ending stocks are expected to be down 19 percent from the 89 million bushels in 1996/97.

## OATS PRODUCTION EXPECTED TO BE THE HIGHEST SINCE 1994

Oats production in 1997 is expected to total 187 million bushels, up 21 percent from 1996. Growers intend to harvest 3.23 million acres for grain in 1997, up 20 percent from 2.69 million last year. Since yields have been relatively flat in recent years, the projected yield was based on the average of the last 5 years. Oats is a cool weather crop and yields can be hurt if the weather turns hot as the heads are filling, which may explain why U.S. yields for oats are not trending up, as they are for corn, sorghum, and barley.

The overall rate of planting oats this spring is just about at the 5-year average, with 65 percent of the crop planted on May 11, compared with a "normal" rate of 66 percent. However, North and South Dakota, the two largest oats producing States, are both behind the average.

The supply of oats in 1997/98 is expected to be up 12 percent from the 322 million bushels available in 1996/97. Imports are expected to equal 1996/97 at 100 million bushels and comprise 28 percent of supply. Canada will remain the major supplier, but shipments from Finland and Sweden are also expected again in 1997/98.

Use of oats in 1997/98 may increase 14 percent from 1996/97's 248 million bushels. Despite favorable endorsements of oats as a heart-healthy food, only modest increases in food use are projected for 1997/98, unlike the sharp gains of the late 1980's. Most of the gain in supply is expected to boost feed and residual use, projected to rise 23 percent from the 150 million bushels in 1996/97.

#### GAINS IN PORK AND POULTRY TO DRIVE FEED DEMAND

Feed and residual use of the four feed grains plus wheat in 1997/98 is expected to increase 2.5 percent from the expected 163 million metric tons used in September 1996-August 1997. Feed and residual use in 1996/97 was up 16 percent from the year earlier when the short 1995 corn crop boosted prices and forced feeders to cut back. Corn, which accounted for 85 percent of feed and residual use in 1995/96, is expected to represent 83 percent of feed and residual use in 1996/97 and 85 percent in 1997/98.

The index of grain consuming animal units (GCAU's) for 1997/98 is expected to be up 2 percent from 1996/97's 85 million units. The grain used per GCAU in 1997/98 would be 1.9 tons, equal to 1996/97, and up from 1.7 tons in 1995/96. In the index components, GCAU's for dairy and cattle on feed are down in 1997/98 and hogs plus poultry are up.

Milk production in 1998 is expected to be up more than 1 percent from the 155 billion pounds expected to be produced in 1997. Dairy producers have been able to increase milk output per cow, thus increases in milk production are not necessarily associated with increased cow numbers. On April 1, 1997, grain and other concentrates fed per dairy cow were 19.5 pounds, up from 18.6 in 1996. Milk production in March was nearly the same as 1996 and cow numbers in the 20 reporting States were down 1 percent. In 1997/98, feed use probably will be slightly higher even though cow numbers to calculate GCAU's may be down.

Beef cow slaughter rose 24 percent in 1996 as drought and high grain prices weakened feeder cattle prices, causing herds to be reduced. Reports of winter storms affecting beef herds and spring calves suggest there will be fewer calves to go on feed in 1998. In addition, more heifers may be retained to increase herds, which would also reduce animals available for feedlot placement. As a result, cattle on feed numbers in 1997/98 may be down from 1996/97 and feed use could be weaker.

Pork production in 1998 is expected to increase 7 percent from the 17.1 billion pounds forecast to be produced in 1997, which was about the same as in 1996. Hog farmers indicated in the latest survey that in the next two quarters, they intended to increase the number of sows farrowing relative to the prior year. This was before prices strengthened because of expected increases in foreign demand for pork. Also, with expected lower corn prices, producers are likely to increase the number of sows farrowing. Thus feed needs by the pork sector are likely to be stronger in 1997/98.

