

United States
Department of
Agriculture

Economic
Research
Service

FDS-0498
May 1998

Feed Outlook

Situation and Outlook Report

FEED OUTLOOK

United States Department of Agriculture

FDS-0498

Economic Research Service

Approved by the World Agricultural Outlook Board

May 13, 1998

HIGHLIGHTS

- o First 1998/99 Projections: Feed Grain Stocks To Rise As Increases in Supply Outpace Gains in Use
- o Projected Corn Production Up 3 Percent in 1998 to 9.6 Billion Bushels; Sharp Drop in Sorghum, and Slight Increases in Barley and Oats
- o Another Record Expected for Domestic Corn Use While Export Outlook Remains Sluggish
- o Feed Grain Prices To Soften Further in 1998/99

LARGE FEED GRAIN SUPPLY EXPECTED TO LEAD TO HIGHER ENDING STOCKS IN 1998/99

U.S. feed grain production is projected to increase 2 percent to 270 million metric tons in 1998, led by gains in corn. Because of a sharp increase in carryin stocks, feed grain supply for 1998/99 will increase even more to 309 million tons. This is up 5 percent from the previous year and would be the third consecutive yearly increase. Although large, the prospective 1998 feed grain crop would still be lower than 3 other years--1985, 1992, and the record year of 1994.

Despite favorable domestic prospects, total feed grain use is likely to increase only modestly because of sluggish export growth. Corn exports are not expected to show a large recovery from the current depressed level, while barley exports are forecast to decline from 1997/98's large volume. Total feed grain disappearance is projected at 263 million tons, up 2 percent from 1997/98, but well below the record high of 270 million reached in 1994/95.

Feed grain ending stocks are projected at 46 million tons, up about 25 percent from the forecast total for 1997/98. This would more than triple the recent low total of 14.4 million tons set in 1995/96, when supplies were extremely tight and prices soared. Thus, feed grain prices are projected to weaken further in 1998/99. While low prices should help stimulate demand by end-users, low prices for several products such as meat and ethanol will limit the response. Similarly on the export side, the positive impact of low U.S. prices will be constrained by abundant exportable supplies from competitors and economic weakness in several key importing countries. Based on assumptions of normal weather, world trade in coarse grains is initially projected to increase slightly in 1998/99 but remain relatively low by historical measures.

U.S. CORN CROP FORECAST AT 9,640 MILLION BUSHELS FOR 1998

Corn production is projected to increase 3 percent from 9,366 million bushels in 1997. This reflects small increases in both area and yields, based on the March *Prospective Plantings* and trend yields. Harvested acreage is projected at 74.4 million acres, assuming the planted to

harvested relationship of the last 3 years. The average corn yield is initially projected at 129.6 bushels an acre, reflecting the 1960-97 linear trend. If realized, this would be the third highest yield after 131.5 in 1992 and 138.6 in 1994, and the crop would rank second to the 10.1 billion bushels produced in 1994.

Corn planting is off to a mixed start in 1998, with excellent progress in the western Corn Belt while much of the eastern Corn Belt is behind due to heavy rainfall. Although Indiana, Ohio, and parts of Illinois have been too wet, most other large producing States, including Iowa, Nebraska, and Minnesota, are ahead of normal, with Minnesota at a record fast start. Nationally, 60 percent of the crop had been planted as of May 10, above the 5-year average of 46 percent. This bodes well for yield prospects since early plantings tend to be beneficial, permitting more of the critical growing stages to occur before the peak heat of midsummer.

In 1997, however, early plantings and a very favorable start to the season were negated by dryness and heat in many regions in late June and July, reducing yields. In 1998, the usual uncertainty about summer growing conditions has increased because of questions about the El Nino and its impact on the Corn Belt as it winds down. USDA assumes normal weather in its forecasts, but among private analysts, opinions fill the range from above average prospects to the potential for severe drought stress.

