



Grain Price OUTLOOK

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CORN: LARGE CROP, STRONG DEMAND

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Summary

The 2003-04 U.S. corn marketing year is closing out with strong domestic demand, disappointing exports, and potential for larger-than-expected year ending stocks. Still, those stocks will be relatively small, representing less than 9 percent of consumption during the year. Early prospects for the 2004-05 marketing year are for a record U.S. crop, a larger crop outside of the U.S., strong world demand, and a continuation of relatively small world inventories at the end of the year.

Corn prices reached the highest levels since 1996 in April 2004, but declined sharply in late June and early July as exports faltered and crop prospects improved. Price volatility is expected to continue through the 2004-05 marketing year, with the marketing year average farm price at or above the average for the 2003-04 marketing year. Price levels in mid-July appeared to fully reflect large crop prospects, so that further significant declines are not expected unless the crop exceeds even the current optimistic prospects.

Old Crop Wrap-Up

The 2003-04 marketing year will draw to a close on August 31, 2004. The year

has been characterized by a record large crop, strong demand, and volatile prices. Domestic consumption of corn during the first three quarters of the marketing year was record large, driven by expanding ethanol production and a recovery in feed and residual use (Table 1). For the year, the USDA projects feed and residual use of corn at 5.8 billion bushels, implying that use during the summer quarter will be a relatively small 877 million bushels. That projection appears too low given the size of the current livestock inventory and the relatively low price of corn in relation to protein feeds. Perhaps more wheat will be fed this summer due to the quality problems, but that is not projected by the USDA. Feed and residual use of corn for the year may exceed the USDA projections. A forecast of 5.82 billion bushels is used here (Table 2).

Domestic processing use of corn during the first three quarters of the year totaled 1.897 billion bushels, 9.7 percent more than used during the same period last year. For the entire marketing year the USDA projects use at 2.565 billion bushels, 9.6 percent more than used last year. The 225 million bushel year-over-year increase in use is being driven by a 200 million bushel increase in use of corn for ethanol production.

U.S. corn exports have recovered sharply from the decline experienced last year. Through the first three quarters of the marketing year, the Census Bureau reported exports of 1.431 billion bushels, an increase of 245 million bushels (20.6 percent) from exports of a year earlier. The rate of exports during the spring and early summer, however, did not keep pace with expectations. The USDA increased the projection of marketing year exports from 2 billion bushels to 2.05 billion in May, but lowered the projection to 1.95 billion in July. Based on the magnitude of exports through July 8, as reported in the USDA's weekly *Export Sales* report, shipments of U.S. corn will need to average nearly 43 million bushels per week during the final 7.5 weeks of the year to reach the USDA projections. [Through May, the Census Bureau estimates of corn exports tracked the USDA estimates very closely.] For the six weeks ended on July 8, weekly shipments averaged only 35 million bushels per week. There is some chance that exports will fall a bit short of even the revised projection. A projection of 1.925 billion bushels is used here (Table 2).

The recovery in U.S. exports during the current marketing year has been fueled in part by less competition from Chinese corn exports and a sharp decline in the availability of wheat. The magnitude of wheat feeding outside of the U.S. declined by 15 percent (600 million bushels) during the 2003-04 marketing year as a result of a second consecutive small crop. Much of that decline

occurred in Europe, Russia, and the Ukraine.

It now appears that stocks of U.S. corn at the end of the 2003-04 marketing year will be near 900 million bushels, the lowest level in 7 years. Stocks, however, will not be quite as small as previously forecast. In April, for example, this newsletter carried a forecast of 831 million bushels. The narrow margin between world production and consumption and the relatively low level of stocks has resulted in extremely volatile prices and a wide trading range during the current marketing year. Will that pattern continue in 2004-05?

U.S. Production Prospects

The USDA's June *Acreage* report, reported that area planted to corn for all purposes in 2004 totaled 80.968 million acres (Table 3). That estimate is 1.964 million acres larger than indicated in the March *Prospective Plantings* report, 2.232 million more than planted in 2003, and the most since 1985. The June estimate represents the largest March to June increase in the planted acreage estimate since 1975. The largest year-over-year increases in acreage occurred in Illinois, Kansas, Minnesota, and North Dakota (Table 4).

