



Grain Price OUTLOOK

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CORN: LARGE CROP DISAPPEARING QUICKLY

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Summary

The 2003 U.S. corn crop was record large, but not as large as forecast in November 2003. The USDA's January *Crop Production* report showed a crop of 10.114 billion bushels, 164 million (1.6 percent) smaller than the November forecast. Stocks of corn on December 1, 2003 were estimated at 7.945 billion bushels, implying a record use of U.S. corn during the first quarter of the 2003-04 marketing year. The USDA now forecasts year ending stocks of corn to be less than one billion bushels, the lowest level in 7 years.

The rapid increase in corn use, and prospects that use will remain large in the near future, means that the U.S. crop needs to be large again in 2004. The USDA's March 31 *Prospective Plantings* report is expected to show that producers intend to increase corn acreage in 2004. The U.S. average yield has been near trend value in 7 of the past 8 years. Can a trend yield be attained again in 2004?

Corn prices moved to the highest level of the year following the USDA's reports released on January 12. Those higher prices are likely to be maintained into the growing season, with a potential for volatile

prices during the spring and summer. The U.S. average farm price of corn for the 2003-04 marketing year is expected to be near \$2.40. The daily central Illinois average cash price could challenge \$2.70 and December 2004 futures could well exceed the \$2.80 mark.

Production and Stock Estimates

The market was generally surprised by the USDA's January estimate of the size of the 2003 corn crop. The estimate was expected to be slightly larger than the November forecast of 10.278 billion bushels. Instead, the estimate was 10.114 billion bushels. The smaller estimate reflected a change in both the acreage and yield forecasts.

Planted acreage of corn in 2003 is now estimated at 78.736 million acres, 330,000 less than forecast in June 2003 (Table 1). Acreage harvested for grain was estimated at 71.139 million acres, 626,000 acres less than forecast. The largest declines in the estimates of harvested acreage were in the Dakotas, Kansas, and Ohio. Still, abandoned acreage (not harvested for grain or silage) of 1.1 million was considerably less than the 2.3 million acres abandoned in 2002.

The U.S. average corn yield in 2003 is estimated at 142.2 bushels per acre. That is a record large yield, but one bushel below the November forecast (Table 2). For the major producing states, the largest changes from the November forecast came in Illinois (-5 bushels), Minnesota (+3 bushels), South Dakota (+6 bushels), and Wisconsin (-3 bushels). Over the past six years, there were five years in which both the October production forecast exceeded the September forecast and the November forecast exceeded the October forecast. In each of those years, the January estimate was smaller than the November forecast. This reverses the trend of the previous 8 times of larger forecasts in October and November. In 7 of those 8 years, the January estimate was larger than the November forecast (Table 3).

Stocks of U.S. corn on December 1, 2003 were estimated at 7.945 billion bushels, only about 300 million larger than stocks of a year earlier (Table 4). The stocks estimate implies that 3.258 billion bushels of U.S. corn were used during the first quarter of the marketing year. That is 289 million bushels (9.7 percent) more than used during the same period last year and 76 million bushels more than the previous record use in 1999. The largest absolute increase in use was in the feed and residual category. Calculated use totaled 2.185 billion bushels, 161 million Exports and export sales of U.S. corn continued at a high rate in December and early January. As of January 8, the USDA's report of export inspections showed cumulative shipments since September 1, 2003 at 700 million bushels. Shipments were 21 percent larger than on the same date last year. The export estimates in the weekly *Export Sales* report and from the Census Bureau (through November) were relatively close to those in the inspections report. As of January 8, the USDA reported unshipped sales of 354 million bushels, compared to outstanding sales of only 222 million at the same time last year. Japan and

more than use of a year ago. That is a surprisingly large calculation given the number of livestock fed during the quarter. However, it is not unusual for first quarter use to vary substantially from year to year. The March 1 *Grain Stocks* report will shed more light on the actual rate of corn feeding. For now, the calculation does suggest that the 2003 crop may have been a bit smaller than the current estimate.

The largest percentage increase in use during the first quarter of the year was in exports. At 475 million bushels, exports were 21 percent larger than the low level of a year ago. Large increases in shipments were registered for Israel, Egypt, and Mexico. Shipments to Canada were down from the high level of a year ago when Canada experienced a small feed grain crop.

Processing use of corn during the first quarter was estimated at 598 million bushels, 8 percent above last year's use. All of that increase was in corn used for ethanol production. Total apparent domestic use of corn during the first quarter of the year was larger than expected.

