



# Grain Price OUTLOOK

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## CORN: SMALLER SUPPLIES ON THE HORIZON

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### Summary

The USDA's March *Grain Stocks* and *Prospective Plantings* report released on March 30 provided some fundamentally supportive news for the corn market. While March 1 corn stocks were up 435 million bushels from stocks of a year ago, they were marginally smaller than expected. Producers intentions to plant only 76.7 million acres of corn in 2001 is also a bit of a surprise. Intentions are 2.852 million acres below last year's actual plantings and are at the lowest level since 1995. The smaller acreage, coupled with trend yields, should allow a significant reduction in stocks by the end of the 2001-02 marketing year.

Corn prices dropped sharply from the last week of December 2000 through the end of March 2001. Some modest price recovery is expected, based on prospects for a smaller crop, some improvement in the pace of exports, and on at least modest planting delays due to cool, wet weather. New crop prices may move far enough above the loan rate to provide some attractive pricing opportunities.

### Old Crop Situation

Stocks of corn on March 1, 2001 totaled 6.037 billion bushels (Table 1). Inventories were 435 million bushels larger than on the same date last year and at the highest level for that date since 1988. Even so, stocks were about 25 to 30 million bushels smaller than expected. The stocks figure implies that a record 2.485 billion bushels of corn were consumed during the second quarter of the marketing year. It is

thought that domestic processing use of corn was about 23 million bushels larger than during the same quarter last year, while exports were down about 82 million bushels. The estimated decline in exports is based on a combination of monthly Census Bureau figures through January and the USDA's weekly export inspections report. Feed and residual use during the quarter is calculated at 1.629 billion bushels, 103 million bushels above the record for the quarter established last year.

For the year, domestic processing uses of corn are expected to total 1.98 billion bushels, an increase of 67 million bushels from use of a year ago (Table 2). The increase is being led by corn used for ethanol production. The USDA has projected feed and residual use of corn during the current marketing year at 5.775 billion bushels, 109 million more than used last year. Estimated use during the first half of the year was 3.821 billion bushels, 106 million more than during the same period last year. Use during the last half of the year will be impacted by prospects for declining numbers of cattle on feed, a very modest expansion in hog numbers, and chances of better pasture conditions in western areas than existed last year. The year-over-year increase in feed and residual use during the last half of the year will likely be small, but could push use for the year up to 5.8 billion bushels (Table 2).

Corn exports during the first half of the 2000-01 marketing year are estimated at 892 million bushels, 110 million bushels less than during the same period last year. The USDA currently projects exports for the entire year at 2 billion bushels, 63 million above the exports of a year

ago. That projection is down from 2.275 billion projected in October and November 2000. The projection was lowered each month from December 2000 through March 2001. Compared to last year, the shortfall in exports have been to Japan and South Korea. Shipments to Mexico continue to expand as livestock production increases there and tariffs on U.S. corn are lowered under the North American Free Trade Agreement (NAFTA).

During the last two weeks of March, the pace of U.S. corn exports accelerated. As of March 29, inspections totaled 1.056 billion bushels, only 88 million less than on the same date last year. Last year, corn exports were fairly anemic during the last half of the year, totaling only 935 million bushels compared to 1.066 billion in the last half of the 1998-99 marketing year. To reach the USDA projection, U.S. exports need to average about 42.6 million bushels per week during the last 22 weeks of the marketing year. The average during that period last year was 35.7 million bushels.

Several factors will determine if U.S. exports will recover to reach the USDA projection of 2 billion bushels. One of those is the purchasing decisions of Japan. If StarLink contaminated corn can be successfully isolated, Japan is expected to accelerate the purchase of U.S. corn. A second factor will be Chinese corn export policy. China has aggressively exported corn to South Korea, but exportable supplies may now be limited. Those sales should slow dramatically. Rumors of potential Chinese purchase of U.S. corn circulated in late March, but seemed to be without foundation. Sales of U.S. corn to China would be a welcome surprise. The third factor will be the availability of corn from the southern hemisphere. While coarse grain production is down sharply in South Africa, production in Brazil is up sharply (Table 3). The Brazilian corn crop is estimated at 1.516 billion bushels, nearly 22 percent larger than the 2000 harvest. Brazil is expected to export 40 to 50 million bushels of corn, becoming an exporter for the first time since 1982-83. In addition, imports of corn into Brazil are expected to decline from 70 million bushels last year to about 20 million during the current year. The reduced imports will be primarily from Argentina, while Japan has expressed interest in importing Brazilian corn.

