

FEED OUTLOOK

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United States Department of Agriculture

Economic Research Service

Approved by the World Agricultural Outlook Board

December 13, 1996

HIGHLIGHTS

- o Corn Export Projection Reduced, Stocks Raised 50 Million Bushels
- o Corn and Sorghum Price Projections Lowered
- o Use of Corn for Ethanol Begins To Recover

LITTLE CHANGE IN FEED GRAIN OUTLOOK THIS MONTH

No new U.S. production estimates were released this month, but there were some adjustments in forecast supply and use because of changes in trade. Projected ending stocks of corn in 1996/97 are up 50 million bushels due to a reduction in exports. Forecast barley imports were reduced 5 million bushels, with a corresponding drop in ending stocks. The forecast of oats imports was increased 5 million bushels and the additional supply placed in feed and residual use. The total feed grain outlook is essentially unchanged, as the decline in projected use slightly outweighs the minor decrease in supply.

The corn harvest is virtually complete, with 96 percent of the crop harvested as of December 1, just above the average of 95 percent. The only State where the harvest is much behind average is Ohio, with 85 percent complete. December is normally a slow period for the feed grain market, and activities should pick up at the start of the new year. USDA will release final crop production estimates on January 10, along with estimates of grain stocks as of December 1.

Market conditions are dramatically different from a year ago because of a sharp rebound in feed grain supplies, forecast up more than 10 percent from 1995/96. Ending stocks are expected to more than double from the extremely low point reached at the end of 1995/96. While total feed grain use is projected to rise only 3 percent in 1996/97, it would still be second only to the record high in 1994/95, and about equal to 1992/93.

SLOW SALES DROP U.S. CORN EXPORT FORECAST 50 MILLION BUSHELS

Projected ending stocks of corn in 1996/97 were raised 50 million bushels this month to 1,157 million because of lower exports. U.S. corn exports are forecast at 1,900 million bushels, down 50 million from last month and 15 percent less than exported a year ago.

Prospects for U.S. corn exports were reduced because of lower imports forecast for Brazil, Mexico, and Japan. Mexico is expected to import less corn and sorghum due to increased production from last year. Japan is increasing the portion of sorghum used in mixed feeds and boosting imports of sorghum (offsetting the decline in demand from Mexico), but this is expected to result in smaller corn imports. Brazil's corn production forecast was increased this month, reducing import prospects.

The 1996/97 forecast of foreign coarse grain production was raised 1.8 million tons this month, with increased corn production in Brazil and Hungary and barley production in Kazakhstan. Compared with 1995/96, foreign coarse grain production is forecast up 5 percent, while consumption is only expected to increase 1 percent, resulting in a rise in foreign stocks.

World coarse grain trade is expected to decline 3 percent. Reduced global imports and increased competitor exports of barley and feed wheat are expected to reduce U.S. corn export prospects. World corn trade in 1996/97 is forecast down 7 percent from a year ago. Although foreign corn production is forecast up 3 percent, foreign corn exports are expected to share in the drop in world corn trade, declining 4 percent.

According to U.S. Export Sales, corn shipments from September 1 through December 5 lagged year-earlier levels by 30 percent, and outstanding sales were 25 percent less than a year ago. However, last year corn export marketing started out unusually strong. In 1994, corn shipments through the first week of December were only 2 percent greater than this year, and outstanding sales at that time were 8 percent lower. Corn exports in 1994/95 started slowly, but reached 2,177 million bushels for the year, after the sales pace accelerated in later months following China's ban on corn exports.

U.S. BARLEY IMPORT FORECAST REDUCED, OATS IMPORTS UP

The forecast for U.S. barley imports in 1996/97 was reduced 5 million bushels to 40 million. Although barley production is up sharply to a record in Canada, the pace of shipments from Canada to the United States has been slower than expected, with Canada shipping mostly to other markets. The U.S. barley export forecast was unchanged this month at 35 million bushels, but down sharply from last year. Japan is buying more barley from Canada, but increased shipments of malting barley to Mexico have limited the overall decline in U.S. barley exports. Last year, Japan became the largest importer of U.S. barley when short supplies limited Canada's exports, causing Japan to turn to the United States.

The U.S. oats import forecast was increased 5 million bushels as the pace of imports picked up in September when new-crop supplies from Canada became available. Preliminary Canadian data indicate that exports to the United States will continue large in October and November. In addition, some shipments of oats from Scandinavia are also expected in coming months.