Consumption Expected to Exceed the Record Crop

Egypt accounted for most of the increase. Importantly, outstanding sales to South Korea and Indonesia totaled 11 million bushels. While not large, sales plus accumulated shipments to those two countries totaled 29 million bushels, compared to only 5 million bushels last year. This increase provides some evidence that Chinese corn exports may be slowing. For the current marketing year, the USDA projects Chinese corn exports at 315 million bushels, 20 million below last month's projection and 285 million below shipments of a year ago. In addition, Argentine exports

are expected to decline by about 120 million bushels due to a smaller crop (Table 5).

The USDA now projects 2003-04 marketing year U.S. exports at 1.975 billion bushels, 50 million above the December projection, 383 million above last year's exports and at the highest level in five years. The current pace of sales and indications that China will curtail shipments, suggests that exports could exceed the current USDA projection. We are using a projection of 2 billion bushels (Table 6).

Apparent feed use of corn during the first quarter of the 2003-04 marketing year was surprisingly large. Prospects for total livestock and poultry production to be near the level of a year ago, along with rising corn prices, and increased by-product feeding suggest that the large apparent rate of feed and residual use may not be sustained for the rest of the year. If use from December 2003 through August 2004 is the same as use of a year ago, consumption of corn in the feed and residual category would reach 5.754 billion bushels. That is less than the current USDA projection of 5.775 billion bushels. The USDA projects a 1.7 percent increase in the number of animal units this year, but a decline in wheat feeding and an increase in the amount of corn fed per animal. The calculation of corn use during the second quarter of the year (not possible until the end of March) will be important to confirm the rate of feeding. For now, we are using a projection of 5.73 billion bushels, 2.5 percent more than fed last year (Table 6).

For seed, food and industrial use, the USDA projects a 5.7 percent increase for the year. That is less than the 6.6 percent increase projected last month. The actual increase depends almost entirely on the rate of increase in ethanol production. The rate of increase may slow as corn prices move higher. For now, we are using the USDA projection of 2.48 billion bushels. Use for all

purposes is projected at 10.21 billion bushels, leaving year ending stocks at 1.001 billion bushels, or 9.8 percent of total consumption.

An Increase in Corn Acreage in 2004?

U.S. corn acreage has been relatively stable since acreage reduction provisions of the farm program were eliminated in 1996. Still, plantings have varied by as much as 4.4 million acres since 1996. In 5 of those 8 years, acreage was near 79 million. Acreage harvested for grain has ranged from 68.808 million to 72.671 million (Table 1).

Because of the generally high corn yields and generally low soybean yields in 2003, there has been considerable speculation that producers will increase corn acreage, mostly at the expense of wheat and soybean acreage, in 2004. This would imply increasing the acreage of second-year corn. Many producers have likely already made the 2004 planting decision, but there is still room for some adjustment in actual plantings. Reduced winter wheat seedings leaves more acreage to be seeded to spring crops – spring wheat, feed grains or oilseeds. Geography, weather, and prices all have the potential to influence planted acreage of corn. Current prices for the 2004 crops of corn and soybeans actually favor soybean production over corn production, depending on the expectation of average yields. A return to pre-2003 yield ratios would certainly favor soybean production (with the soybean to corn price ratio currently at 2.6 to 1 in the eastern corn belt). Expectations of another year of a high corn yields relative to soybean yields might swing the decision toward planting more corn even though production costs for corn have increased.

The USDA will release the survey of farmer planting intentions on March 31. For now, we expect some increase in corn acreage based on anecdotal reports from producers. If every corn producing state planted acreage in 2004 equal to the largest acreage planted since 1996, total acreage would jump by 4.4 million acres (calculated from Table 7). Such a scenario is highly unlikely. We expect an increase of less than one million acres. A million acre increase would put 2004 acreage at 79.7 million, one million above the average of the past 8 years. With generally favorable weather and a “normal” level of abandoned acres, corn area harvested for grain might be near 72.7 million in 2004, 1.56 million above the area harvested in 2003. A 2004 trend yield of just over 140 bushels per acre, would result in a crop near 10.2 billion bushels. Even a crop of that size would allow for very little expansion in total use of U.S. corn during the year ahead. A poor growing season that resulted in a yield near the 130 bushels of 2002 would result in a crop of only about 9.5 billion bushels. Unless corn acreage increases by more than one million acres in 2004, a very favorable growing season will be needed in order to avoid the necessity to reduce consumption. If export demand remains robust due to a further decline in Chinese exports, or even some imports by China, high prices would likely be needed to force a cut in consumption if production is not large.

