



Grain Price OUTLOOK

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CORN: AMPLE SUPPLIES, BUT UNCERTAINTY ABOUT 2003

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Darrel Good

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Summary

Stocks of U.S. corn on December 1, 2002 totaled 7.633 billion bushels. While inventories were 7.6 percent smaller than on the same date in 2001, they were larger than expected. The stocks figure implies that feed and residual use of corn during the first quarter of the marketing year totaled 2.04 billion bushels, 7.6 percent less than during the same quarter last year and the smallest first quarter use in five years. The apparent slow rate of domestic feed and residual use of corn, along with a very slow export pace, suggests that consumption of U.S. corn during the current marketing will be less than that of a year ago even with a sharp increase in domestic processing use.

Year ending stocks are expected to exceed 900 million bushels and U.S. producers are expected to increase corn acreage in 2003. The most uncertainty, as usual, surrounds prospects for U.S. average yields in 2003. Widespread dry conditions currently are of some concern so that spring weather becomes very important.

The average farm price averaged \$2.35 during the first quarter of the marketing year. Prices are expected to remain near that level for the next two months. More price volatility can be expected in the spring. Spring/summer weather concerns may provide the next opportunity for pricing old and new crop corn.

Corn Supplies Are Down

In the final report for the 2002 crop, the USDA estimated the 2002 U.S. corn crop at 9.008 billion bushels, only 5 million larger than the November 2002 projection (Table 1). The crop was 499 million bushels, or 5.2 percent, smaller than the 2001 crop. The January 10 USDA report contained a 207,000 acre increase in the estimate of planted acreage of corn in 2002, but a 1.228 million acre reduction in the estimate of acreage harvested for grain. Still, harvested acreage was 505,000 larger than that of 2001 (Table 2). Corn acreage harvested for silage jumped by 1.342 million from 2001 to 2002. Unharvested acreage increased from 796,000 in 2001 to 2.251 million in 2002.

The U.S. average corn yield in 2002 was estimated at 130 bushels per acre, 2.4 bushels above the November 2002 projection, but 8.2 bushels below the 2001 average (Table 3). For the major corn producing states, average yields were high in Iowa (165 bushels) and Minnesota (157 bushels); modest in Illinois (136 bushels), Wisconsin (135 bushels), and Nebraska (128 bushels); and relatively low in Ohio (88 bushels), South Dakota (95 bushels), Missouri (105 bushels), and Kansas (116 bushels).

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Stocks of corn on hand at the end of the first quarter of the 2002-03 marketing year (December 1, 2002) totaled 7.633 billion bushels (Table 4). Stocks were 632 million bushels, or 7.6 percent, smaller than on the same date last year. Apparent consumption of U.S. corn during the first quarter of the year totaled 2.974 billion bushels, 170 million less than during the same quarter last year and at the lowest level in five years. During the quarter, domestic processing use of corn was 45 million bushels (9.2 percent) larger than during the same quarter last year. Exports were down 48 million bushels (10.7 percent), and feed and residual use was down by 167 million bushels (7.6 percent).

Year Ending Stocks – Lower, But Ample

The apparent 7.6 percent decline in feed and residual use of corn during the first quarter of the marketing year was not expected. The decline was not offset by an increase in feed and residual use of other grains. Feed and residual use of grain sorghum during the quarter was 28 million bushels (17 percent) less than during the same quarter last year and apparent feed and residual use of wheat was -85 million bushels, compared to -22 in the same quarter a year earlier. The decline in feed and residual use of grain was larger than the decline in the number of animal units fed during the quarter, implying a drop in the rate of feeding per animal. Alternatively, the 2002 corn crop may have been larger than the current projection, resulting in an underestimate of feed and residual use during the first quarter of the marketing year. Subsequent quarterly stocks reports will shed more light on the issue.

For the 2002-03 September through August grain marketing year, the USDA projects a 1.9 percent decline in the number of grain consuming animal units. Almost all of that decline is expected to come from a smaller number of cattle being fed. A modest decline in pork production and a modest increase in poultry production is projected. During that same period, a 3 percent increase in feed and residual use of grains other than corn is expected. The USDA also projects a 2.2 percent decline in the amount of grain fed per grain feeding animal unit. As a result, the USDA projects feed and residual use of corn for the entire 2002-03 marketing year at 5.6 billion bushels, 4.7 percent less than used during the 2001-02 marketing year and the smallest use in four years. The projection implies that feed and residual use of corn during the last three quarters of the marketing year will total 3.56 billion bushels, 110 million (3 percent) less than during the same period a year ago. The projected decline during those three quarters seems a little large based on the expected reduction in the number of livestock, but it appears small based on the large decline experienced in the first quarter of the year. Improving livestock prices and lower corn prices should result in heavier slaughter weights for cattle and hogs, resulting in some increase in corn feeding rates during the remainder of the 2002-03 marketing year. The USDA projection implies that 36.4 percent of feed and residual use for the year occurred in the first quarter. That compares to 37.6 percent last year and the five year average of 37.7 percent.