In recent history, the final acreage estimate has been relatively close to the June estimate. The largest differences occurred in 1993, 1995, and 1996 when the final estimates were 1 to 1.3 million below the June estimate. This year, there are reports of some unplanted

acreage in river bottoms and particularly in some upper midwestern states that experienced prolonged wet conditions. Still, we expect that actual acreage will be near June intentions and an estimate of 80.7 million acres is used.

The bigger uncertainty centers around the magnitude of acreage that will be harvested for grain in 2004. Since 1996, acreage harvested for silage has ranged from 5.61 to 7.49 million acres. The 7.49 million acres occurred in 2002 when dry conditions in many eastern areas resulted in acreage intended for grain to be harvested as silage. The "typical" acreage harvested for silage has been near 6.1 million. That acreage, however, totaled 6.5 million in 2003. Acreage not harvested for either grain or silage has ranged from 786,000 to 2.074 million since 1996,. The smallest area occurred in 2001 and the largest in 2002. Unharvested acreage totaled 1.069 million in 2003.

Under "normal" conditions, it appears that about 7 million acres of planted corn is not harvested for grain. Since 1996, however, that total has ranged from 6.6 to 9.6 million acres and totaled 7.6 million last year. Reports of more extensive flooding and ponding in a number of areas this year suggests that acreage not harvested for grain might be somewhat larger than normal. The USDA has estimated that area at 7.6 million, about the same as last year. A slightly larger area might be expected and 7.7 million is used here. This analysis projects to area harvested for grain in 2004 of 73 million acres, slightly

smaller than the USDA's June forecast of 73.362 million (Table 3).

The U.S. average corn yield was a record large 142.2 bushels in 2003 (Table 5). The average was above the early forecasts and was surprisingly large given the late season dryness and heat in some areas. The average was also higher than suggested by the last USDA crop condition report of the season which showed only 53 percent of the crop in either good or excellent condition. This apparent lack of correlation between crop condition ratings and yield is a major reason that many analysts do not use the crop condition ratings to form yield expectations. However, the poor correlation last year is not indicative of the longer term correlation between the final crop condition rating of the season and the average yield, when historical yields are adjusted for the trend increase in average yields over time. Using data from the last 18 years, the following model was estimated for forecasting the 2004 average yield: $\text{yield} = .6119(X) + 103.07$, where X is the percentage of the crop rated good or excellent in the final report of the year. The estimated relationship explains 86 percent of the annual variation in the trend-adjusted yields.

Obviously, the final crop condition ratings of the 2004 season cannot be anticipated. As of July 11, the USDA crop condition report showed 74 percent of the crop rated good or excellent. If that rating persists through the end of the season, the 2004 average yield would be forecast at 148.35 bushels per acre [$.6119(74) + 103.07$]. It is way too

early to be confident in a yield forecast. The 2004 crop is currently in generally very good condition and is maturing early in some states, including Illinois, Missouri, and Tennessee. However, crops in the upper midwest are maturing more slowly and there are reports of insect and disease problems in some areas. It appears that a high average yield is in the making, but uncertainty will persist for several more weeks. Based on trend analysis and factoring in the positive impact of an early planted crop, the USDA's World Agricultural Outlook Board is using a yield of 145 bushels in its supply projections. The USDA's National Agricultural Statistics Service will release the first yield and production forecasts based on enumeration and objective field measurements on August 12.

Based on current expectations about harvested acreage of corn for grain (73 million) and average yield prospects near 145 bushels per acre, a 2004 crop near 10.6 billion bushels is anticipated. Combined with beginning stocks of 900 million bushels, supply available for the 2004-05 marketing year is projected at 11.5 billion bushels (Table 2).

Consumption, Stocks and Price Prospects

Domestic consumption of corn during the 2004-05 marketing year should be supported by expanding ethanol production, a relatively stable livestock inventory, and slightly smaller crops of other feedgrains and wheat. Based on the USDA's *Acreage* report, combined acreage of sorghum, oats, and barley

harvested for grain in 2004 will be 1.7 million acres (11.6 percent) less than harvested in 2003. Higher average yields may offset most of that decline, resulting in a reduction in output of 12 to 15 million bushels. USDA projects a 105 million bushel increase in the amount of corn used for ethanol production, a 10 million bushels increase in corn used for all other food and industrial purposes, and a 25 million bushel decline in feed and residual use of corn. Using current projections for the 2003-04 marketing, the magnitude of increase would result in 2004-05 domestic use of 8.475 billion bushels.