CORN ENDING STOCKS IN 1998/99 PROJECTED TO BE HIGHEST IN 6 YEARS

Total disappearance of corn in 1998/99 is projected at 9.3 billion bushels, up 300 million from a year earlier, mainly due to gains in domestic use. This would be second to the 1994/95 record of 9.4 billion. Corn exports are projected at 1,575 million bushels, up 100 million, but remaining relatively weak. Exports accounted for 23 percent of use in 1994/95, but are projected at just 17 percent of use in 1998/99. Domestic use is projected to increase 200 million bushels to 7,725 million, the second consecutive record. Food, seed, and industrial (FSI) use is projected at 1,875 million bushels, up 50 million bushels, while feed and residual use is projected at 5,850 million, up 150 million.

Ending stocks of corn in 1998/99 are projected at 1,609 million bushels, the second sharp increase in a row and the highest since 1992/93. Given the tight supplies of recent years, this represents a relatively large cushion for the corn market. The stocks-to-use ratio for corn is projected at 17.3 percent, compared with 14 percent in 1997/98 and 5 percent in 1995/96.

MORE GAINS FORECAST IN FOOD, SEED, AND INDUSTRIAL USE OF CORN

Food, seed and industrial (FSI) use of corn in 1998/99 is expected to be up 3 percent from 1997/98. FSI use may represent 17 percent of total expected use, down from 18 percent in 1997/98. FSI use is expected to be up for all the categories but corn used for high fructose corn sirup (HFCS), starch, and ethanol will be up more than the other uses.

In 1998/99, corn used for HFCS production is expected to increase 5 percent from the 545 million bushels which may be used in 1997/98. With the U.S. economy strong and employment high, consumers are expected to maintain large consumption of soft drinks and "new age" drinks, a major use for HFCS. Corn used to make glucose and dextrose in 1998/99 is forecast to increase 2 percent from this year's expected 250 million bushels. These sweeteners are used in bakery goods to offset the reduction of fat and this market has likely matured, slowing expected growth. Corn used for starch production is forecast up 2 percent from the same period in 1997/98. The strong economy and paper recycling is expected to keep starch sales strong.

Corn used to make ethanol in 1998/99 may total 515 million bushels, up from an expected 500 million bushels in 1997/98. Even with recent low gasoline prices, ethanol production has remained relatively strong and the industry is optimistic that ethanol use will increase. In fact, one firm has brought a plant back on stream, but this plant is in a sorghum production area and is currently increasing sorghum use. If sorghum plantings turn out larger than earlier intended, or if better yields increase sorghum availability, sorghum use for ethanol use could strengthen.

SORGHUM PRODUCTION AND USE TO DECLINE AGAIN

The 1998 sorghum crop is initially projected at 545 million bushels, down 17 percent from last year and the lowest since 1995. Most of the prospective drop is due to lower acreage. In fact, the 9 million acres that growers said they'd plant responding to the March survey are not only below the recent dip in the 1993-95 period (under the old farm program), but would be the lowest since 1929. Acres harvested for grain are projected at 8 million acres, which would be the lowest since 1953. Sorghum appears to be losing acres to soybeans and corn in major producing States. Based on the 1960-97 trend, the average yield is projected at 68.5 bushels per acre, down 1 bushel from 1997.

Reduced supplies will again lead to a contraction in sorghum use, projected at 535 million bushels in 1998/99. This is down from a forecast 660 million bushels in 1997/98. Lower feed and residual use accounts for all of the expected decline, down 125 million bushels to 300 million, on top of a 100-million bushel drop forecast in 1997/98. No change is expected in exports at 200 million bushels, with Mexico and Japan accounting for nearly all shipments. A moderate rise in ending stocks is projected at 51 million bushels, compared with 41 million in 1997/98.

BARLEY OUTLOOK: PRODUCTION STEADY BUT USES TO SHIFT

Barley production in 1998 is projected at 380 million bushels, up from 374 million last year, as a small rise in yields is expected to outweigh a decline in acreage. The projected yield of 59.8 bushels per acre, based on the 1960-97 trend, is up from 58.3 bushels in 1997. Producers intend to plant 6.8 million acres, down 2 percent, with most of the decline in North Dakota and Minnesota where many growers have experienced scab disease problems in recent years. Although not as low as 1995, barley plantings will remain very low. Harvested acres are projected at 6.4 million in 1998, almost unchanged from last year, based on the planted to harvested relationship for 1995-97.