For now, we are inclined to use the USDA's projection of feed use for the year, but will be eager to see the March 1 estimate of corn inventories to be revealed on March 31. That report will shed considerably more light on the apparent rate of feed and residual use of corn.

The large increase in domestic processing and seed use of corn experienced last year (97 million bushels, or 5 percent) and the large increase projected for this year (191 million bushels, or 9.3 percent) is being driven almost entirely by expanded use of corn for ethanol production. Use of corn for production of fuel alcohol grew from 627.6 million bushels in 2000-01 to 713.8 million bushels last year and is projected at 900 million bushel this year. Use for all other food and industrial purposes grew by only 10 million bushels last year and is expected to increase by only 5 million bushels this year.

Use of corn for ethanol was 27.4 percent larger in the first quarter of the 2002-03 marketing year than during the same quarter last year. For the year, the USDA projects a 26.1 percent increase. The projection may be a little too small. We project the use of corn for all seed, food, and industrial purpose at 2.255 billion bushels, 10 million above the current USDA projection.

Exports of U.S. corn during the first quarter of the 2003-03 marketing year reached 400 million bushels, 10.7 percent less than during the same quarter last year and the smallest for the quarter in five years and the second smallest in 12 years. Through mid January 2003, cumulative shipments were only 1.6 percent behind last year's total. However, at 222 million bushels, unshipped sales were 21 percent less than outstanding sales of a year ago. Total commitments (exports plus outstanding sales) as of January 9 were up 96 percent for Canada, 53 percent to Mexico, and up 16 percent to Japan. However, commitments were down 81 percent for South Korea and 24 percent for Taiwan. The large sales to Canada reflect the poor grain harvest there, while sales to Mexico reflect the switch in imports back to corn from sorghum. The poor performance for South Korea and Taiwan reflect the influence of larger sales by China. For the year, the USDA projects Chinese corn exports at 430 million bushels, a 28 percent increase from exports of a year ago. The 2002 Chinese corn crop is estimated to be nearly 10 percent larger than the 2001 crop (Table 5), but the larger exports will contribute to a continued decline in the level of estimated stocks in China. The exports are being subsidized by the Chinese government.

It now appears that U.S. exports will be disappointing again this marketing year. The USDA projects exports at 1.85 billion bushels, 39 million less than shipped last year, the smallest exports in five years, and 200 million less than projected at the beginning of the marketing year. That projection is used here (Table 6).

Longer term, some analysts believe that the aggressive exports by China and the draw down in inventory will eventually result in the necessity for China to import corn. That development would provide a significant boost to U.S. export prospects. The logic of subsidizing exports, reducing inventory, and then importing corn is missing. While China may reduce its role as an exporter, it may be a little optimistic to expect them to deliberately reduce inventories just to import corn, even though internal transportation issues are significant.

Based on current projections, year ending stocks of U.S. corn will be near 900 million bushels, the smallest in six years, but well above our October projection of about 690 million bushels. At the projected levels, consumption during the current crop year will be about 700 million bushels larger than the 2002 crop (Table 6).

Will U.S. Corn Acreage Expand?

Planted acreage of corn in the U.S. since new agricultural policy was established in 1996 has ranged from 77.386 to 80.165 million acres. The variation in acreage has been less than in previous time periods when acreage reduction programs were in place, but acreage has responded to economic signals (Table 2). Acreage declined in 2001 as market prices at or below the loan rate discouraged production. Acreage rebounded in 2002 due to pre-planting time prices that were above the loan rate for that crop. Currently, prices offered for the 2003 crop are above the loan rate, while new crop soybean prices are below the loan rate. The price differential favors corn production in many areas of the U.S. With continued expansion of soybean production in South America, U.S. producers are expected to expand corn acreage in the U.S. in 2003 at the expense of soybean acreage.

A number of factors will influence spring planting decisions, including relative prices, weather conditions and the extent of damage to the winter wheat crop. The 2.5 million acre increase in winter wheat seedings may limit the increase in acreage of spring planted crops. One widely followed private analyst has predicted a 2.7 million increase in planted acreage of corn in 2003. That firm also predicts a 3.35 million acre increase in combined acreage of corn, soybeans, and wheat in 2003. It is not clear how the increase would be accomplished.

Just as the increase in winter wheat acreage (6 percent) in 2002 was modest relative to the very high price of wheat, the increase in corn acreage in 2002 will likely be limited by factors other than relative price. If all major corn producing states planted at the highest level since 1996, adjusted for the increase in winter wheat seedings in 2002, corn acreage would increase by about 2.3 million acres in 2003. (calculated from Table 7). We are reluctant to project a larger increase and suspect that it will be smaller. The USDA will release a *Prospective Plantings* report on March 31. If 80.5 million acres of corn are planted in 2003, about 73.5 million would be harvested for grain, under normal weather conditions.