U.S. corn exports during the 2004-05 marketing year should be supported by continued expansion in consumption outside of the U.S. (Projected year-over-year growth is 643 million bushels) and an expected decline of 160 million bushels in Chinese exports. Export demand will be moderated by the large year-over-year increase in world wheat production and by a possible rebound in Argentine corn production and exports. The USDA projects exports at 2.1 billion bushels and that projection is used here.

The forecasts developed here point to a slight increase in U.S. stocks by the end of the 2004-05 marketing year. At 926 million bushels, projected year end stocks represent about 8.8 percent of projected use, almost identical to that ratio for the 2003-04 marketing year.

One starting point in anticipating the 2004-05 marketing year average price is to examine the historical relationship between the year end stocks to use ratio

and the marketing year average price. This procedure should be only considered as a starting point since very different supply and demand conditions in individual years can lead to similar ratios of stocks-to-use but very different prices. The most obvious example is the contrast between a year of very small production that results in a low stocks-to-use ratio but also requires very high prices to force a reduction in consumption and a large crop year that results in a high level of consumption and a small stocks-to-use ratio, but a low price in order to encourage consumption. As a result, the relationship between stocks-to-use and price is not consistent over time.

We have estimated the relationship between the ratio of stocks-to-use and marketing year average price based on the period 1989-90 through 1997-98. That relationship is expressed as:

Price = \$1.90 + 6.89 (1 ÷ ratio of stocks to use).

For 2004-05, then the forecast of the marketing year average price is:

$\$1.90 + 6.89 (1 \div 8.8) = \2.68 per bushel.

In terms of making marketing decisions, the forecast marketing year average price can be compared to the average price currently offered by the futures market. Using closing futures prices for July 14, 2004 for the December 2004 through September 2005 contracts, in conjunction with the 3-year average U.S. basis, and the 5-year average

monthly marketing percentages (September through August), the futures market currently reflects a 2004-05 marketing year average price of \$2.47.

The current price of corn for the 2004-05 marketing year appears to be somewhat lower than suggested by our forecasts of supply, consumption, and stocks. The market may be reflecting different fundamentals, or supply and demand relationships may be different than those during the base period of 1989-90 through 1997-98. The results should be used cautiously, but can be updated as often as a change in any of the entries in the 2004-05 balance sheet in Table 2 are warranted. That process can be accomplished easily and quickly at the following web site:

www.farmdoc.uiuc.edu/marketing/corn_balance_tool/corn_balance.asp

A downloadable spread sheet is also available at that site that will allow the user to enter current futures prices and receive a calculation of the marketing year average farm price projected by current futures prices.

Pricing Decisions

December 2004 corn futures reached a contract high of \$3.415 in April 2004, but declined to near \$2.50 by mid-July. Many market advisors recommended significant forward sales of the 2004 crop with cash contracts, futures, or options during the period of high prices. With the potential for higher than expected yields in many areas and the reluctance to forward price early in the

growing season, the majority of the 2004 crop probably has not been priced by producers. Prices will likely remain under pressure as long as crop condition ratings remain high. In general, however, price declines appear to fully reflect a very large 2004 harvest. Periods of weather or crop concerns may still unfold over the next few weeks, offering an opportunity to price additional quantities of the 2004 crop. At this juncture a move back above the \$2.70 to \$2.80 level is not expected. Without a crop scare, higher prices will have to be generated by a high rate of consumption following of harvest.

[Dr. Scott Irwin was instrumental in developing the crop yield model, the price model, and the average marketing year spread sheet described in this newsletter.]