Planting progress has been very rapid so far in 1998, with 79 percent planted by May 10. This is well ahead of the 48 percent average. Generally dry conditions were favorable for planting. Recent rains in North Dakota, the leading producing State, provided beneficial moisture. The outlook in Montana, which is second in barley acreage, is more guarded because of continuing dryness.

Barley supply is projected at 527 million bushels, up slightly. Imports are expected to show no change at 35 million bushels, and again consist mainly of malting barley. Total disappearance is also projected unchanged at 407 million bushels. However, while food, seed, and industrial use is expected to remain steady, there will be a dramatic change in other uses. Exports are expected to sink from the unusually robust 75 million bushels forecast in 1997/98 to 25 million in the face of more aggressive exports by the European Union. Feed and residual use is projected to rebound sharply to 210 million bushels, up 50 million. This will reverse the switch in use that occurred during 1997/98, when U.S. barley faced little export competition in the early months of the year.

OATS PRODUCTION PROJECTED AT 180 MILLION BUSHEL; IMPORTS DOWN

The 1998 oats crop is projected at 180 million bushels, up marginally from 176 million last year. The outlook is shaped by steady acreage prospects and a modest drop from the fairly high yields achieved in 1997. Like barley, acreage remains close to historical lows. Intended plantings of 5.1 million acres reported by growers were virtually equal to last year, while growers intend to harvest 3.1 million for grain in 1998, up slightly. Based on the 1960-97 trend, average yields are projected at 58.9 bushels per acre.

Oats planting progress this spring has also been well ahead of normal. As of May 10, 86 percent was planted, compared with the 5-year average of 58 percent, and 62 percent in 1997. Early planting is generally favorable for oats to the extent the oats might avoid damage from heat later in the year.

Little change is expected in oats supply in 1998/99, up slightly to 361 million bushels as a larger carryin about offsets lower imports. The most critical question is how exporters will react to low prospective U.S. oats prices. Imports are projected to decline from the record large 110 million bushels forecast in 1997/98 to 100 million bushels. The initial projection of use calls for no change, with the total at 272 million bushels and food and feed and residual use both steady.

FEED DEMAND PROSPECTS

Feed and residual use of the four feed grains plus wheat in 1998/99 is expected to increase 1 percent from the 168 million metric tons used in September 1997-August 1998. Feed and residual use in 1997/98 was up 2 percent from a year earlier. In 1998/99, corn is expected to represent 88 percent of feed and residual use, up from the 86 percent in 1997/98.

The index of grain consuming animal units (GCAU's) for 1998/99 is expected to be down 1 percent from 1997/98's 88 million units. Declines are expected in numbers of cattle on feed and numbers of sheep. The grain used per GCAU in 1998/99 is expected to be 1.95 tons, up 2 percent from 1997/98.

Cattle and calves on feed on January 1, 1999 are expected to be down from 1998 because the calf crop from which feeders are eventually drawn was down 1 percent from a year earlier in 1996 and down 3 percent in 1997. On January 1, 1998, cattle and calves on feed in the U.S. totaled 13,618,000 head, up 3 percent from 1997. However, cattle on feed on April 1 in feedlots with capacity of 1,000 head reporting monthly were down 3 percent from a year earlier. Placements were down 13 percent from a year earlier. Thus feed use by cattle on feed is likely weaker than last year.

Pork production in 1999 is expected to increase 2 percent from the 19 billion pounds likely to be produced in 1998, up 10 percent from 1997. Hog farmers responding to the March 1998 survey indicated that they intended to increase the number of sows farrowing in December 1997-May 1998 by 5 percent relative to the prior year. However, producers responded that in June-August 1998, they expected to increase farrowings by 1 percent from the year earlier, suggesting a slowing in production and feed needs in 1998/99.

Broiler and egg production in 1999 are expected to increase from the forecast 1998 levels and maintain strong demand for feed grains. Broiler production in 1999 is expected to increase 4 percent from 1998 as producers respond to abundant feed supplies and possibly lower prices. In 1999, turkey producers are expected to reduce production 2 percent even with lower feed prices from the 1998 output. Egg producers in 1999 are expected to produce 6.8 billion dozen eggs, up 2 percent from 1998. These increases in poultry production are likely to increase feed needs.