SIGNS OF RECOVERY IN ETHANOL PRODUCTION

Food, seed and industrial (FSI) use of corn in 1996/97 is forecast to total 1,670 million bushels, unchanged from last month and up 5.5 percent from 1995/96. Use at this level in 1996/97 would represent 17 percent of total supply, down from 18 percent in 1995/96 when supply was lower. The short crop in 1995 strengthened prices and cut industrial use of corn, with all the reductions in ethanol and starch. In 1996/97, corn use is expected to rebound for both categories.

With corn in short supply and prices high, corn used in ethanol bottomed out in June and July 1996 at about 19 million bushels in each month, way down from the peak of 49 million in January 1995. After slight gains in August and September, production in October rebounded and used 38 million bushels. With corn prices declining and byproduct feeds not declining as rapidly, net corn costs (corn prices less the value of the byproducts) for wet millers have dropped to \$1.23 per bushel in October, down from a high of \$3.08 in July. Net corn costs for dry mill ethanol producers peaked in May at \$3.23 per bushel, and were \$1.40 in October 1996. Dry mill producers sell fewer byproducts so net corn costs are usually higher. However, dry millers get a higher ethanol yield from each bushel of corn. By October, net corn costs had retreated to near their early 1995 levels.

In recent weeks, fuel ethanol prices have declined from their summer highs, and gasoline prices have been strong. This is expected to lead to more ethanol blending which will keep ethanol in the marketing channel and in competition with MTBE. Many times when products

leave the market, consumers switch to alternatives and the product has to buy its market back, usually a costly proposition. Ethanol may have avoided this pitfall, partly because methanol to produce MTBE has become more costly also.

Starch production was down in 1995/96 partly because of higher input prices but also because of the paper market. Paper production was down as users apparently were working off supplies laid in when prices were rising. Users could also switch types of starch but it is not known how much of that has been done. Starch use should begin to increase in 1996/97 as paper production stabilizes and the economy continues to grow.

Corn sweeteners continued to use more corn even in the face of high 1995/96 prices. Although beverages continue to be the major use, sweeteners are used in more food products to make them taste better, to give texture, and to give other desired properties as fats are cut back. Chemists can customize corn sweeteners for many applications, such as different degrees of sweetness and taste properties. These properties are also useful in producing processed foods that are or appear "freshly" made or like "homemade" products. As a result, per capita sweetener use continues to increase faster than the rate of growth in the population.

UPDATE ON FEED AND RESIDUAL USE

Feed and residual use in 1996/97 of the four feed grains (corn, sorghum, barley, and oats) is expected to total 146 million tons, up from 134 million in 1995/96. If wheat is included, the total is expected to reach 154 million tons in 1996/97, up from 141 million. Corn comprises the biggest share of the total at 87 percent in 1996/97 and 89 percent in 1995/96. The large grain sorghum crop in 1996 will boost the percent of sorghum use to 9 percent, from 6 percent in 1995/96.

Grain consuming animal units (GCAU's) in 1996/97 are expected to be up 2 percent from the 84.9 million units in 1995/96. With the lower cost of grain, more cattle are entering feedlots at a younger age and will likely consume more grain than had they remained on pasture longer.

Strong corn prices caused a decline in pig crops in the spring from a year ago. The fall pig crop is expected to be down from a year ago if producers carried through with their intentions. As corn prices have moderated, many analysts expect hog producers to begin increasing production. If so, then more grain will be needed for these animals, but part of that will come from next year's crop.

The poultry sector is strongly affected by grain prices. Broiler producers either cut production slightly or slowed rates of expansion earlier than other livestock sectors. This helped to support product prices and partly offset the higher grain prices. Continued strong demand for grain is expected by the poultry industry.

PRICE OUTLOOK WEAKENS FOR CORN AND SORGHUM

The drop in projected corn exports and increase in stocks led to a slight drop in expected prices from a month ago. The forecast of the 1996/97 season average farm price was reduced 10 cents on the top end of the range to \$2.50-2.80 per bushel. In November, the average farm price of corn declined for the fourth straight month to a preliminary \$2.64, the lowest since August 1995.

Cash and futures prices for corn were relatively flat in the last few weeks, rebounding slightly after steep declines from summer highs that continued into early November. Most futures

contracts for the 1996/97 marketing year were trading around \$2.65 per bushel by early December. Despite slipping expectations in recent weeks, the 1996/97 price would still rank well ahead of most recent years, excluding the 1995/96 record. From 1990 to 1994, the farm price of corn averaged \$2.30 per bushel.

The sharp increase in sorghum supplies this year, coinciding with the increase in corn, is putting strong downward pressure on prices. A larger reduction was made in the sorghum farm price forecast this month, down 5 cents at the low end and 10 cents at the top end to \$2.15-2.45 per bushel. During the first 3 months of the marketing year, sorghum prices received by farmers nationally have averaged just 85 percent of corn. In contrast, sorghum prices averaged 102 percent of corn in the first 3 months of 1995/96 when the feed grain situation was tightening.