As of March 29, outstanding export sales of U.S. corn totaled only 250 million bushels, compared to 285 million on the same date last year. New sales will need to exceed 32 million bushels per week if sales are to reach the 2 billion bushel mark for the year. It now appears doubtful if that will happen. Corn exports are projected to reach 1.95 billion bushels for the year (Table 2). Corn consumption for all purposes is projected at 9.73 billion bushels for the 2000-01 marketing year. Year ending stocks are expected to be at an eight year high of 1.966 billion bushels.

### **Prospects for 2001-02**

The USDA's March *Prospective Plantings* report provides the first look at the potential size of the 2001 U.S. crop. Producers reported intentions to plant 76.693 million acres of corn in 2001. That is 2.852 million fewer acres than planted last year and would be the smallest acreage since 1995 (Table 4). The planned reduction in corn acreage is fairly widespread. Of the major corn producing states, only Missouri and Pennsylvania show acreage unchanged for 2001, while none of the major states plan an increase in corn acreage. The largest declines are planned in Iowa (400,000) and Minnesota (300,000), with cuts of 200,000 acres planned in Illinois, Indiana, Nebraska, Ohio, South Dakota, and Texas (Table 5).

Last year, actual corn acreage exceeded March intentions by 1.664 million acres. Such an increase is rare and probably reflected the early planting season and relatively high corn prices during the spring. This year, low corn prices, high fertilizer costs (nitrogen), and a more normal planting season are all expected to hold corn acreage near March intentions. If planted acreage is near intentions, and a normal growing season unfolds, acreage harvested for grain should be near 69.9 million acres.

The U.S. average corn yield is difficult to anticipate this early in the season. History would suggest that summer weather conditions determine yield. There is little correlation of planting dates with final yields. The tendency is to use trend yield as a projection of actual yield, although actual yield rarely falls on the trend line. The U.S. average yield was at or

above trend yield in each of the past five years. The average yield was below trend in 1991, 1993, and 1995 and above trend in 1992 and 1994. The trend yield calculation for 2001 depends a bit on what time period is used to calculate the trend and what form of trend line is calculated (linear or curvilinear). Most calculate a trend for 2001 in the 136 to 137 bushel range. Assuming that producers follow through on their planting intentions, a trend yield would result in a 2001 corn crop of about 9.55 billion bushels. A crop of that size would be about 420 million bushels smaller than the 2000 crop and about equal to the average production of the past five years (Table 7). With beginning stocks of 1.966 billion and imports of 10 million bushels, marketing year supplies would total 11.526 billion bushels, about 170 million less than supplies for the current marketing year (Table 2).

Domestic consumption of corn during the 2001-02 marketing year should be well supported. Processing use of corn continues to grow at a very steady pace, driven by a growing population and expansion in ethanol production. With new facilities coming on-line, ethanol production should continue to grow into next year, particularly if petroleum prices remain relatively high. Use for all seed, food, and industrial purposes is projected at 2.06 billion bushels.

Feed and residual use of corn should be supported by profitable feeding margins and expansion in hog and poultry production. A reduction in the number of cattle being fed and the potential for a rebound in sorghum production would likely limit the growth in feed use. Use is projected at 5.875 billion bushels.

Unlike the steady growth experienced in domestic corn consumption, annual exports have been extremely volatile. Export are influenced by a wide range of factors – the price of corn, the rate of economic growth, size of crops in the rest of the world, currency values, policy decision, and perhaps other factors all have some influence. Exports of U.S. corn have been relatively stable since 1998-99, but at a modest level. The magnitude of annual exports tend to cycle, but there has clearly not been a trend increase. For the most part, feed grain production in the rest of the world has grown fast enough that

the need for U.S. corn has not increased over time. Production was consistently large from 1996 through 1999 (Table 3).

For the year ahead, the size of the Chinese corn crop and Chinese export/import policy will be extremely important for U.S. corn exports. There is some optimism that Chinese exports will diminish when they enter the World Trade Organization as subsidies will be restricted. Exports to South Korea could decline and China might once again become a net importer in the near future. The rate of growth in Brazilian corn production will also be important. Continued growth suggests that Brazil could maintain an export presence, particularly for the non-GMO market. In addition, the rate of growth in corn consumption in Mexico will be important. Reduced import tariffs will make U.S. corn very competitive in that market. For now, we anticipate a reasonable expansion in U.S. exports next year, perhaps to 2.2 billion bushels.