Price Prospects

An estimate of the U.S. average price received by producers during the first four months of the 2003-04 marketing year can be made using average monthly prices reported by the USDA and estimates of the percentage of the 2003 crop marketed in each of those four months. The actual percentage of the crop marketed each month will not be known until the year is over. The average percent marketed by month over

the past 5 years is used to estimate the monthly marketings for 2003-04. The current price reported by the USDA for December is the price at mid-month, not the average for the month. The average will be reported at the end of January. Recognizing these limitations, the calculation of average price received to date is as follows:

Month	Average Price	5-Year Average Marketing
	\$/bu	%
Sept. 2003	\$2.20	8.6
Oct.	\$2.12	13.8
Nov.	\$2.20	10.9
Dec	\$2.32	7.1
Ave./Total	\$2.19	40.4

These calculations are updated each month at the web site <www.farmdoc.uiuc/marketing>. It appears that the remaining 60 percent of the 2003 crop will be sold at a higher average price than the average for the first 40 percent of the crop. It is important to recognize that the average price for January is heavily influenced by relatively large amounts of forward contracted corn. As a result, the average price for January, which has typically accounted for 14 percent of total marketings, will likely be lower than the average of the cash bids in January. Our estimate is that the average price received by U.S. producers for the first 5 months of the 2003-04 marketing year (54.4 percent of the crop) was near \$2.25. Current futures prices for the remainder of the year reflect an average cash price of about \$2.55. If the last 45.6 percent of the crop is sold at \$2.55, the average for the year would be near \$2.39. We are using a forecast of \$2.40.

What about price patterns and price ranges over the next few months? The average daily cash price of corn (overnight bid) in central Illinois established a marketing year low of \$2.00 on October 1, 2003. The marketing year high was established following the January USDA reports, \$2.545 on January 16. The range of \$.545 from low to high is near the low end of the experience of the past 30 years and will likely be exceeded before August 31, 2004. Assuming that \$2.00 stands as the marketing year low, the yearly high would be expected to reach at least \$2.75. Historically, in years when the marketing year low was established in the fall (as is the case as for this year) the marketing year high was established in the spring/summer. Given the current high rate of corn use and the low level of expected inventories, prices should be expected to be very responsive to spring/summer weather conditions as well as the magnitude of intended corn acreage.

It has not been uncommon for the range in cash prices during the marketing year to exceed \$1.00 per bushel (12 times in the past 30 years). The range exceeded \$1.00 in four consecutive years from 1994-95 to 1997-98, but has not exceeded \$80 in the past 5 years. Unfavorable weather this year could propel prices to higher levels than now expected, resulting in new highs during the planting or growing season. In what now appears to be a very unlikely scenario, a new marketing year low could occur in July or August on the basis of an extremely large U.S. crop or a collapse in demand.

The price of December 2004 futures has traded in a very narrow range of \$.395, from \$2.325 to 2.72. In the past 15 years, December futures have traded in a range of \$.55 to \$1.06. The largest trading range were \$2.01 for the December 1973 contract, followed by \$1.85 for the December 1988 contract. The range has exceeded \$1.00 9

times in the past 34 years. The contract high to date of \$2.72 is also on the low side from a historical perspective. The recent lowest high was the \$2.69 for the 2003 contract. The lowest high since 1973 was \$2.16 (1987) and the highest high was \$3.96 (1981). The high has been less than \$2.75 only 3 times since 1973. Do these historical ranges mean anything? They provide some support for the case for higher prices for the December 2004 contract, particularly in the current environment of rapid consumption, small stocks, and production uncertainty.

Current conditions suggest producers will have excellent opportunities to price the remainder of the 2003 crop and to establish the price on a portion of the 2004 crop. The bigger question is whether the current environment of good demand, tight stocks, and higher prices is the beginning of a "new era" as some forecast in 1996, or just a temporary blip. That is the subject for future discussions.