TIMING OF FARM SALES IMPORTANT INFLUENCE ON CORN PRICE

The timing of sales and the extent to which producers price crops in advance of harvest play an important role in determining the season average price of corn. In 1995/96, a larger than normal share of corn was marketed early in the year, and prior to the dramatic runup in prices. In the first 3 months of 1995/96, 38.1 percent of the corn was marketed, the largest share in data checked back to 1980. The 15-year average was 32.1 percent. In addition, a substantial amount was contracted before prices rallied, and, even when delivered later in the year, this corn was priced far below spot prices.

With strong prices prevailing most of the summer, there were opportunities to hedge or lock in attractive prices for 1996/97. While farmers in southern States realized strong premiums for their early delivered corn, anecdotal evidence suggests that elsewhere a large portion of the crop has not yet been sold. Reports of slower farm sales than normal apparently reflect a backlash against last year's experience. (There are no public data on the amount of contracting or other sales arrangements.)

If marketings are later than usual, it's not entirely clear what the price impact would be. Using current futures prices as an indicator results in only a minor change in the season average because contracts are trading in a relatively narrow range. However, heavier than normal sales in the winter or spring months would tend to depress prices. On the other hand, if a more significant quantity of corn was priced in advance, this would tend to support the annual weighted average price received by farmers.

Another factor will be expectations about 1997. Corn prices typically bottom out around harvest and then slowly rise in the following months, peaking in midsummer before the next harvest. This seasonal pattern usually does not hold in years preceding a large crop. If the market anticipates large acreage for 1997, prices may start to decline by early spring.

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* Information Contacts:      Pete Riley      (202) 501-8512      *
*                           Allen Baker      (202) 219-0360      *
* International Analysis:   Edward Allen    (202) 219-0831      *
* Data Coordinator:        Jenny Gonzales (202) 219-0704      *
* The next Feed Outlook will be released January 13, 1997.      *
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NOTE: THE ANNUAL FEED YEARBOOK IS SCHEDULED FOR MARCH 1997.
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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										

1993/94										
Sep-Nov	2,113	6,336	5	8,455	380	1,703	435	2,518	5,937	2.34
Dec-Feb	5,937	---	8	5,945	376	1,243	330	1,949	3,996	2.71
Mar-May	3,996	---	6	4,002	418	955	270	1,642	2,360	2.67
Jun-Aug	2,360	---	1	2,361	418	800	293	1,511	850	2.34
Mkt. yr.	2,113	6,336	21	8,470	1,591	4,700	1,328	7,620	850	2.50
1994/95										
Sep-Nov	850	10,103	2	10,955	406	2,019	449	2,874	8,080	2.05
Dec-Feb	8,080	---	4	8,084	406	1,497	590	2,493	5,592	2.18
Mar-May	5,592	---	3	5,595	445	1,167	568	2,180	3,415	2.35
Jun-Aug	3,415	---	1	3,416	434	854	570	1,858	1,558	2.59
Mkt. yr.	850	10,103	10	10,962	1,690	5,537	2,177	9,405	1,558	2.26
1995/96										
Sep-Nov	1,558	7,374	4	8,935	409	1,760	660	2,830	6,106	2.80
Dec-Feb	6,106	---	5	6,111	397	1,352	562	2,311	3,800	3.15
Mar-May	3,800	---	5	3,805	411	1,066	610	2,087	1,718	3.76
Jun-Aug	1,718	---	3	1,721	366	533	396	1,294	426	4.31
Mkt. yr.	1,558	7,374	16	8,948	1,583	4,711	2,228	8,522	426	3.24
1996/97										
Mkt. yr.	426	9,265	10	9,702	1,670	4,975	1,900	8,545	1,157	2.50-2.80
SORGHUM										
1993/94										
Sep-Nov	175	534	0	709	1	223	39	263	446	2.22
Dec-Feb	446	---	0	446	1	109	60	170	276	2.59
Mar-May	276	---	0	276	1	83	64	148	128	2.39
Jun-Aug	128	---	0	128	1	41	38	81	48	2.10
Mkt. yr.	175	534	0	709	4	456	202	662	48	2.31
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	1	10	41	52	18	3.63
Mkt. yr.	72	460	0	532	4	312	198	514	18	3.19
1996/97										
Mkt. yr.	18	820	0	839	1	245	60	306	533	2.15-2.45