Even with a large increase in acreage, a small inventory of corn by harvest time 2003 means that the average corn yield in 2003 will have to be above the 130 bushel level of 2002 in order to allow a modest increase in corn consumption and maintain stocks above 700 million bushels by the end of the 2003-04 marketing year. A trend yield near 140 bushels would produce a crop near 10.3 billion bushels and allow some rebuilding of stocks.

It is too early to forecast 2003 growing conditions, but current dry conditions in some western and northern growing areas have attracted the markets attention. Given the widely variable growing conditions in 2002, and the uncertainty surrounding the current El Nino event, the market is preparing for some production uncertainty in 2003.

Price Prospects

The highest cash price of corn in the 2002-03 marketing year occurred in September 2003. The highest cash price in central Illinois in September was \$2.785 on September 11. That price occurred before harvest really got underway and was more reflective of the old crop. Since harvest began in earnest, the highest price in central Illinois was \$2.46, on September 26. The lowest price was \$2.22 on January 14, 2003. It is not uncommon for the marketing year high to occur in September, but it is rare for the low to occur in January. Over the past 30 years, the lowest cash price (central Illinois) occurred in January only one time (1980). It would not be surprising if the cash price reaches a new low, and perhaps a new high, before the marketing year is complete.

A new low price would likely be generated by prospects of a very large crop in 2003, while a new high would likely require periods of significant concerns about the 2003 crop. Prices may well remain in a fairly narrow range into March, with price extremes more likely to occur in the May through August period.

As for new crop prices, December futures have traded in a range of only \$.34 (\$2.35 to \$2.69). Two observations can be made about the historical pattern of December futures. First, the narrowest trading range over the past 30 years was \$.54 (1987 contract). Second, December futures have failed to trade to at least \$2.75 only twice in the past 30 years (1986 and 1987 contracts).

Currently, prices for both the 2002 and 2003 crops are trading near the bottom of the range experienced so far this year. Significantly lower prices are not expected over the next two months, but prospects for a major rally are also small. Based on historical price patterns, the low inventories expected at the end of this year, and the prospects for weather and crop concerns in 2003, the market may offer better pricing opportunities in the spring/summer months. That is a long time to wait to price additional quantities of old crop corn, but patience is suggested. Old crop inventories can be placed under loan to generate cash and put options could be purchased to limit downside price risk. May 2003 put options with a strike price of \$2.30 are currently priced at about \$.05 while the \$2.40 strike price is priced at about \$.105 per bushel. Similarly, some patience in pricing additional quantities of new crop corn may be warranted. December put options are relatively expensive. The \$2.40 strike is priced at about \$.18 per bushel. One strategy might be to buy put options and sell higher priced call options to reduce the cost. This strategy establishes both a minimum and maximum price.

For the year, the USDA currently projects the average farm price to fall in a range of \$2.15 to \$2.55. A price below \$2.32 would trigger a counter-cyclical payment. The average price during the first four months of the marketing year (unweighted) was very near \$2.32.

Issued by Darrel Good
Extension Economist
University of Illinois

Table 1. 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
	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
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
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
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
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
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		

Table 2. 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)

^a February

Table 3. 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		
	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		
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		
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		
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		
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		
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			

Table 4. Corn Quarterly Balance Sheet

	1981-82	1982-83	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
	million bushels																					
September 1 stocks	1,392	2,537	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
Production	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
TOTAL ^a	9,511	10,772	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	11,639	11,416	10,619
September-November																						
Seed, food, ind.	173	208	227	244	276	295	296	302	312	338	361	370	383	410	417	388	435	450	459	466	489	534
Export	519	443	493	503	415	318	396	471	582	383	421	488	435	449	660	487	380	450	535	507	448	400
Feed, residual	1,218	1,215	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	2,207	2,040
TOTAL	1,910	1,866	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	2,974
December 1 stocks	7,601	8,906	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	7,633
Seed, food, ind.	166	192	212	236	262	281	288	301	313	330	362	365	379	410	405	400	425	434	447	465	480	480
Export	470	510	506	580	460	313	405	502	682	471	362	463	330	590	562	525	380	465	465	415	451	451
Feed, residual	1,199	1,305	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	1,540
TOTAL	1,835	2,007	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	2,471
March 1 stocks	5,766	6,899	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	5,795
Seed, food, ind.	201	228	253	294	307	333	337	353	376	384	414	414	423	452	433	471	470	495	512	514	545	545
Export	596	475	513	475	201	496	510	592	601	454	371	411	270	568	610	433	350	497	451	455	496	496
Feed, residual	1,089	1,272	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	1,162	1,162
TOTAL	1,886	1,975	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	2,203
June 1 stocks	3,880	4,924	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	3,597
Seed, food, ind.	193	227	238	293	307	324	331	341	369	374	396	407	429	442	373	460	475	467	496	511	540	540
Export	412	393	374	292	151	365	406	463	503	419	430	301	293	570	396	353	394	569	485	564	494	494
Feed, residual	739	781	527	603	499	761	843	685	627	679	816	891	789	846	527	809	865	795	890	951	968	968
TOTAL	1,344	1,401	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	1,869	2,026	2,002	2,002
September 1 stocks	2,537	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	1,596
Annual																						
Seed, food, ind.	733	855	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	2,054	2,054
Export	1,997	1,821	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	1,981	1,937	1,941	1,889	1,889
Feed, residual	4,245	4,573	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	5,471	5,665	5,842	5,877	5,877
TOTAL	6,975	7,249	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	9,524	9,740	9,820	9,820

