Staff Paper

2001-2002 CORN OUTLOOK

by
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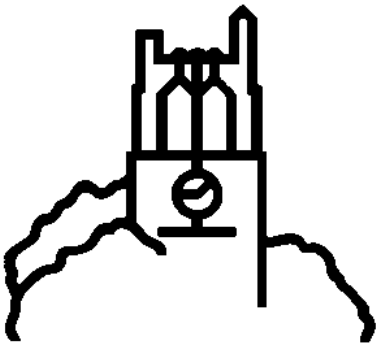

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2001-2001 Corn Outlook

Is this the year we will finally get past three years of below loan rate corn prices and finally average over $2.00 per bushel? Given my analysis, and being the "fine" weather forecaster I am not, the answer is Yes. Obviously, there is a bit of both our and the rest of the world's 2001-02 growing season left, so things can change.

Will we get corn prices back to the long term average of $2.35 in the near future? My analysis would indicate there is about a 50% chance that we will average above $2.35 in 2002-03 and about a 50% chance we will be lower. Remember, it is easier to forecast the further you go out. Table 2 a the end of the text, pretty much lays out my Supply/Demand expectations for the next two corn marketing years.

A few last comments on 2000-01

Exports and export sales the past month indicate we are and will export almost 5 million bushels per week more than had been anticipated earlier. Therefore I have added 25 million bushels to the 2000-01 corn exports on Table 2 than the last USDA estimate. I also added another 5 million bushels to FSI as I expect a little more ethanol will be produced as well. This of course lowers projected ending stocks, but they still remain a huge 20% of use. It also means the average price may move up marginally. Consider moving remaining old crop on the next rally, and notice I didn't say it had to be a big rally.

Let's move on to 2001-02

The first issue is the 2001 U.S. corn yield projection. I have in pugged 135 bushel per acre, about 2 bushels below USDA's trend yield. I relied on William I. Tierney's, an Ag. Economist at Kansas State University, crop process and crop condition model for this number. His model showed a yield of 134.7 after putting in data up through the week ending July 29. This estimate falls in the range of other estimates. Charts showing Tierney's model results and a comparison with some other analysts's production estimates can be found at http://ww.agecon.ksu.edu/risk/. Using the 135 bushel per acre figure and the June acreage to be harvested estimate gives us a 2001 corn production estimate of 9,355 million bushels. The standard error of the prediction is 4.7, or plus or minus 325 million bushels. See Kansas State University's Risk Management Web Page (http://ww.agecon.ksu.edu/risk/) for a more complete discussion of the yield estimate.

As shown in Table 2, column 3 under Hilker 2001-02, total supplies are expected to be11,385 million bushels, about 300 billion bushels less than we started with for the 200-01 crop year. Given the above assumptions this would indicate the odds are 2 out of 3 that we will end up with between a 11-11.7 billion bushel supply. In four days, August 10, 2001 at 8:30 am EST, the USDA will release the year's first corn crop production estimate; I suggest you move to that figure as soon as it is released.

Feed use is expected to drop off less than a percent in 2001-02. More feed will be fed to hogs and poultry, and less to cattle, with a net of about zero. The 50 million bushel drop in corn fed I show is due to more sorghum being feed due to the larger sorghum crop forecast for this year. The USDA is showing fewer Grain Consumer Animal Units for next year and have a 50 million bushel lower corn fed estimate. I have no strong argument against their numbers, especially after seeing the July Cattle Inventory Report and noting the high numbers of heifers on feed. My suspicions are that a few extra hogs will show up by next summer and weights will continue to increase.

The Food, Seed, and Industrial Uses is where I am going to stick my neck out a bit. I am using the USDA estimate for all FSI besides ethanol which is an increase of 25 million bushels. Their estimate for corn used for ethanol is an increase of 45 million bushels to 665 million of corn used to produce ethanol in 2001-02. I am projecting corn used for ethanol will be up 130 million bushels to 750 million bushels. The Bush administration and the House of Representatives have rejected a waiver of the federal oxygenate standards for reformulated gasoline for California, I think both after the last USDA estimate.

Where do I come up with such an estimate and the possibility it could be higher? Let's look at both need and potential supply. Terry Francl, Senior Economist/Commodity Specialist, at American Farm Bureau provided me with many of these numbers (he gets credit for all the numbers that are correct, and I will take credit for all that may turn out not to be and for analysis, right or wrong). California will need 580 million gallons of ethanol by 2003, which they have set as a deadline for replacing MBTE. This translates to 230 million bushels of corn. The rest of the country would need another 600 million gallons, another 240 million bushels of corn. While not all of it will be made from corn, and much could be imported, there is still plenty of need to more than fulfill my forecasts of corn used for ethanol production the next two years.

How about capacity? Again, I rely on the numbers Terry Francl provided, which if in the ballpark, shows we will have capacity to meet my forecast. Current ethanol capacity, at 65 plants, is 2 billion gallons, 800 bushels of corn needed. This meets my 750 million bushel forecast. There is another 445 million gallons of capacity to be coming on line from expansion of present plants and new plants already under construction, 178 million bushels of corn needed to run full speed. There is another 590 gallons of approved construction and another 465 million gallons of scheduled construction, or the capacity for another 422 million bushels of corn. This totals 3.5 billion gallons of ethanol production capacity or 1400 million bushels of corn that could be processed each year by the end of 2003. My forecasts fall well within this projected capacity. In fact, this potential capacity/(over) capacity makes me worry about the returns to farmer investments in ethanol plants.