Dairy cow numbers are expected to decline 1 percent from the 9.3 million head average of 1997, with a similar decline in 1999. In part due to heavier concentrate feeding, milk per cow is expected to grow enough to lift milk production about 1 percent each year.

HAY STOCKS INCREASE

Stocks of all hay on farms May 1, 1998, were up 25 percent from 1997's 17 million tons. In the 1997/98 hay marketing year, hay disappearance was 147.8 million tons, down 3 percent from 1996/97. Beginning stocks were down from the prior year but hay production was up nearly enough to offset the stocks. Since December 1, 1997, conditions have allowed less hay feeding than in the first part of the marketing year when hay stocks were down from a year earlier. The "early spring" in many areas and adequate spring rains across the United States revitalized pastures and allowed livestock producers to reduce hay feeding.

Roughage consuming animal units in 1997/98 are estimated to be down 2 percent from 1996/97. Hay disappearance per RCAU in 1997/98 was 1.99 tons, down from 2.01 tons in 1996/97.

Hay prices have been strong in 1997/98 and the average price received by farmers when weighted by marketing is likely to be above last year. The simple average price received by farmers in 1997/98 was \$101 per ton, up from \$96 in 1996/97 (the weighted season average price in 1996/97 was \$93 per ton). Prices for alfalfa hay in 1997/98 were \$109 per ton and \$102 the previous marketing year (the weighted average price for 1996/97 was \$97). Other hay prices in 1997/98 averaged \$77 per ton, about the same as the \$76 in 1996/97 (when weighted by marketings the average was \$75.50). Hay prices in 1998/99 are likely to be weaker than in 1997/98 because of the larger beginning stocks and the prospects for a good hay crop, given the current weekly pasture and range conditions of 67 percent rated good to excellent vs. 57 percent last year.

LARGE, BUT NOT RECORD, GLOBAL COARSE GRAIN PRODUCTION FORECAST IN 1998/99

Projected world coarse grain production is up 9.3 million tons while global consumption is up 9.7 million in 1998/99. While the increases in production and consumption are nearly balanced, production remains about 4 million tons larger than consumption, and global stocks are expected to increase for the third straight year. However, the increase is not large, and the global stocks-to-use ratio is projected to increase marginally to 14.5 percent.

Although production and consumption of global coarse grains as an aggregate appear balanced, corn and other feed grains are expected to be quite distinct.

World corn production is forecast over 600 million tons for the first time, while barley and sorghum production are forecast down. World corn production and consumption are projected to be nearly equal and global stocks are expected to build only slightly. This contrasts with 1997/98 when global stocks dropped 7 percent because of a huge drop in China's corn stocks.

China's role in world trade is a key uncertainty for 1998/99 forecasts. In China, prices compared to a year ago reportedly favor corn area expansion at the expense of soybeans. Increased area and a return to trend yields results in a forecast production of 122 million tons, up sharply from the drought-damaged crop of the previous year. However, beginning stocks have been reduced sharply, leaving China's corn supplies in 1998/99 down slightly. Current projected use includes a 3-million-ton increase in domestic consumption, a 2-million-ton decline in exports, and a 5-million-ton drop in ending stocks. However, the quantity exported will depend on policy decisions as much or more than on the size of production and world market conditions.

World barley production is forecast down 2 percent as many producers reduce area because of very low world prices. Growing conditions around the Northern Hemisphere have been mostly favorable, except in North Africa, limiting the production decline. A return to trend yields is expected to boost production in Canada. World consumption of barley in 1998/99 is expected up slightly from a year earlier, but little changed for the last 3 years. Production is expected to continue larger than consumption and stocks are forecast up for the third straight year. EU stocks are forecast at burdensome levels, and despite very large export subsidies, stocks are expected to continue to increase in 1998/99. World barley trade is expected to increase 13 percent as Saudi Arabia's imports rebound and China's imports continue to grow.

U.S. CORN EXPORTS FORECAST AT 1,575 MILLION BUSHEL IN 1998/99

World corn trade is forecast to decline slightly in 1998/99 because of sluggish demand and increased competition from barley and rye. The financial crisis in South Korea and Southeast Asia and reduced hog numbers in Taiwan caused by past disease will combine to reduce the region's forecast imports in 1998/99, following a sharp reduction in 1997/98.