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Table 1. Corn Quarterly Balance Sheet

	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
	million bushels																				
September 1 stocks	3,523	1,006	1,648	4,040	4,882	4,259	1,930	1,344	1,521	1,100	2,113	850	1,558	426	883	1,308	1,787	1,718	1,899	1,596	1,087
Production	4,174	7,672	8,875	8,226	7,131	4,929	7,532	7,934	7,475	9,477	6,338	10,051	7,400	9,233	9,207	9,759	9,431	9,915	9,503	8,968	10,114
TOTAL ^a	7,699	8,680	10,534	12,267	12,016	9,191	9,464	9,282	9,016	10,584	8,472	10,910	8,974	9,672	10,099	11,085	11,232	11,640	11,412	10,578	11,211
September-November																					
Seed, food, ind.	227	244	276	295	296	302	312	338	361	370	383	410	417	388	435	450	459	466	492	549	598
Export	493	503	415	318	396	471	582	383	421	488	435	449	660	487	380	450	535	507	448	393	473
Feed, residual	1,326	1,301	1,219	1,348	1,551	1,344	1,487	1,619	1,673	1,814	1,701	1,963	1,778	1,885	2,030	2,118	2,188	2,131	2,200	1,986	2,178
TOTAL	2,046	2,048	1,910	1,961	2,243	2,117	2,381	2,339	2,455	2,672	2,519	2,822	2,856	2,759	2,845	3,018	3,182	3,104	3,140	2,928	3,249
December 1 stocks	5,652	6,631	8,615	10,305	9,771	7,072	7,082	6,940	6,547	7,906	5,937	8,080	6,106	6,903	7,247	8,052	8,039	8,530	8,265	7,638	7,954
Seed, food, ind.	212	236	262	281	288	301	313	330	362	365	379	410	405	400	425	434	447	465	482	563	616
Export	506	580	460	313	405	502	682	471	362	463	330	590	562	525	380	465	465	415	448	400	500
Feed, residual	1,069	1,192	1,306	1,463	1,444	1,065	1,276	1,351	1,267	1,401	1,240	1,492	1,344	1,486	1,503	1,460	1,529	1,607	1,540	1,547	1,570
TOTAL	1,787	2,008	2,028	2,057	2,137	1,868	2,271	2,152	1,991	2,229	1,949	2,493	2,311	2,411	2,308	2,359	2,441	2,488	2,471	2,510	2,686
March 1 stocks	3,865	4,623	6,587	8,248	7,636	5,204	4,812	4,789	4,561	5,678	3,996	5,592	3,800	4,494	4,940	5,698	5,602	6,043	5,795	5,132	5,271
Seed, food, ind.	253	294	307	333	337	353	376	384	414	414	423	452	433	471	470	495	512	514	539	617	683
Export	513	475	201	496	510	592	601	454	371	411	270	568	610	433	350	497	451	455	497	393	458
Feed, residual	954	1,019	1,091	1,088	951	841	993	960	1,042	1,146	950	1,159	1,044	1,097	1,084	1,097	1,058	1,153	1,166	1,141	1,164
TOTAL	1,720	1,788	1,599	1,917	1,798	1,786	1,970	1,798	1,828	1,971	1,642	2,180	2,087	2,001	1,904	2,089	2,022	2,122	2,203	2,151	2,305
June 1 stocks	2,145	2,836	4,990	6,332	5,839	3,419	2,843	2,992	2,739	3,709	2,360	3,415	1,718	2,497	3,040	3,616	3,586	3,924	3,597	2,985	2,970
Seed, food, ind.	238	293	307	324	331	341	369	374	396	407	429	442	373	460	475	467	496	512	532	611	
Export	374	292	151	365	406	463	503	419	430	301	293	570	396	353	394	572	485	564	512	406	
Feed, residual	527	603	499	761	843	685	627	679	816	891	789	846	527	809	865	792	890	951	958	884	
TOTAL	1,139	1,188	957	1,450	1,580	1,489	1,499	1,472	1,642	1,599	1,511	1,858	1,295	1,617	1,734	1,831	1,871	2,027	2,002	1,900	
September 1 stocks Annual	1,006	1,648	4,040	4,882	4,259	1,930	1,344	1,521	1,100	2,113	850	1,558	426	883	1,308	1,787	1,718	1,899	1,596	1,087	
Seed, food, ind.	930	1,067	1,152	1,233	1,251	1,298	1,370	1,425	1,533	1,556	1,613	1,715	1,628	1,714	1,805	1,846	1,913	1,957	2,046	2,340	
Export	1,887	1,850	1,227	1,492	1,716	2,029	2,367	1,727	1,584	1,663	1,328	2,177	2,228	1,797	1,504	1,989	1,937	1,941	1,905	1,592	
Feed, residual	3,876	4,115	4,114	4,660	4,789	3,934	4,382	4,609	4,798	5,252	4,680	5,460	4,693	5,277	5,482	5,468	5,665	5,842	5,864	5,558	
TOTAL	6,693	7,032	6,494	7,385	7,757	7,260	8,120	7,761	7,916	8,471	7,622	9,352	8,548	8,789	8,791	9,298	9,515	9,741	9,815	9,490	