^a Includes imports for the entire year.

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
	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
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	62.3	60.8
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	107.2	105.7	105.1
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	121.9	132.9
Eastern 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	51.8	49.3
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	19.6
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	27.5
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	36.7	37.2
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	18.5	17.2
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	7.8	9.5	8.4
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	859.6	887.7	860.0
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	625.9	614.9

Source: USDA, FAS, *World Crop Production*, Jan. 2003 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 ^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
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>
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	10,619
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	2,054	2,255
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	1,889	1,850
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>5,877</u>	<u>5,600</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	9,705
Carryout	1,344	1,521	1,100	2,113	850	1,558	426	883	1,308	1,787	1,718	1,899	1,596	914
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	\$2.35

^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
	thousand acres												
Georgia	660	600	750	650	600	400	580	550	500	350	360	265	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
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
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
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
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
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
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
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
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
North Carolina	1,200	1,050	1,150	1,000	1,000	800	1,000	960	860	750	730	700	790
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
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
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
Tennessee	620	620	740	660	670	640	770	700	700	630	650	630	690
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
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
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

Table 6. World Wheat Production

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	million metric tons																	
United States	65.9	70.6	66.0	56.9	57.4	49.3	55.4	74.5	53.9	67.1	65.2	63.2	59.4	62.0	67.5	69.3	62.6	60.9
Former USSR	79.0	68.6	78.1	92.3	83.3	84.4	92.3	100.3	72.0	89.7	83.3	59.9	59.3	63.3	80.5	56.1	65.2	65.8
Western Europe	68.0	87.4	75.7	76.3	75.4	78.5	86.4	89.9	94.7	88.5	83.9	84.5	86.2	98.5	94.2	103.1	96.9	104.6
China	81.4	87.8	85.8	90.0	85.8	85.4	90.8	98.2	96.0	101.6	106.4	99.3	102.2	110.6	123.3	109.7	113.9	102.0
Eastern Europe	35.4	42.1	37.1	39.2	39.9	44.8	40.7	41.3	38.5	26.4	30.6	34.0	35.0	26.1	34.4	33.2	28.7	27.8
India	42.8	45.5	44.1	47.1	44.3	46.2	54.1	49.9	55.1	55.7	57.2	59.8	65.5	62.1	69.3	66.4	70.8	71.0
Canada	26.6	21.2	24.3	31.4	26.0	16.0	24.6	32.1	32.0	29.9	27.2	23.1	25.0	29.8	24.3	24.1	26.9	25.5
Australia	22.0	18.7	16.2	16.1	12.4	14.1	14.2	15.1	10.6	16.2	16.5	8.9	16.5	23.7	19.4	22.1	24.1	21.0
Argentina	12.8	13.2	8.5	8.9	8.8	8.4	10.2	10.9	9.9	9.8	9.4	11.3	8.6	15.9	14.8	12.4	15.1	15.5
Pakistan	10.9	11.7	13.9	12.0	12.7	14.4	14.4	14.4	14.6	15.7	16.2	15.2	17.0	16.9	16.7	18.7	17.9	21.0
Turkey	13.3	12.7	14.0	13.0	15.0	12.5	16.0	16.0	16.5	15.5	16.5	14.7	15.5	16.0	16.0	18.0	16.5	17.5
World	491.0	511.6	500.1	530.7	501.7	500.8	537.6	588.1	542.1	561.8	559.1	524.6	537.5	582.7	609.7	588.4	585.9	579.9
Excluding the U.S.	425.1	441.0	434.1	473.7	444.4	451.5	482.2	513.6	488.4	494.7	493.9	461.3	478.1	520.8	542.2	519.1	523.4	519.0

Source: USDA, FAS, World Crop Production, Oct. 2002 and earlier issues.