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										
1993/94										
Jun-Aug	151	398	3	552	43	92	15	150	403	1.91
Sep-Nov	403	---	11	413	37	28	15	80	333	2.02
Dec-Feb	333	---	24	357	34	87	12	133	224	2.19
Mar-May	224	---	34	258	53	43	24	119	139	2.24
Mkt. yr.	151	398	71	621	166	250	66	482	139	1.99
1994/95										
Jun-Aug	139	375	24	538	44	122	20	186	352	2.00
Sep-Nov	352	---	14	366	36	32	19	87	279	1.98
Dec-Feb	279	---	14	292	36	53	11	99	193	2.05
Mar-May	193	---	14	207	51	27	17	95	113	2.15
Mkt. yr.	139	375	66	580	166	235	66	467	113	2.03
1995/96										
Jun-Aug	113	360	12	484	42	113	17	172	313	2.53
Sep-Nov	313	---	8	321	38	30	11	78	243	2.80
Dec-Feb	243	---	8	251	34	19	20	73	178	3.18
Mar-May	178	---	12	190	52	23	16	91	100	3.29
Mkt. yr.	113	360	41	513	166	185	62	413	100	2.89
1996/97										
Mkt. yr.	100	397	40	536	166	235	35	436	100	2.50-2.70
OATS										
1993/94										
Jun-Aug	113	207	17	337	32	84	1.5	118	219	1.35
Sep-Nov	219	---	35	254	29	30	0.7	60	194	1.33
Dec-Feb	194	---	31	225	27	51	0.5	79	147	1.42
Mar-May	146	---	24	170	37	28	0.2	65	106	1.39
Mkt. yr.	113	207	107	427	125	193	3.0	321	106	1.36
1994/95										
Jun-Aug	106	229	20	355	32	103	0.2	135	220	1.19
Sep-Nov	220	---	34	254	30	32	0.2	62	192	1.19
Dec-Feb	192	---	23	215	28	38	0.4	66	149	1.21
Mar-May	149	---	16	165	35	29	0.2	64	101	1.36
Mkt. yr.	106	229	93	428	124	202	1.0	327	101	1.22
1995/96										
Jun-Aug	101	162	28	290	32	78	0.4	110	180	1.48
Sep-Nov	180	---	26	206	30	23	0.5	53	153	1.52
Dec-Feb	153	---	18	171	27	30	0.3	58	113	1.94
Mar-May	113	---	9	122	34	21	0.8	56	66	2.21
Mkt. yr.	101	162	81	343	123	152	2.1	277	66	1.68
1996/97										
Mkt. yr.	66	155	90	312	120	120	3.0	243	69	1.75-1.95

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
1993/94									
Sep-Nov	43.2	5.7	0.6	0.5	50.1	-1.0	49.0		
Dec-Feb	31.6	2.8	1.9	0.8	37.1	1.1	38.1		
Mar-May	24.2	2.1	0.9	0.5	27.8	-0.7	27.1		
Jun-Aug	20.3	1.0	2.7	1.5	25.6	10.2	35.8		
Mkt. yr.	119.4	11.6	6.1	3.4	140.4	9.6	150.0	84.0	1.79
% Change	-10.7	-3.1	58.1	7.1	-8.0	145.2	-4.2	1.5	-5.6
1994/95									
Sep-Nov	51.3	5.3	0.7	0.6	57.9	-0.8	57.1		
Dec-Feb	38.0	2.0	1.2	0.6	41.8	0.7	42.5		
Mar-May	29.6	1.7	0.6	0.5	32.4	-0.8	31.6		
Jun-Aug	21.7	1.1	2.5	1.2	26.4	8.3	34.7		
Mkt. yr.	140.6	10.2	4.91	2.8	158.5	7.4	166.0	84.3	1.97
% Change	17.8	-12.4	-19.4	-15.8	12.9	-22.4	10.6	0.4	10.2
1995/96									
Sep-Nov	44.7	4.5	0.7	0.4	50.2	-2.7	47.5		
Dec-Feb	34.3	1.8	0.4	0.5	37.1	0.3	37.4		
Mar-May	27.1	1.4	0.5	0.3	29.3	-1.8	27.5		
Jun-Aug	13.5	0.2	3.1	0.9	17.8	10.4	28.1		
Mkt. yr.	119.7	7.9	4.6	2.1	134.4	6.2	140.6	84.9	1.66
% Change	-14.9	-22.0	-5.7	-24.5	-15.3	-16.4	-15.3	0.7	-15.9
1996/97									
Mkt. yr.	126.4	13.3	4.1	2.2	146.0	8.0	154.0	86.3	1.79
% Change	5.6	68.4	-10.8	2.0	8.7	28.6	9.6	1.6	7.8