Boiler, turkey, and egg production in 1998 are expected to increase from the expected 1997 levels and maintain strong demand for feed grains. Broiler production in 1998 is expected to increase 6 percent from 1997 as producers respond to strong domestic and international demand as well as abundant feed supplies and lower prices. Even with reported turkey disease problems, turkey production in 1997 is expected to total 5.5 million pounds, up 1 percent from 1996. In 1998, turkey producers are expected to respond to lower feed prices and increase production 4 percent from the expected 1997 output. Egg producers are expected to produce 6.7 billion dozen eggs in 1998, up 3 percent from the expected 1997 output. With these increases in production, feed needs by the poultry sector are likely to remain strong.

## HAY STOCKS DECLINE, LOWEST IN 32 YEARS

Hay stocks on May 1 totaled 17 million tons, the lowest reported since 1965. A 3-percent decline in 1996 hay production and one of the harshest winters on record in the Northern Plains contributed to the low stocks. Hay disappearance in 1996/97 totaled 153 million tons, down 1 percent from 1995/96. Hay use per roughage consuming animal unit (RCAU) totaled 2.01 tons, up from 1.98 tons in 1995/96. In 1997/98, RCAU's are expected to be down 2 percent from 76 million units in 1996/97.

Strong prices for hay in 1996/97 have encouraged producers to plan on increased production for 1997. Producers reported they expected to harvest 61.5 million acres in 1997, up 1 percent from 1996. Yields in the last 5 years have averaged 2.5 tons per acre. Using that average, hay production in 1997 could be 154 million tons. Hay supplies for 1997/98 would thus be 171 million tons, up 1 percent from 1996/97. Supplies per RCAU would be up 2 percent from the 2.24 tons in 1996/97. As a result, prices would be expected to weaken from the high levels in 1996/97.

## LARGER SUPPLIES TO PULL DOWN FEED GRAIN PRICES

Prices are expected to decline for each feed grain in 1997/98. The season average farm price of corn is projected at \$2.25-2.65 per bushel, down from \$2.70-2.80 forecast in 1996/97. Despite the likelihood of solid growth in demand, the prospective increase in corn supply and ending stocks will bring down prices. Since peaking in late March, futures prices for new-crop corn have fallen considerably, but they still tend to factor in risk premiums. A model based on Chicago Board of Trade contracts for new-crop prices currently suggests a price of around \$2.60 per bushel for the 1997/98 season. The risk premium will likely be retained through at least mid-summer depending on growing conditions.

The season average price of sorghum received by farmers is projected at \$2.00-2.40 per bushel, down from \$2.30-2.40 forecast in 1996/97. Although sorghum supplies will be lower, the influence of larger corn supplies will be dominant. The 1997/98 sorghum price would be equivalent to 90 percent of the corn price, slightly stronger than the 86 percent expected in 1996/97.

The sharpest drop in price is likely for barley in 1997/98. The barley market was buoyed by extremely high feed grain prices last summer, when the new barley crop was available before corn or sorghum, pushing up the 1996/97 average price. The all barley farm price is projected at \$2.10-2.50 per bushel, compared with \$2.77 forecast in 1996/97. The farm price of oats will also slip in 1997/98 because of larger oats production and the weight of lower corn prices. The farm price of oats is projected at \$1.40-1.80, down from a forecast \$1.90 in 1996/97.

## U.S. CORN EXPORTS PROJECTED UP 12 PERCENT IN 1997/98

U.S. corn exports are expected to increase 5.5 million tons to 52 million in 1997/98, benefiting from reduced competition and growing import demand. U.S. corn exports are expected to capture a larger share of expanding world coarse grain trade. Corn trade is expected to expand because of reduced production of foreign coarse grains, particularly corn and barley. Compared to a year earlier, lower prices and more abundant U.S. corn supplies will increase the U.S. export market share.