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Table 1. 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	75,752	68,808
2002		79,047	78,847	79,054	69,313
2003		79,022	79,066	78,736	71,139

^a February

Table 2. 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	130.0		

Table 3. 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	9,507	9,008	

Table 4. 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	9,507	9,008	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	11,416	10,618	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	552	598
Export	493	503	415	318	396	471	582	383	421	488	435	449	660	487	380	450	535	507	448	393	475
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	2,204	2,024	2,185
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	3,144	2,969	3,258
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	7,945
Seed, food, ind.	212	236	262	281	288	301	313	330	362	365	379	410	405	400	425	434	447	465	482	564	
Export	506	580	460	313	405	502	682	471	362	463	330	590	562	525	380	465	465	415	448	400	
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	
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	2,511	
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	
Seed, food, ind.	253	294	307	333	337	353	376	384	414	414	423	452	433	471	470	495	512	514	539	619	
Export	513	475	201	496	510	592	601	454	371	411	270	568	610	433	350	497	451	455	497	393	
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	1,140	
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	2,152	
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	
Seed, food, ind.	238	293	307	324	331	341	369	374	396	407	429	442	373	460	475	467	496	512	532	612	
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	882	
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	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	
Annual																					
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	2,346	
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	5,868	5,593	
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	9,820	9,531	

^a Includes imports for t

Table 5. World Coarse Grain Production

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	million metric tons																				
United States	137.1	237.7	274.9	252.8	215.9	149.7	221.4	230.7	218.6	277.4	186.5	284.9	210.0	265.7	260.4	271.5	263.2	273.1	261.9	245.0	275.7
Former USSR	99.0	90.5	100.0	105.9	113.7	97.5	104.8	99.4	80.4	95.3	95.6	79.2	57.4	52.0	67.9	38.0	40.5	49.5	62.4	60.8	566.0
Western Europe	86.2	103.6	101.4	94.0	93.3	99.5	102.2	97.6	104.3	93.8	96.1	86.6	88.5	103.8	109.4	105.6	102.6	107.1	106.8	106.4	92.8
China	92.7	96.2	82.3	87.0	95.8	94.2	93.5	111.7	112.3	108.4	117.8	114.3	124.5	141.3	114.7	144.2	137.2	114.0	122.3	129.2	121.3
Central Europe	67.1	72.8	65.5	73.9	63.9	61.3	60.2	51.4	64.7	43.2	44.5	46.9	51.4	50.0	59.0	51.0	54.7	37.0	51.0	50.4	41.8
Canada	21.0	22.0	23.9	25.5	25.5	19.7	23.5	24.8	21.8	19.6	24.0	23.4	24.1	28.2	25.1	26.6	26.8	24.0	22.6	19.9	26.3
India	34.1	31.4	25.8	26.6	23.5	31.3	34.6	32.6	25.9	36.8	31.0	30.1	29.8	34.3	30.9	31.7	30.5	31.6	34.7	25.7	32.5
Brazil	21.5	22.5	21.7	27.3	25.4	26.7	22.5	24.4	31.4	29.9	33.8	38.2	33.2	36.6	31.3	33.5	32.6	42.7	36.8	47.0	39.2
Argentina	17.4	18.9	17.4	13.0	13.1	7.3	8.3	10.8	14.5	14.1	13.3	13.9	14.1	18.9	24.7	17.8	21.5	19.6	22.6	19.4	15.8
South Africa	5.1	9.0	8.9	7.9	7.9	13.0	9.5	8.9	3.6	10.7	14.0	5.4	11.0	10.7	8.2	8.1	11.1	8.4	10.5	9.6	9.4
World	685.4	814.1	843.3	835.2	791.5	731.2	802.6	819.5	804.2	869.1	799.9	873.6	802.9	908.3	883.2	890.1	876.4	859.7	892.4	871.9	883.3
Excluding the U.S.	548.3	576.4	568.4	582.4	575.7	581.5	581.2	588.8	585.6	591.7	613.4	588.7	592.9	642.6	622.8	618.4	613.2	586.5	630.6	626.6	607.6

Source: USDA, FAS, World Crop Production, Jan. 2004 and earlier issues.

Table 6. 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 ^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
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>9,507</u>	<u>9,008</u>	<u>10,114</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	11,416	10,618	11,211
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	2,346	2,480
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	2,000
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>5,868</u>	<u>5,593</u>	<u>5,730</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	9,820	9,531	10,210
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	1,001
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	\$2.40

^a Projected

^b Includes imports

Table 7. Planted Acreage of Corn by State

State	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003 ^a
	thousand acres													
Georgia	660	600	750	650	600	400	580	550	500	350	360	265	340	340
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
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
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
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
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
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
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
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
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
North Carolina	1,200	1,050	1,150	1,000	1,000	800	1,000	960	860	750	730	700	790	740
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
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
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
Tennessee	620	620	740	660	670	640	770	700	700	630	650	630	690	710
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
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
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

^a Intentions