Early in the 2000-01 crop year, it appeared that use of corn could reach 10 billion bushels. Disappointing exports, however, means that use will fall short of that level. For the 2001-02 year, it once again appears that use could exceed 10 billion bushels, with our projection at 10.135 billion. With a crop of 9.55 billion bushels, year ending stocks (September 1, 2002) could be reduced to a more manageable 1.4 billion bushels.

### **Price Prospects**

The average farm price of corn in central Illinois averaged about \$1.89 per bushel during the first seven months of 2000-01 marketing year (September 2000 through March 2001). That price is about equal to the price during the same period last year and about \$.12 below the average in those six months in 1998-99. The lowest price of \$1.51 was reached on September 19, 2000 and the highest price of \$2.105 was established on December 29. With the majority of the crop already priced, the weighted average price for the 2000 crop is expected to be near \$1.85, on a national basis. The only thing that could alter that average significantly would be a problem with the 2001 crop.

For the 2001-02 marketing year, prospects of declining stocks point to slightly higher average prices. In recent years when ending stocks were about 1.5 billion or less, the seasons average price was in the range of \$2.26 to \$2.45 per bushel (Table 2). Based on the projections developed here, the ending stocks to use ratio for the 2001-02 marketing year is about 13.7 percent. That is a smaller ratio than in years with a similar level of stocks. That ratio was 16.6 percent in 1989-90, 19.6 percent in 1990-91, 16.7 percent in 1994-95, and 14.9 percent in 1997-98. On the surface then, it appears that the average price during the upcoming marketing year should be at least as high as during those years cited. However, there appears to be less demand for inventory than during the pre "freedom to farm" era. Part of the decline in demand for inventory likely reflects the fact that there is less need for buffer stocks in an era of full production (no acreage reduction programs). The shift in demand for inventory, if in fact it has occurred, means that the relationship between the stocks-to-use ratio and the average price has shifted. The market is more comfortable with stocks at a low level. The price impact of the demand shift appears to be large, although a short crop year has not been experienced in the post "freedom-to-farm" era to provide a complete test. An average marketing year price of about \$2.10 might be expected, rather than an average near \$2.35.

The futures market is currently offering a marketing year average price of about \$2.25 for the 2001 crop (December futures at \$2.38). Based on our analysis, there is a relatively small risk premium reflected in the current market. That is probably justified by the outlook for a generally favorable growing season. A change to a more unfavorable outlook could readily add \$.20 to \$.25 to that risk premium. On the other hand, a very favorably growing season with an average yield of 140 bushels or higher could push December futures back to near \$2.00.

### **What to Do**

For old crop corn that is in inventory and either under loan or still eligible for marketing loan benefits, a case can be made for continued patience. With the loan price as a floor, holding for a spring or early summer weather

rally is a low risk proposition. For old crop corn that is no longer eligible for marketing loan benefits, there is still risk in ownership if the early part of the growing season is favorable. Pricing additional quantities early may be a prudent strategy. Otherwise, slightly out of the money July options might be considered. While basis levels are generally weak by historic standards, significant improvement may once again prove difficult this spring and summer. Without significant basis strength, replacing inventory with call options might be considered, although there is still a bit of carry in the market. Retaining ownership and buying put options for farm stored corn might be considered a low cost way to speculate on some basis improvement.

For new crop corn, the price for harvest delivery in most areas is slightly above the loan rate. There seems to be little incentive to price much of the crop with such limited downside risk. More aggressive selling would be warranted if weather rallies push December futures back near the \$2.50 mark.

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Table 1. 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
	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
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	9,968
TOTAL <sup>a</sup>	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	11,696
September-November																				
Seed, food, ind.	173	208	227	244	276	295	296	302	312	338	361	370	383	410	417	388	435	450	459	468
Export	519	443	493	503	415	318	396	471	582	383	421	488	435	449	660	487	380	450	534	506
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	2,189	2,192
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	3,166
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	8,522
Seed, food, ind.	166	192	212	236	262	281	288	301	313	330	362	365	379	410	405	400	425	434	447	470
Export	470	510	506	580	460	313	405	502	682	471	362	463	330	590	562	525	380	465	468	386
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	1,526	1,629
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	2,426	2,485
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	6,037
Seed, food, ind.	201	228	253	294	307	333	337	353	376	384	414	414	423	452	433	471	470	495	512	
Export	596	475	513	475	201	496	510	592	601	454	371	411	270	568	610	433	350	497	451	
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	1,059	
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	
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	
Seed, food, ind.	193	227	238	293	307	324	331	341	369	374	396	407	429	442	373	460	475	467	495	
Export	412	393	374	292	151	365	406	463	503	419	430	301	293	570	396	353	394	569	484	
Feed, residual	739	781	527	603	499	761	843	685	627	679	816	891	789	846	527	809	865	795	890	
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	1,873	
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	
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	
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	
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	5,664	
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	

<sup>a</sup> Includes imports for the entire year.