Foreign coarse grain production is forecast down 2 percent, while foreign consumption increases 2 percent. Foreign production is down in many countries because prices favor oilseeds, and area planted to coarse grains is expected to decline. In Argentina, Australia, and Canada coarse grain production is expected to decline a total of almost 4 million tons, but combined exports are projected down only 1 million. The EU, an exception, is expected to increase coarse grain area

slightly, as the grains area set-aside was reduced from 10 percent to 5 percent in 1997/98. However, EU production is expected to decline as growing conditions and prospective yields are not as favorable as in 1996/97. EU coarse grain exports, mostly barley, are expected to increase 4 percent to 8.2 million tons, matching Argentina as the world's second largest coarse grain exporter. Although production is expected to be stable in South Africa, exports are expected to decline 1 million tons in 1997/98.

Foreign coarse grain consumption is projected to grow in 1997/98 at almost 2 percent, the same rate as the previous year. The largest increases are expected in China, Mexico, Canada, and the EU. Consumption will decline in Taiwan as hogs are liquidated as a result of foot and mouth disease, and in Russia, where livestock herd liquidation continues.

#### CHINA'S LARGE CORN STOCKS INCREASE UNCERTAINTY OF EARLY ESTIMATES

The May projections of 1997/98 world feed grain supply and demand are the first monthly forecast and are subject to change. Most Northern Hemisphere feed grains are just being planted and Southern Hemisphere exporters will not even plant for another 6 months, making projections very tentative. An additional factor this year is the uncertainty posed by China. China's 1996/97 corn production was increased by 5 million tons this month to a record 127 million. Moreover, lower estimates of corn use leave 1996/97 ending stocks up 9 million tons from last month's forecast. Although information about China's grain stocks is limited, China's corn stocks are forecast at 41 million tons, 77 percent higher than those in the United States. The large corn stocks have contributed to lower prices in China, and corn area is expected to decline in 1997. With lower production, and increasing internal consumption, China's corn stocks are projected to decline in 1997/98. However, the Chinese government controls export licenses, and can accelerate or decelerate the stock decline by changing export levels. Current projections assume a fairly stable export pace.

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* The Feed Outlook report is available on the Internet via the ERS Homepage *
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* Crops, Feed Grains. *
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Table 1--Feed Grains: Marketing year supply and disappearance 1/

Year/ Qtr.	Beg. stocks	Produc- tion	Im- ports	Supply	FSI	Feed & resid.	Ex- ports	Total disp.	End. stks.	Farm price
-----Million bushels-----										
CORN										
-----										
1994/95										
Sep-Nov	850	10,103	2	10,955	409	2,016	449	2,874	8,080	2.05
Dec-Feb	8,080	---	4	8,084	409	1,493	590	2,493	5,592	2.18
Mar-May	5,592	---	3	5,595	448	1,163	568	2,180	3,415	2.35
Jun-Aug	3,415	---	1	3,416	438	850	570	1,858	1,558	2.59
Mkt. yr.	850	10,103	10	10,962	1,704	5,523	2,177	9,405	1,558	2.26
1995/96										
Sep-Nov	1,558	7,374	4	8,935	413	1,756	660	2,830	6,106	2.80
Dec-Feb	6,106	---	5	6,111	401	1,348	562	2,311	3,800	3.15
Mar-May	3,800	---	5	3,805	415	1,062	610	2,087	1,718	3.76
Jun-Aug	1,718	---	3	1,721	370	530	396	1,295	426	4.31
Mkt. yr.	1,558	7,374	16	8,948	1,598	4,696	2,228	8,522	426	3.24
1996/97										
Sep-Nov	426	9,293	3	9,723	385	1,948	487	2,819	6,904	2.96
Dec-Feb	6,904	---	2	6,906	392	1,496	525	2,412	4,494	2.66
Mkt. yr.	426	9,293	10	9,729	1,670	5,325	1,825	8,820	909	2.70-2.80
1997/98										
Mkt. yr.	909	9,840	10	10,759	1,760	5,600	2,050	9,410	1,349	2.25-2.65
SORGHUM										
1994/95										
Sep-Nov	48	649	0	697	0	210	64	274	422	1.91
Dec-Feb	422	---	0	422	1	80	61	142	281	2.02
Mar-May	281	---	0	281	1	67	54	122	159	2.18
Jun-Aug	159	---	0	159	1	43	43	87	72	2.64
Mkt. yr.	48	649	0	697	3	400	223	625	72	2.13
1995/96										
Sep-Nov	72	460	0	532	1	176	54	231	301	2.36
Dec-Feb	301	---	0	301	1	71	67	139	163	3.25
Mar-May	163	---	0	163	1	55	36	92	70	3.94
Jun-Aug	70	---	0	70	4	7	41	52	18	3.63
Mkt. yr.	72	460	0	532	8	308	198	514	18	3.19
1996/97										
Sep-Nov	18	803	0	821	11	287	56	354	467	2.50
Dec-Feb	467	---	0	467	11	124	59	193	274	2.25
Mkt. yr.	18	803	0	821	35	515	215	765	56	2.30-2.40
1997/98										
Mkt. yr.	56	665	0	721	24	400	200	624	97	2.00-2.40