^a Includes imports for t

Table 2. Corn Annual Balance Sheet

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 ^a
	million bushels															
Carryin	1,930	1,344	1,521	1,100	2,113	850	1,558	426	883	1,308	1,787	1,718	1,899	1,596	1,087	901
Production	<u>7,532</u>	<u>7,934</u>	<u>7,475</u>	<u>9,477</u>	<u>6,338</u>	<u>10,051</u>	<u>7,400</u>	<u>9,233</u>	<u>9,207</u>	<u>9,759</u>	<u>9,431</u>	<u>9,915</u>	<u>9,503</u>	<u>8,967</u>	<u>10,114</u>	<u>10,585</u>
TOTAL ^b	9,464	9,282	9,016	10,584	8,472	10,910	8,974	9,672	10,099	11,085	11,232	11,659	11,412	10,578	11,211	11,501
Seed, food, industrial	1,370	1,425	1,533	1,556	1,613	1,715	1,628	1,714	1,805	1,846	1,913	1,957	2,046	2,340	2,565	2,680
Export	2,367	1,727	1,584	1,663	1,328	2,177	2,228	1,797	1,504	1,981	1,937	1,935	1,905	1,592	1,925	2,100
Feed and residual	<u>4,382</u>	<u>4,609</u>	<u>4,798</u>	<u>5,252</u>	<u>4,680</u>	<u>5,460</u>	<u>4,693</u>	<u>5,277</u>	<u>5,482</u>	<u>5,471</u>	<u>5,664</u>	<u>5,848</u>	<u>5,864</u>	<u>5,558</u>	<u>5,820</u>	<u>5,795</u>
TOTAL	8,120	7,761	7,915	8,471	7,621	9,352	8,548	8,789	8,791	9,298	9,515	9,741	9,815	9,491	10,310	10,575
Carryout	1,344	1,521	1,100	2,113	850	1,558	426	883	1,308	1,787	1,718	1,899	1,596	1,087	901	926
U.S. average price	\$2.36	\$2.28	\$2.37	\$2.07	\$2.50	\$2.26	\$3.24	\$2.71	\$2.45	\$1.94	\$1.82	\$1.85	\$1.97	\$2.32	\$2.43	\$2.60

^a Projected

^b Includes imports

Table 3. United States Corn Planting Intentions, Actual Plantings, and Acres Harvested

Year	Planted Acreage			Actual	Harvested Acreage
	February/January Intentions	March Intentions	June Intentions		
			thousand acres		
1976	80,822	82,727	84,092	84,588	71,506
1977	84,526	83,923	82,735	84,328	71,614
1978	80,944	80,237	78,717	81,675	71,930
1979	80,676	79,209	79,751	81,394	72,400
1980	83,131	82,022	83,478	84,043	72,961
1981	...	83,977	84,677	84,097	74,524
1982	...	84,735	82,129	81,857	72,719
1983	69,569 ^a	58,812	60,129	60,217	51,479
1984	...	81,766	79,940	80,617	71,897
1985	...	82,021	83,217	83,398	75,209
1986	...	78,066	76,646	76,580	68,907
1987	...	67,556	66,024	66,200	59,505
1988	...	66,926	67,519	67,717	58,250
1989	...	73,253	72,790	72,322	64,783
1990	...	74,804	74,574	74,166	66,952
1991	77,500	76,124	75,909	75,957	68,822
1992		79,007	79,335	79,311	72,077
1993		76,486	74,259	73,239	62,933
1994		78,625	78,767	78,921	72,514
1995		75,323	72,800	71,479	65,210
1996		79,920	80,355	79,229	72,644
1997		81,416	80,227	79,537	72,671
1998		80,781	80,798	80,165	72,589
1999		78,219	77,611	77,386	70,487
2000		77,881	79,579	79,551	72,440
2001		76,693	76,109	75,702	68,768
2002		79,047	78,847	78,894	69,330
2003		79,022	79,066	78,736	71,139
2004		79,004	80,968		(73,362)