Then why did I call my ethanol forecasts sticking my neck out? One is timing, how fast, when, will the transition from MBTE to ethanol take place (I can't believe anyone would use MBTE for one minute longer than absolutely necessary.) A possible problem is competition from imports of ethanol. Another problem may be other competition for the use of corn. What if we and/or China had a significant crop shortfall next year? How about the possibility that the long awaited feed demand in China?

The other worry is the possibility of a sharp decline in the price of oil, making the use of ethanol less economical, especially in areas of the country where here is no federal oxygenate standards for gasoline. And the biggest possible hole in my forecast and for farmer optimism, especially over the next 2-4 years, is a possible change in energy policy. Improved petroleum refining techniques, which could be more economical, may make the need for oxygenate standards obsolete in the next few years with respect to

pollution standards. Although at this point, it would take an act of Congress to allow that, as I understand it. Then it comes back, at least partly, to the energy independent and renewable fuels arguments.

Now on to exports. I show an increase of 300 million bushels this next marketing year to 2050 million bushels. This is 75 million bushels more than the July USDA Supply/Use Report and matches exactly the July estimates of two prominent Ag. Economists, one from Iowa and one from Illinois as found on their Web sites. My reasons for the projected increase include, my great respect for their analytical talents, the decrease in projected China corn exports, which I assume we will get most of, and a smaller Brazilian corn corp next spring. I also feel Japan will come back to the U.S. market as we sort out the GMO problems. I am also optimistic the world as a whole will have economic growth.

This gives us a total use forecast of 9970 million bushels. And projected ending stocks for the 2001-02 crop year of 1415 million bushels, down 30% from 2000-01. This puts ending stocks at 14.2% of use, which would project an annual average U.S. farm price of $2.20. This price is at least 15 cents higher than the market is now giving. Check out the futures prices on a page attached after the text, and subtract an appropriate basis from the future prices listed, i.e., March corn futures at $2.33 minus $.025 equals $2.08, Dec futures at $2.22 minus $.030 divided by a .95 seasonal index gives you $2.02.

This tells me to hold new crop pricing until December futures hit $2.40, which will give most producers a cash price 10-20 cents over loan. In other words, let the loan rate provide downside risk, and hold for at least some of the upside potential. See the attached probability charts and tables to see the risk around my price forecasts. (See http://www.msu.edu/user/hilker).

So when will corn prices average $2.25? The "answer" is 2002-03

See column 4 of Table 2 (the second attachment after the text). It shows my guess for the Supply/Demand situation for 2002-03. The situation and the projected $2.35 price will help my 2001-02 price forecast happen. I use a trend yield, a small increase in acreage due to higher expected returns, a continuation of my ethanol story, slightly more grain consuming animal units, and continued world economic growth.

TABLE 1. USDA SUPPLY/DEMAND BALANCE SHEET FOR CORN
July 11, 2001

	1996-97	1997-98	1998-99	1999-00	Estimated 2000-01	Projected 2001-02
			(Million Acres)			
Acres Set-Aside and Diverted	0.0	0.0	0.0	0.0	0.0	0.0
Acres Planted	79.2	79.5	80.2	77.4	79.5	76.1
Acres Harvested	72.6	72.7	72.6	70.5	72.7	69.3
Bu/Harvested Acre	127.1	126.7	134.4	133.8	137.1	137.0
			(Million Bushels)			
Beginning Stocks	426	883	1308	187	1718	2053
Production	9233	9207	9759	9431	9968	9495
Imports	13	9	19	15	7	15
Total Supply	9672	10099	11086	11233	11693	11563
Use:						
Feed and Residual	5302	5505	5472	5665	5850	5725
Food, Seed & Ind. Uses	1692	1782	1846	1913	1965	2035
Total Domestic	6994	7287	7318	7578	7815	7760
Exports	1795	1504	1981	1937	1825	1975
Total Use	8789	8791	9299	9515	9640	9735
Ending Stocks	883	1308	1787	1718	2053	1828
Ending Stocks, % of Use	10.0	14.9	19.2	18.1	21.3	18.8
Regular Loan Rate	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89
U.S. Season Average Farm Price, $/Bu.	$2.71	$2.43	$1.94	$1.82	$180-$190	$1.750 $2.15

Source: USDA.

TABLE 2. SUPPLY/DEMAND BALANCE SHEET FOR CORN
July 8, 2001

	1999-00	Hilker 2000-01	Hilker 2001-02	Guess 2002-03
		(Million Acres)		
Acres Planted	77.4	79.5	76.1	77.8
Acres Harvested	70.5	72.7	69.3	71.0
Bu./Harvested Acre	133.8	137.1	135.0	139.0
		(Million Bushels)		
Beginning Stocks	1787	1718	2023	1415
Production	9431	9968	9355	9870
Imports	15	7	7	10
Total Supply	11233	11693	11385	11295
Use:				
Feed and Residual	5665	5850	5800	5875
Food, Seed, Ind. Uses	1913	1970	2120	2245
Total Domestic	7578	7820	7920	8120
Exports	1937	1970	1050	2100
Total Use	9515	9670	9970	10220
Ending Stocks	1718	2023	1415	1075
Ending Stocks, % of Use	18.1	20.1	14.2	10.5
Regular Loan Rate	$1.89	$1.89	$1.89	$1.89
U.S. Farm Price, $/Bu.	$1.82	$1.86	$2.20	$2.35

Source: USDA and Jim Hilker.