Table 1--Feed Grains: Marketing year supply and disappearance, (cont.) 1/

Year/ Qtr.	Beg. stocks	Produc- tion	Im- ports	Supply	FSI	Feed & resid.	Ex- ports	Total disp.	End. stks.	Farm price
-----Million bushels-----										
BARLEY										
1994/95										
Jun-Aug	139	375	24	538	45	120	20	186	352	2.00
Sep-Nov	352	---	14	366	37	31	19	87	279	1.98
Dec-Feb	279	---	14	292	38	51	11	99	193	2.05
Mar-May	193	---	14	207	52	26	17	95	113	2.15
Mkt. yr.	139	375	66	580	173	228	66	467	113	2.03
1995/96										
Jun-Aug	113	360	12	484	44	111	17	172	313	2.53
Sep-Nov	313	---	8	321	39	28	11	78	243	2.80
Dec-Feb	243	---	8	251	37	17	20	73	178	3.18
Mar-May	178	---	12	190	52	23	16	91	100	3.29
Mkt. yr.	113	360	41	513	172	179	62	413	100	2.89
1996/97										
Jun-Aug	100	397	9	505	44	138	7	190	316	3.18
Sep-Nov	316	---	8	324	39	25	12	76	248	2.73
Dec-Feb	248	---	8	256	37	40	7	84	172	2.57
Mkt. yr.	100	397	35	531	172	235	35	442	89	2.77
1997/98										
Mkt. yr.	89	395	40	524	172	245	35	452	72	2.10-2.50
OATS										
1994/95										
Jun-Aug	106	229	20	355	23	112	0.2	135	220	1.19
Sep-Nov	220	---	34	254	22	40	0.2	62	192	1.19
Dec-Feb	192	---	23	215	20	46	0.4	66	149	1.21
Mar-May	149	---	16	165	27	37	0.2	64	101	1.36
Mkt. yr.	106	229	93	428	92	234	1.0	327	101	1.22
1995/96										
Jun-Aug	101	162	28	290	23	86	0.4	110	180	1.48
Sep-Nov	180	---	26	206	22	31	0.5	53	153	1.52
Dec-Feb	153	---	18	171	20	38	0.3	58	113	1.94
Mar-May	113	---	9	122	27	28	0.8	56	66	2.21
Mkt. yr.	101	162	81	343	92	183	2.1	277	66	1.68
1996/97										
Jun-Aug	66	155	6	228	24	70	1.0	95	133	2.08
Sep-Nov	133	---	39	172	22	20	0.8	43	129	1.83
Dec-Feb	129	---	28	156	20	40	0.3	61	96	1.79
Mkt. yr.	66	155	100	322	95	150	3.0	248	74	1.95
1997/98										
Mkt. yr.	74	187	100	361	95	185	3	283	78	1.40-1.80

Totals may not add due to rounding.

1/ Corn and sorghum are on a September 1 to August 31 marketing year.  
Barley and oats are on a June 1 to May 31 marketing year.