^a February

Table 4. Planted Acreage of Corn by State

State	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 ^a
	thousand acres														
Georgia	660	600	750	650	600	400	580	550	500	350	360	265	340	340	330
Illinois	10,600	11,200	11,200	10,590	11,600	10,200	11,000	11,200	10,600	10,800	11,200	11,000	11,200	11,200	11,700
Indiana	5,600	5,700	6,100	5,550	6,100	5,400	5,600	5,900	5,800	5,800	5,700	5,800	5,400	5,600	5,600
Iowa	12,800	12,500	13,200	12,000	13,000	11,700	12,700	12,200	12,500	12,100	12,300	11,700	12,300	12,400	12,600
Kansas	1,600	1,800	1,850	2,000	2,280	2,150	2,500	2,750	3,000	3,150	3,450	3,450	3,250	2,900	3,250
Kentucky	1,350	1,400	1,420	1,370	1,350	1,280	1,300	1,270	1,300	1,320	1,330	1,200	1,130	1,170	1,240
Michigan	2,400	2,600	2,700	2,500	2,550	2,450	2,650	2,500	2,300	2,200	2,200	2,200	2,250	2,300	2,200
Minnesota	6,700	6,600	7,200	6,300	7,000	6,700	7,500	7,000	7,300	7,100	7,200	6,800	7,200	7,200	7,700
Missouri	2,100	2,300	2,500	2,200	2,400	1,650	2,750	2,700	2,650	2,650	2,850	2,700	2,800	2,900	3,000
Nebraska	7,700	8,200	8,300	8,000	8,600	8,000	8,500	8,900	8,800	8,600	8,500	8,100	8,400	8,100	8,300
New York													1,020	1,000	980
North Carolina	1,200	1,050	1,150	1,000	1,000	800	1,000	960	860	750	730	700	790	740	830
North Dakota													1,230	1,450	1,850
Ohio	3,700	3,700	3,800	3,500	3,700	3,300	2,900	3,800	3,550	3,450	3,550	3,400	3,200	3,300	3,250
Pennsylvania	1,380	1,400	1,380	1,370	1,400	1,380	1,450	1,550	1,550	1,500	1,550	1,500	1,450	1,450	1,400
South Dakota	3,400	3,750	3,800	3,350	3,800	2,800	4,000	3,800	3,900	3,600	4,300	3,800	4,400	4,400	4,500
Tennessee	620	620	740	660	670	640	770	700	700	630	650	630	690	710	700
Texas	1,650	1,700	1,750	2,000	2,150	2,100	2,100	2,000	2,400	1,950	2,100	1,600	2,050	1,830	1,800
Wisconsin	3,700	3,800	3,900	3,400	3,750	3,650	3,900	3,850	3,700	3,600	3,500	3,400	3,650	3,750	3,750
United States	74,171	75,951	79,325	73,323	79,158	71,245	79,487	79,537	80,165	77,386	79,551	75,752	79,054	78,736	80,968