U.S. corn exports are forecast to increase in 1998/99 despite lower world trade because less competition is forecast from China and Eastern Europe. Production in Eastern Europe is forecast down sharply because of reduced incentives to plant, and the exceptionally favorable growing conditions of the previous year are not expected to be repeated. However, competition from Argentina is expected to remain strong. At 40 million tons, the U.S. corn export forecast is up 7 percent from 1997/98, but 18 percent less than the 5-year average.

FEED GRAIN PRICES EXPECTED TO WEAKEN FURTHER

Reflecting a healthy increase in expected supply and the likelihood of continued export weakness, feed grains prices are expected to decline in 1998/99. The average price of corn received by farmers is projected at \$2.05-2.45 per bushel for the season. This compares with \$2.40-2.50 forecast for 1997/98 (which was reduced 5 cents this month due further slippage in the corn export forecast). The projected 1998/99 corn price will fall well below the \$2.63 per bushel average of the last 5 years (including the 1997/98 forecast price) and challenge the \$2.26 reached in 1994/95 when there was a record large crop.

Market prices for feed grains have slumped in recent months as demand prospects have slipped. Moreover, price prospects for other commodities such as soybeans and wheat, have also softened. Nearby corn futures prices recently reached contract lows in the \$2.38-2.45 per bushel range. Futures contracts for new-crop corn are running about 20 cents higher, factoring in some premium for weather risk above what fundamentals would suggest.

Although acreage and production for the other feed grains will be relatively low, weak corn prices will weigh heavily on their prices. The season average farm price of sorghum is projected at \$1.90-2.30 per bushel, down from \$2.15-2.25 forecast in 1997/98. The farm price of barley is also projected at \$1.90-2.30 per bushel, down from \$2.35 forecast in 1997/98, while the oats price is expected to sink from the \$1.60 forecast in 1997/98 to \$1.05-1.45.

UPDATE ON THE MARKETING ASSISTANCE LOAN PROGRAM

With season average farm prices for feed grains projected to decline for the third consecutive year in 1998/99, producers are expected to place larger amounts of their feed grain production under loan. The marketing assistance loan program of the 1996 farm bill modified

the previous loan program in several areas. 1) To receive a marketing assistance loan for a feed grain, a producer must have a production flexibility contract for one of the contract commodities (wheat, corn, grain sorghum, barley, oats, cotton, and rice). All production of the feed grain on the farm is eligible for loan placement. 2) The marketing assistance loan rate for corn is capped at the 1995 level of \$1.89 per bushel. 3) The marketing assistance loan rate for other feed grains is set in relation to corn, taking into consideration the feed value relative to corn.

Other features of the marketing assistance loan program are similar to the previous commodity loan programs. The Secretary may use discretionary authority to lower the corn marketing assistance loan rate if the projected stocks-to-use ratio exceeds predetermined levels. Marketing assistance loans are nonrecourse loans and may be redeemed at the lower of (a) the applicable county loan rate plus accrued interest and other charges or (b) the marketing loan repayment rate (i.e., posted county price, PCP). If the posted county price is lower than the county loan rate, a marketing loan gain is realized. Producers are eligible to receive a loan deficiency payment if they agree not to place the commodity under loan. The loan deficiency payment rate is equal to the amount by which the county loan rate exceeds the posted county price in the county in which the grain is stored.

If the season average price for corn for 1998/99 is near the low end of the forecast price range, November 1998 and August 1999 corn prices would likely fall to about \$1.95 per bushel, very near the national average loan rate of \$1.89 per bushel. In November, daily prices at some locations in the U.S. could be pressured by favorable harvesting conditions, reports of higher than expected yields, storage or transportation problems, or weaker than expected export sales. Thus, producers could receive marketing loan benefits this fall if favorable growing conditions produce trend or higher yields for the 1998 crop.

For additional information on marketing assistance loan programs, visit the Farm Service Agency Internet site at <http://www.fsa.usda.gov/pas/publications/facts/pubfacts.htm> or contact your local USDA Farm Service Agency office.