Table 2--Feed and residual use of wheat and coarse grains

Year Beginning September 1	Corn	Sorg.	Barley	Oats	Feed Grains	Wheat	Total grains	Animal Units	Feed/ animal unit
	----- Million metric tons -----							Mil.	Tons
1994/95									
Sep-Nov	51.2	5.3	0.7	0.7	57.9	-0.8	57.1		
Dec-Feb	37.9	2.0	1.1	0.7	41.8	0.7	42.5		
Mar-May	29.5	1.7	0.6	0.6	32.4	-0.8	31.6		
Jun-Aug	21.6	1.1	2.4	1.3	26.4	8.3	34.7		
Mkt. yr.	140.3	10.2	4.76	3.3	158.5	7.4	165.9	84.3	1.97
% Change	17.9	-12.4	-20.0	-13.8	12.9	-22.4	10.7	0.4	10.2
1995/96									
Sep-Nov	44.6	4.5	0.6	0.5	50.2	-2.7	47.5		
Dec-Feb	34.3	1.8	0.4	0.6	37.0	0.3	37.3		
Mar-May	27.0	1.4	0.5	0.4	29.3	-1.8	27.5		
Jun-Aug	13.5	0.2	3.0	1.0	17.7	10.4	28.0		
Mkt. yr.	119.3	7.8	4.5	2.6	134.2	6.2	140.4	85.0	1.65
% Change	-15.0	-22.9	-5.8	-22.1	-15.3	-16.6	-15.4	0.8	-16.1
1996/97									
Sep-Nov	49.5	7.3	0.5	0.4	57.7	-2.1	55.6		
Dec-Feb	38.0	3.1	0.9	0.7	42.6	0.7	43.3		
Mkt. yr.	135.3	13.1	5.0	2.7	156.1	6.6	162.7	85.4	1.91
% Change	13.4	67.1	12.4	5.5	16.3	7.1	15.9	0.4	15.4
1997/98									
Mkt. yr.	142.2	10.2	5.3	3.0	160.7	6.1	166.8	87.2	1.91
% Change	5.2	-22.3	5.7	8.9	2.9	-7.8	2.5	2.2	0.3

Table 3--Grain shipments and rates

	1994/95 Mkt. Yr.	1995/96 Mkt. Yr.	1995/96 Sept-Mar	1995/96 Mar	1996/97-- Sept-Mar	1996/97-- Mar
Barge shipments 1/ (Million ton/month)	3.1	4/ 3.7	3.5	3.5	NA	3.2
Barge rate index 2/ (Dec 1990 = 100)	160.8	151.8	188.3	159.8	125.4	119.7
Railcar loadings 3/ (1,000 cars/week)	28.5	28.2	29.3	31.0	24.4	25.2
Rail rate index 2/ (Dec 1984 = 100)	116.6	117.3	117.7	118.1	NA	NA

- 1/ Illinois & Mississippi rivers. Includes soybeans and all grains.  
Source: U.S. Army Corps of Engineers
- 2/ Source: Bureau of Labor Statistics
- 3/ Includes soybeans and all grains.  
Source: Association of American Railroads.
- 4/ 11-months average. NA = Not available.

Table 4--Cash feed grain prices

	Corn, No. 2, Yel, Ctrl. IL 1/	Corn, No. 2, Yel, Gulf ports 1/	Sorghum, No. 2, Yel Texas South Panhandle 1/	Sorghum, No. 2, Yel, Gulf ports 1/	Barley, No. 2, feed, Duluth 2/	Barley, No. 3 or better, Malting, Minn. 2/	Oats, No. 2, Heavy white, Minn. 2/
Mkt. yr.	\$/bu	\$/bu	\$/cwt	\$/cwt	\$/bu	\$/bu	\$/bu
92/93	2.12	2.46	4.06	4.27	2.11	2.37	1.58
93/94	2.54	2.85	4.95	4.90	2.05	2.48	1.55
94/95	2.34	2.78	4.75	4.62	2.02	2.75	1.36
95/96	3.91	4.30	7.30	7.19	2.67	3.69	2.28
Monthly:							
1995/96:							
Dec	3.36	3.76	6.55	6.93	2.92	3.98	2.50
Jan	3.53	4.00	6.75	7.05	2.94	4.00	2.40
Feb	3.71	4.18	7.25	7.25	3.00	3.47	2.31
Mar	3.92	4.34	7.38	7.50	2.86	NQ	2.47
1996/97:							
Dec	2.62	2.97	4.59	4.77	1.96	NQ	1.86
Jan	2.62	3.02	4.57	4.80	1.95	NQ	1.89
Feb	2.71	3.08	4.80	5.03	2.01	2.75	1.94
Mar	2.90	3.25	5.47	5.42	2.22	NQ	1.99