Table 3--Grain shipments and rates

	1994/95		-----1995/96-----		-----1996/97--	
	Mkt. Yr.	Mkt. Yr.	Sept-Oct	Oct	Sept-Oct	Oct
Barge shipments 1/ (Million ton/month)	3.1	4/ 3.7	3.8	3.7	NA	NA
Barge rate index 2/ (Dec 1990 = 100)	160.8	151.4	215.5	206.1	136.6	157.0
Railcar loadings 3/ (1,000 cars/week)	28.5	28.2	30.5	29.8	21.4	24.9
Rail rate index 2/ (Dec 1984 = 100)	116.6	117.1	117.2	117.3	119.9	123.7

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/	3.91	4.30	7.30	7.19	2.67	3.69	2.28
Monthly:							
1995:							
Jul	2.79	3.23	5.61	5.41	2.25	3.69	1.92
Aug	2.68	3.21	5.53	5.38	2.09	3.22	1.96
Sep	2.83	3.32	5.84	5.78	2.06	3.58	2.04
Oct	3.12	3.57	6.15	6.22	2.58	3.69	2.11
1996:							
Jul	4.70	5.07	8.35	7.38	2.79	3.74	2.48
Aug	4.48	4.73	7.43	6.89	2.60	3.40	2.36
Sep	3.39	3.69	6.30	5.89	2.34	3.15	2.08
Oct	2.81	3.27	5.08	5.34	2.10	NQ	2.06
1/ Marketing year beginning September 1. NQ = No quote.							
2/ Marketing year beginning June 1.							
3/ Preliminary.							

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/
-----\$/ton-----								
Mkt. yr.								
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:								
Jul	160.10	116.90	81.90	218.75	159.80	101.00	61.80	89.60
Aug	157.50	116.50	79.40	232.00	157.40	NQ	71.90	87.00
Sep	171.75	137.60	81.60	250.00	166.70	112.00	88.10	86.80
Oct	183.40	153.25	98.40	290.50	221.00	121.70	93.40	87.20
1996:								
Jul	242.30	201.75	109.30	308.50	239.60	175.40	112.70	92.90
Aug	251.10	193.10	111.60	295.00	246.60	NQ	115.80	96.00
Sep	265.50	193.10	115.75	329.40	279.80	164.00	115.40	95.70
Oct	238.00	183.25	102.30	344.00	272.10	160.80	103.20	98.20
1/ Marketing year beginning September 1. NQ = No quotes.								
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							
1993/94							
Sep-Nov	98.5	55.8	56.4	112.2	27.7	29.4	380.1
Dec-Feb	95.3	49.6	52.7	119.3	29.9	29.1	375.8
Mar-May	118.0	56.7	56.3	112.4	24.9	29.7	398.2
Jun-Aug	131.8	60.8	57.3	114.3	23.2	29.7	417.1
Mkt year	443.6	222.9	222.7	458.3	105.8	118.0	1571.3
1994/95							
Sep-Nov	104.6	58.8	57.3	134.4	21.2	29.4	405.8
Dec-Feb	100.5	51.5	55.0	141.5	27.9	29.1	405.5
Mar-May	123.8	58.4	56.2	137.7	24.2	29.7	430.1
Jun-Aug	135.6	62.3	57.3	119.1	26.7	29.7	430.8
Mkt year	464.6	231.1	225.7	532.8	100.0	118.0	1672.1
1995/96							
Sep-Nov	110.1	60.7	55.8	121.1	32.3	29.4	409.4
Dec-Feb	105.1	52.9	51.5	120.8	37.5	29.1	396.9
Mar-May	130.8	60.7	54.9	91.8	25.0	29.7	393.1
Jun-Aug	136.2	62.8	57.0	61.9	15.5	29.7	363.2
Mkt year	482.2	237.0	219.3	395.7	110.4	118.0	1562.6
1996/97							
Mkt year	505.0	245.0	230.0	450.0	100.0	120.0	1650.0

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					
1995:					
Aug	13.80	11.25	25.50	11.80	13.85
Sep	14.34	11.80	25.50	11.80	13.67
Oct	14.76	12.23	25.50	12.55	13.94
Nov	14.87	12.34	25.50	13.30	14.36
1996:					
Aug	21.72	17.62	25.50	13.15	19.19
Sep	20.36	16.26	25.50	13.15	18.50
Oct	17.19	13.11	25.50	13.15	15.41
Nov 2/	16.78	12.70	25.50	13.15	13.58

1/ Marketing year beginning September 1.

2/ Preliminary.

3/ Bulk-industrial, unmodified.