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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										\$/bu
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	429	1,048	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	1,612	4,682	2,228	8,522	426	3.24
1996/97										
Sep-Nov	426	9,293	3	9,723	387	1,946	487	2,820	6,903	2.87
Dec-Feb	6,903	---	2	6,905	398	1,489	525	2,411	4,494	2.66
Mar-May	4,494	---	4	4,498	463	1,108	431	2,001	2,497	2.77
Jun-Aug	2,497	---	4	2,500	444	819	353	1,617	883	2.49
Mkt. yr.	426	9,293	13	9,733	1,692	5,362	1,795	8,849	883	2.71
1997/98										
Sep-Nov	883	9,366	2	10,251	436	2,188	380	3,004	7,247	2.52
Dec-Feb	7,247	---	1	7,248	424	1,506	380	2,311	4,937	2.55
Mar-May	4,937	---	4	4,941	489	1,175	325	1,989	2,952	
Jun-Aug	2,952	---	3	2,955	477	830	390	1,697	1,259	
Mkt. yr.	883	9,366	10	10,259	1,825	5,700	1,475	9,000	1,259	2.40-2.50
1998/99										
Mkt. yr.	1,259	9,640	10	10,909	1,875	5,850	1,575	9,300	1,609	2.05-2.45
SORGHUM										
1995/96										
Sep-Nov	72	460	0	532	1	176	54	231	301	2.88
Dec-Feb	301	---	0	301	1	71	67	139	163	3.25
Mar-May	163	---	0	163	5	51	36	92	70	3.94
Jun-Aug	70	---	0	70	4	7	41	52	18	3.63
Mkt. yr.	72	460	0	532	11	305	198	514	18	3.19
1996/97										
Sep-Nov	18	803	0	821	11	287	56	354	467	2.44
Dec-Feb	467	---	0	467	11	124	59	193	274	2.26
Mar-May	274	---	0	274	12	82	61	155	119	2.41
Jun-Aug	119	---	0	119	7	36	29	72	47	2.27
Mkt. yr.	18	803	0	821	40	529	205	774	47	2.34
1997/98										
Sep-Nov	47	653	0	701	9	268	49	327	374	2.23
Dec-Feb	374	---	0	374	9	53	83	145	229	2.24
Mar-May	229	---	0	229	9	70	40	119	110	
Jun-Aug	110	---	0	110	8	34	28	69	41	
Mkt. yr.	47	653	0	701	35	425	200	660	41	2.15-2.25
1998/99										
Mkt. yr.	41	545	0	586	35	300	200	535	51	1.90-2.30

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	
BARLEY				-----Million bushels-----							\$/bu
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	396	9	504	44	137	7	188	316	3.11	
Sep-Nov	316	---	8	324	39	25	12	76	248	2.74	
Dec-Feb	248	---	8	256	37	40	7	84	173	2.55	
Mar-May	173	---	11	184	53	18	4	75	109	2.33	
Mkt. yr.	100	396	37	532	172	220	31	423	109	2.74	
1997/98											
Jun-Aug	109	374	12	496	44	100	24	168	328	2.32	
Sep-Nov	328	---	7	335	39	12	39	90	245	2.47	
Dec-Feb	245	---	8	253	37	33	6	76	177	2.36	
Mar-May	177	---	7	184	53	14	6	72	112		
Mkt. yr.	109	374	35	519	172	160	75	407	112	2.35	
1998/99											
Mkt. yr.	112	380	35	527	172	210	25	407	120	1.90-2.30	
OATS											
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	1.67	
1996/97											
Jun-Aug	66	155	6	228	24	71	1.0	96	132	2.06	
Sep-Nov	132	---	39	171	22	22	0.8	45	126	1.84	
Dec-Feb	126	---	28	154	20	37	0.3	58	96	1.79	
Mar-May	96	---	24	120	29	24	0.4	53	67	1.88	
Mkt. yr.	66	155	97	319	95	155	2.5	252	67	1.96	
1997/98											
Jun-Aug	67	176	19	262	24	81	0.4	105	157	1.65	
Sep-Nov	157	---	38	195	22	27	0.7	50	144	1.54	
Dec-Feb	144	---	26	170	20	38	0.5	59	111	1.59	
Mar-May	111	---	27	138	29	29	0.4	58	81		
Mkt. yr.	67	176	110	353	95	175	2.0	272	81	1.60	
1998/99											
Mkt. yr.	81	180	100	361	95	175	2.0	272	89	1.05-1.45	