1/ Marketing year beginning September 1.

NQ = No quote.

2/ Marketing year beginning June 1.

Table 5--Selected feed and feed by-product prices

	Soybean meal 44% slv. Decatur, IL 1/	Cotton- seed meal, 41% slv. Memphis 1/	Corn gluten feed, IL pts. 1/	Corn gluten meal, IL pts. 1/	Meat & bone meal, Central U.S. 1/	Dists.' dried grains, Lawrence- burg, IN 1/	Wheat midlgs, Kansas City 1/	Alfalfa farm price 2/ 3/
Mkt. yr.	\$/ton							
92/93	180.80	159.22	95.95	284.60	220.93	122.84	69.69	78.20
93/94	181.82	168.36	88.62	286.61	206.81	123.79	81.51	89.30
94/95	151.77	112.64	82.77	221.95	170.51	106.70	65.04	92.10
95/96	217.27	186.12	116.47	319.35	222.07	151.37	118.08	88.20
Monthly:								
1995/96:								
Dec	213.60	185.80	119.10	331.90	228.80	146.50	126.60	84.60
Jan	220.50	208.80	127.00	351.00	236.50	144.80	131.20	84.60
Feb	216.70	202.80	122.10	342.50	217.60	144.00	118.70	84.60
Mar	215.70	195.60	122.00	341.25	216.50	145.00	128.90	85.50
1996/97:								
Dec	240.90	224.50	99.50	342.50	272.00	143.10	113.00	102.00
Jan	240.70	207.20	100.25	336.25	262.90	144.00	103.10	106.00
Feb	253.60	183.75	102.75	335.60	258.80	149.00	96.20	115.00
Mar	270.40	189.10	100.90	340.00	285.00	148.50	97.10	116.00

1/ Marketing year beginning September 1.

2/ Marketing year beginning May 1.

3/ Includes monthly &amp; marketing year revisions from 1994/95.

Table 6--Corn: Food, and industrial uses

Year	HFCS	Glucose and dex.	Starch	---Alcohol--- Fuel	Bev. & Mfg	Cereals & other products	Total F&I
Million bushels							
1994/95							
Sep-Nov	104.6	58.8	57.3	134.4	21.2	32.9	409.2
Dec-Feb	100.5	51.5	55.0	141.5	27.9	32.5	408.9
Mar-May	123.8	58.4	56.2	137.7	24.3	33.3	433.8
Jun-Aug	135.6	62.3	57.3	119.1	26.7	33.3	434.3
Mkt year	464.6	231.1	225.7	532.8	100.1	132.0	1686.2
1995/96							
Sep-Nov	110.1	60.7	55.8	121.1	32.3	33.2	413.1
Dec-Feb	105.1	52.9	51.5	120.8	37.5	32.8	400.6
Mar-May	130.8	60.7	55.0	91.8	25.0	33.5	396.8
Jun-Aug	136.2	62.8	57.0	61.9	15.5	33.5	367.0
Mkt year	482.2	237.1	219.3	395.7	110.4	133.0	1577.6
1996/97							
Sep-Nov	115.1	57.4	55.0	96.4	27.4	33.5	384.8
Dec-Feb	110.7	56.3	55.1	109.4	27.1	33.1	391.7
Mkt year	515.0	240.0	225.0	425.0	110.0	134.3	1649.3
1997/98							
Mkt year	530.0	245.0	230.0	485.0	112.0	137.0	1739.0