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 <sup>a</sup>	2001-02 <sup>a</sup>
	million bushels												
Carryin	1,930	1,344	1,521	1,100	2,113	850	1,558	426	883	1,308	1,787	1,718	1,966
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>9,968</u>	<u>9,550</u>
TOTAL <sup>b</sup>	9,464	9,282	9,016	10,584	8,472	10,910	8,974	9,672	10,099	11,085	11,232	11,696	11,526
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	1,980	2,060
Export	2,367	1,727	1,584	1,663	1,328	2,177	2,228	1,797	1,504	1,981	1,937	1,950	2,200
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>5,800</u>	<u>5,875</u>
TOTAL	8,120	7,761	7,915	8,471	7,621	9,352	8,548	8,789	8,791	9,298	9,515	9,730	10,135
Carryout	1,344	1,521	1,100	2,113	850	1,558	426	883	1,308	1,787	1,718	1,966	1,391
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	\$2.10

<sup>a</sup> Projected

<sup>b</sup> Includes imports

Table 3. World Coarse Grain Production

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	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	274.5
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	40.4	49.7
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	103.1	108.3
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	137.8	113.9
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	54.8	36.0
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	24.4
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	30.5
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	39.6
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	21.7	19.1
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	7.9
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	876.7	856.3
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	612.5	581.8

Source: USDA, FAS, World Crop Production, Mar. 2001 and earlier issues.

Table 4. United States Corn Planting Intentions, Actual Plantings, and Acres Harvested

Year	Planted Acreage				Harvested Acreage
	February/January Intentions	March Intentions	June Intentions	Actual	
			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 <sup>a</sup>	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	79,545	72,732
2001		76,693			(69,893)

<sup>a</sup> February



Table 5. Planted Acreage of Corn by State

State	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>1</sup>
	thousand acres											
Georgia	660	600	750	650	600	400	580	550	500	350	400	300
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
Indiana	5,600	5,700	6,100	5,550	6,100	5,400	5,600	5,900	5,800	5,800	5,700	5,500
Iowa	12,800	12,500	13,200	12,000	13,000	11,700	12,700	12,200	12,500	12,100	12,300	11,900
Kansas	1,600	1,800	1,850	2,000	2,280	2,150	2,500	2,750	3,000	3,150	3,450	3,400
Kentucky	1,350	1,400	1,420	1,370	1,350	1,280	1,300	1,270	1,300	1,320	1,330	1,280
Michigan	2,400	2,600	2,700	2,500	2,550	2,450	2,650	2,500	2,300	2,200	2,200	2,150
Minnesota	6,700	6,600	7,200	6,300	7,000	6,700	7,500	7,000	7,300	7,100	7,100	6,800
Missouri	2,100	2,300	2,500	2,200	2,400	1,650	2,750	2,700	2,650	2,650	2,850	2,850
Nebraska	7,700	8,200	8,300	8,000	8,600	8,000	8,500	8,900	8,800	8,600	8,500	8,300
North Carolina	1,200	1,050	1,150	1,000	1,000	800	1,000	960	860	750	730	710
Ohio	3,700	3,700	3,800	3,500	3,700	3,300	2,900	3,800	3,550	3,450	3,550	3,350
Pennsylvania	1,380	1,400	1,380	1,370	1,400	1,380	1,450	1,550	1,550	1,500	1,550	1,550
South Dakota	3,400	3,750	3,800	3,350	3,800	2,800	4,000	3,800	3,900	3,600	4,300	4,100
Tennessee	620	620	740	660	670	640	770	700	700	630	650	640
Texas	1,650	1,700	1,750	2,000	2,150	2,100	2,100	2,000	2,400	1,950	2,100	1,900
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
United States	74,171	75,951	79,325	73,323	79,158	71,245	79,487	79,537	80,165	77,386	79,545	76,693

<sup>1</sup> March intentions

Table 6. 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
	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
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
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
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
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
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	

Table 7. 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
	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
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
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
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
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
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	