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
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	0.4	37.4		
Mar-May	26.6	1.3	0.5	0.4	28.8	-1.8	27.0		
Jun-Aug	13.5	0.2	3.0	1.0	17.7	10.5	28.1		
Mkt. yr.	118.9	7.7	4.5	2.6	133.7	6.3	140.1	84.9	1.65
% Change	-15.2	-23.8	-6.3	-21.7	-15.6	-14.6	-15.6	0.7	-16.2
1996/97									
Sep-Nov	49.4	7.3	0.5	0.4	57.7	-2.1	55.6		
Dec-Feb	37.8	3.1	0.9	0.6	42.4	0.8	43.3		
Mar-May	28.1	2.1	0.4	0.4	31.1	-0.7	30.4		
Jun-Aug	20.8	0.9	2.2	1.2	25.1	10.8	35.9		
Mkt. yr.	136.2	13.4	4.0	2.7	156.3	8.8	165.2	85.4	1.93
% Change	14.5	73.5	-10.8	4.0	16.9	39.3	17.9	0.6	17.3
1997/98									
Sep-Nov	55.6	6.8	0.3	0.5	63.2	-3.1	60.1		
Dec-Feb	38.3	1.4	0.7	0.6	41.0	0.0	41.0		
Mar-May	29.8	1.8	0.3	0.5	32.4	-0.9	31.5		
Jun-Aug	21.1	0.9	2.5	1.3	25.7	10.2	36.0		
Mkt. yr.	144.8	10.8	3.8	2.9	162.3	6.2	168.5	88.1	1.91
% Change	6.3	-19.6	-4.5	8.5	3.8	-29.7	2.0	3.1	-1.1
1998/99									
Mkt. yr.	148.6	7.6	4.6	2.8	163.6	6.1	169.7	86.8	1.95
% Change	2.6	-29.4	20.2	-3.7	0.8	-1.5	0.7	-1.4	2.1

Table 3--Grain shipments and rates

	1995/96		1996/97		1997/98	
	Mkt. Yr.	Mkt. Yr.	Sept-Mar	Mar	Sept-Mar	Mar
Barge shipments 1/ (Million ton/month)	4/ 3.7	2.8	2.2	3.2	1.7	NA
Barge rate index 2/ (Dec 1990 = 100)	151.8	108.7	123.0	119.1	112.8	90.9
Railcar loadings 3/ (1,000 cars/week)	27.1	23.3	24.4	25.2	23.3	21.7
Rail rate index 2/ (Dec 1984 = 100)	117.3	117.7	5/	5/	5/	5/

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.

5/ Data series discontinued. This series will be excluded from table starting Next issue.

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
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
96/97	2.74	3.07	5.02	5.03	2.32	3.18	2.03
Monthly:							
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
1997/98:							
Dec	2.60	2.89	4.82	5.02	1.66	NQ	1.71
Jan	2.60	2.90	4.88	5.04	1.58	NQ	1.68
Feb	2.58	2.88	4.85	5.07	1.56	NQ	1.59
Mar	2.59	2.89	4.85	5.00	1.51	NQ	1.65

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-----							
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	87.20
96/97	260.37	191.47	93.05	341.50	272.44	142.87	91.18	97.20
Monthly:								
1996/97:								
Dec	240.90	224.50	99.50	342.50	272.00	143.10	113.00	97.00
Jan	240.70	207.20	100.25	336.25	262.90	144.00	103.10	104.00
Feb	253.60	183.75	102.75	335.60	258.80	149.00	96.20	113.00
Mar	270.40	189.10	100.90	340.00	285.00	148.50	97.10	116.00
1997/98:								
Dec	214.90	190.50	78.20	350.50	226.60	125.80	91.70	106.00
Jan	193.10	153.10	76.90	321.90	189.50	124.10	95.30	105.00
Feb	182.10	139.10	76.50	295.00	160.40	118.40	82.50	106.00
Mar	165.30	128.70	61.30	270.50	171.10	107.80	81.00	104.00

1/ Marketing year beginning September 1.

2/ Marketing year beginning May 1.