Table 7--Wholesale corn milling product and by-product prices

	Corn meal, yellow, New York	Brewers' grits, Chicago	Sugar, destrose, Midwest	HFCS, 42% tank cars, Midwest	Corn starch, fob Midwest 3/
	\$/cwt	\$/cwt	cents/lb	cents/lb	\$/cwt
Mkt. yr. 1/					
92/93	13.39	9.68	24.50	13.30	10.70
93/94	14.49	10.98	25.44	14.63	12.61
94/95	13.22	10.67	25.62	12.27	12.43
95/96 2/	17.79	14.21	25.50	13.01	15.98
Monthly					
1996:					
Jan	17.01	12.91	25.50	13.15	14.57
Feb	17.36	13.26	25.50	13.15	15.11
Mar	17.87	13.77	25.50	13.15	15.50
Apr	19.46	15.36	25.50	13.15	16.19
1997:					
Jan	16.38	12.28	25.50	13.15	12.89
Feb	16.67	12.57	25.50	13.15	12.77
Mar	17.02	12.92	25.50	13.15	12.95
Apr 2/	16.93	12.83	25.50	13.15	13.55

1/ Marketing year beginning September 1.

2/ Preliminary.

3/ Bulk-industrial, unmodified.

Table 8--U.S. feed grain exports by selected destinations 1/

Country/region	-----1994/95-----		-----1995/96-----		1996/97
	Mkt. yr.	Sep-Feb	Mkt. yr.	Sep-Feb	Sep-Feb
-----Thousand tons-----					
CORN					
Japan	15,849	7,650	15,303	7,412	7,327
Taiwan	6,027	2,761	5,938	2,925	2,728
Former USSR	140	33	34	27	69
South Africa	187	0	347	329	81
Sub-Saharan Africa	449	266	321	272	42
EU	2,836	957	2,842	2,078	545
Egypt	2,569	1,408	2,167	1,284	1,315
Canada	1,096	461	808	347	525
China	3,240	774	2,207	2,207	53
East Europe	112	67	188	134	103
Algeria	1,000	704	522	360	469
S. Korea	8,005	3,748	8,285	4,551	3,886
Mexico	2,985	1,905	6,453	2,460	1,704
Others	10,723	5,606	11,077	6,609	6,789
Total	55,218	26,339	56,494	30,994	25,637
SORGHUM					
Mexico	2,557	1,355	1,759	771	1,107
Japan	2,050	1,250	1,617	1,040	1,203
Others	1,008	545	1,591	1,213	591
Total	5,615	3,150	4,968	3,024	2,901
-----1994/95-----					
	Mkt. yr.	June-Feb	Mkt. yr.	June-Feb	1996/97
-----					
BARLEY					
Saudi Arabia	203	34	373	244	88
Israel	468	427	42	42	28
Jordan	51	51	0	0	50
Others	671	518	932	1,019	527
Total	1,392	1,029	1,347	1,305	694

1/ Totals may not add due to rounding. Source: Bureau of the Census

Table 9--U.S. imports by country of origin

Country/region	-----1994/95-----		-----1995/96-----		1996/97
	Mkt. yr.	June-Feb	Mkt. yr.	June-Feb	June-Feb
-----Thousand tons-----					
OATS					
Canada	1,161	888	1,302	1,226	1,118
Finland	374	374	22	37	46
Sweden	70	70	62	62	94
Other	0	0	0	0	0
Total 1/	1,605	1,332	1,387	1,325	1,259
BARLEY, MALTING					
Canada	715	524	740	510	411
Other	0	0	0	0	0
Total 1/	716	524	740	510	411
BARLEY, OTHER 2/					
Canada	702	581	141	106	142
Other	16	16	6	1	0
Total 1/	719	597	147	107	142

1/ Totals may not add due to rounding.

2/ Mainly consists of barley for feeding, and also includes seed barley.

Source: Bureau of the Census