^a Intentions

Table 5. United States Corn Yield Estimates

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
	bushels per acre																													
July 1	93.0	90.5	89.4	90.1	95.8	99.3	95.9	87.0																
August 1	87.4	86.7	87.3	96.1	102.1	93.0	104.3	113.9	99.9	107.9	110.6	120.4	121.4	78.5	112.8	117.7	107.8	121.3	116.0	128.4	125.6	118.7	125.3	130.0	134.7	141.9	133.9	125.2	139.9	
September 1	85.1	82.8	89.7	100.3	104.6	91.8	107.1	113.9	85.1	106.3	113.3	119.7	119.9	78.5	112.4	121.7	106.1	121.4	113.1	129.0	121.1	120.2	125.2	132.0	132.2	141.8	133.5	125.4	138.5	
October 1	86.2	82.7	90.8	100.7	106.4	90.8	109.0	114.2	82.9	105.5	115.1	119.2	119.9	80.2	114.4	120.3	108.8	123.8	110.3	133.8	116.6	123.0	125.8	132.0	133.5	139.6	136.3	127.2	142.2	
November 1	87.2	85.5	91.5	101.2	109.2	90.8	109.2	114.2	80.5	105.9	116.6	119.3	120.3	82.3	116.6	119.0	108.6	129.3	103.1	138.4	113.7	126.5	126.4	133.3	134.5	137.7	138.0	127.6	143.2	
January 1	86.2	87.4	90.8	101.2	109.4	91.0	109.9	114.8	81.6	106.6	118.0	119.3	119.4	84.6	116.2	118.5	108.6	131.4	100.7	138.6	113.5	127.1	127.0	134.4	133.8	137.1	138.2	130.0	142.2	
FINAL	86.4	88.0	90.8	101.0	109.5	91.0	108.9	113.2	81.1	106.7	118.0	119.3	119.8	84.6	116.3	118.5	108.6	131.5	100.7	138.6	113.5	127.1	126.7	134.4	133.8	136.9	138.2	129.3		

Table 6. United States Corn Production Estimates

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	million bushels																						
July	7,116	...	...	...	...	...	...	5,200															
August	7,735	8,315	5,237	7,668	8,266	8,316	7,231	4,479	7,348	7,850	7,418	8,762	7,423	9,214	8,122	8,695	9,276	9,592	9,561	10,369	9,266	8,886	10,064
September	7,940	8,319	4,390	7,552	8,469	8,268	7,141	4,462	7,321	8,118	7,295	8,770	7,229	9,257	7,832	8,804	9,268	9,738	9,381	10,362	9,238	8,849	9,944
October	8,081	8,315	4,259	7,498	8,603	8,220	7,139	4,553	7,449	8,022	7,479	8,938	6,962	9,602	7,541	9,012	9,312	9,743	9,467	10,192	9,430	8,970	10,207
November	8,097	8,330	4,121	7,527	8,717	8,223	7,166	4,671	7,590	7,935	7,479	9,329	6,503	10,010	7,374	9,265	9,359	9,836	9,537	10,054	9,546	9,003	10,278
January	8,201	8,397	4,204	7,656	8,865	8,253	7,064	4,921	7,527	7,933	7,474	9,479	6,344	10,103	7,374	9,293	9,366	9,761	9,437	9,968	9,507	9,008	10,114
FINAL	8,119	8,235	4,174	7,672	8,875	8,226	7,131	4,929	7,532	7,934	7,475	9,477	6,338	10,051	7,400	9,233	9,207	9,759	9,431	9,915	9,503	8,967	

Table 6. United States Corn Production Estimates

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	million bushels																						
July	7,116	...	...	...	...	...	...	5,200															
August	7,735	8,315	5,237	7,668	8,266	8,316	7,231	4,479	7,348	7,850	7,418	8,762	7,423	9,214	8,122	8,695	9,276	9,592	9,561	10,369	9,266	8,886	10,064
September	7,940	8,319	4,390	7,552	8,469	8,268	7,141	4,462	7,321	8,118	7,295	8,770	7,229	9,257	7,832	8,804	9,268	9,738	9,381	10,362	9,238	8,849	9,944
October	8,081	8,315	4,259	7,498	8,603	8,220	7,139	4,553	7,449	8,022	7,479	8,938	6,962	9,602	7,541	9,012	9,312	9,743	9,467	10,192	9,430	8,970	10,207
November	8,097	8,330	4,121	7,527	8,717	8,223	7,166	4,671	7,590	7,935	7,479	9,329	6,503	10,010	7,374	9,265	9,359	9,836	9,537	10,054	9,546	9,003	10,278
January	8,201	8,397	4,204	7,656	8,865	8,253	7,064	4,921	7,527	7,933	7,474	9,479	6,344	10,103	7,374	9,293	9,366	9,761	9,437	9,968	9,507	9,008	10,114
FINAL	8,119	8,235	4,174	7,672	8,875	8,226	7,131	4,929	7,532	7,934	7,475	9,477	6,338	10,051	7,400	9,233	9,207	9,759	9,431	9,915	9,503	8,967	