3/ Includes monthly & 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							
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	39.6	33.5	411.4
Jun-Aug	136.2	62.8	57.0	61.9	15.6	33.5	367.0
Mkt year	482.2	237.1	219.3	395.7	125.0	133.0	1,592.2
1996/97							
Sep-Nov	113.2	60.0	55.0	96.4	29.0	33.6	387.1
Dec-Feb	110.7	56.3	55.1	109.4	33.0	33.2	397.6
Mar-May	134.8	64.0	59.5	116.6	34.0	33.9	442.8
Jun-Aug	145.1	65.5	59.1	106.3	34.0	33.9	444.0
Mkt year	503.8	245.8	228.6	428.7	130.0	134.6	1,671.5
1997/98							
Sep-Nov	122.8	63.4	59.6	122.7	33.2	34.0	435.8
Dec-Feb	116.8	56.2	56.7	128.3	32.8	33.7	424.4
Mar-May	145.9	64.5	62.0	129.9	33.5	34.4	470.2
Jun-Aug	159.5	66.0	61.6	119.1	33.5	34.4	474.1
Mkt year	545.0	250.0	240.0	500.0	133.0	136.5	1,804.5
1998/99							
Mkt year	570.0	255.0	245.0	515.0	133.0	136.0	1,854.0

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/					
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	17.79	14.21	25.50	13.01	15.98
96/97 2/	16.94	12.85	25.50	13.15	13.83
Monthly					
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	16.94	12.84	25.50	13.15	13.55
1998:					
Jan	16.02	11.92	25.50	8.50	13.63
Feb	16.10	12.00	25.50	8.50	13.66
Mar	16.13	12.03	30.65	7.75	13.78
Apr 2/	15.74	11.64	30.65	7.25	13.39

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	-----1995/96-----		-----1996/97-----		1997/98
	Mkt. yr.	Sep-Feb	Mkt. yr.	Sep-Feb	Sep-Feb
-----Thousand tons-----					
CORN					
Japan	15,303	7,412	14,821	7,270	7,682
Taiwan	5,938	2,925	5,482	2,728	2,347
Former USSR	34	27	131	112	22
South Africa	347	329	81	81	0
Sub-Saharan Africa	321	272	188	68	138
EU	2,842	2,014	1,704	545	6
Egypt	2,167	1,083	2,292	1,315	1,104
Canada	808	347	833	525	725
China	2,207	2,207	53	53	53
East Europe	188	111	378	378	19
Algeria	522	360	869	402	495
S. Korea	8,285	4,551	5,321	3,886	1,175
Mexico	6,453	2,460	3,155	1,704	1,417
Others	11,077	6,897	10,214	6,571	4,047
Total	56,494	30,994	45,523	25,637	19,231
SORGHUM					
Mexico	1,759	771	2,111	1,107	1,642
Japan	1,617	1,040	2,102	1,203	1,345
Others	1,591	1,213	948	591	350
Total	4,968	3,024	5,161	2,901	3,337

	-----1995/96-----		-----1996/97-----		1997/98
	Mkt. yr.	Jun-Feb	Mkt. yr.	Jun-Feb	Jun-Feb
BARLEY					
Saudi Arabia 2/	373	244	88	88	922
Israel	42	42	28	28	0
Jordan	0	0	50	50	53
Japan	522	460	175	134	284
Mexico	190	69	182	156	98
Taiwan	100	100	35	35	60
Other	119	104	220	93	94
Total	1,347	1,019	779	584	1,510

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

2/ For 1997/98, includes unidentified country, until data is revised.

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

Country/region	-----1995/96-----		-----1996/97-----		1997/98
	Mkt. yr.	Jun-Feb	Mkt. yr.	Jun-Feb	Jun-Feb
-----Thousand tons-----					
OATS					
Canada	1,302	1,143	1,440	1,119	1,150
Finland	22	22	99	46	124
Sweden	62	62	140	94	130
Total 1/	1,387	1,227	1,680	1,260	1,432
BARLEY, MALTING					
Canada	740	510	608	411	523
Total 1/	740	510	609	411	523
BARLEY, OTHER 2/					
Canada	141	102	191	142	81
Total 1/	147	107	192	142	81

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