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Who Will Have Surplus Corn?

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The continuing strong expansion of the ethanol industry has raised questions about the availability and price of corn over the next few years. Will Corn Belt states continue to produce enough surplus corn to meet all the traditional users in other states and in the rest of the world? Based on ethanol industry announcements, the United States could have up to 12 billion gallons of ethanol production capacity during the 2008/09 crop year. With a typical ethanol conversion rate of 2.75 gallons of ethanol per bushel of corn, 12 billion gallons of ethanol translates into 4.4 billion bushels of corn. To see how the expansion of the ethanol industry is changing the flow of corn across the United States, we have estimated state-level domestic surplus corn, which is the amount of corn remaining in a state after accounting for ethanol, livestock feed, and other processing in the state. To do that, we estimated corn usage for ethanol and livestock feed by state and combined those estimates with figures on corn processing for non-ethanol purposes from ProExporter and corn production numbers from USDA. Domestic surplus corn is corn that is either maintained in stocks or available for export to other states or countries. We estimated domestic surplus corn for 2004 and for a projection of 2008.

Corn Utilization and Surpluses for 2004

The graph below shows domestic surplus corn estimates for the two years. This graph also shows that the ethanol industry is having and will continue to have a major impact on U.S. corn utilization and sourcing. The 2004 crop year was a record breaker for corn. The U.S. produced 11.8 billion bushels of corn. Domestic livestock consumed over 6 billion bushels of that crop. Ethanol captured over 1 billion bushels, and other corn processing took over 1 billion bushels as well. That left roughly 3 billion bushels of domestic surplus corn for exports and stocks. As the blue bars show, the surplus corn came from the upper Midwest. Sixteen states produced more corn than they used. Illinois had the...
most surplus corn, at 1.4 billion bushels, but Iowa, Minnesota, Indiana, and Nebraska all had over 500 million bushels of surplus corn each.

**Corn Utilization and Surpluses for Projected 2008**

For 2008, we have assumed that the U.S. produces 12.6 billion bushels, based on trend yields and an increase in U.S. corn planting to around 89 million acres. We held state-level livestock feeding and other corn processing constant at 2004 levels but allowed state-level corn usage for ethanol to shift, reflecting the ongoing construction in the ethanol industry. We assumed that all of the plants listed on the CARD ethanol plants Web page (http://www.card.iastate.edu/research/bio/tools/ethanol.aspx) would be in production during the 2008/09 crop year. Because the plants under construction are concentrated in a few regions of the country, ethanol’s expansion will shift the location of domestic surplus and how much is available. Given our assumptions, nationwide there would be a total of just over 800 million bushels of domestic surplus corn available for export to other countries or to place in stocks. The acreage increase is not enough to offset completely the combination of a return to trend yields and the expansion of ethanol. Fifteen states produce more corn than they use. Wisconsin changes from a net exporter of corn to a net importer. Illinois holds firm at 1.4 billion bushels of surplus corn, but other midwestern states experience sizable drops in surplus corn. Iowa falls from second to third in surplus corn, as the state will have only 400 million bushels left after accounting for in-state uses. Nebraska and Indiana also have significant drops in surplus corn. Nebraska’s domestic surplus corn falls 400 million bushels from 2004 levels; Indiana’s drops 200 million. Corn importing states, such as Kansas and Texas, increase their use of corn to fuel their new ethanol plants as well. The expansion of the ethanol industry could have dramatic effects on the U.S. corn sector and on the other uses for U.S. corn. If sizable declines in surplus corn in Iowa, Nebraska, and Indiana occur, it should translate into higher corn prices within those states. Illinois and Minnesota, with their relatively stable supplies of surplus corn, stand to be the targets for states and countries looking for sources of cheaper corn.

**Crop Insurance**

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directly transfer a large portion of the risk currently taken on by the crop insurance industry directly to U.S. taxpayers, thereby lowering both underwriting gains and other costs of running the program. A proposal being considered by the NCGA would replace marketing loans and countercyclical payments with a target revenue program at the county level that would also transfer a significant amount of risk away from the crop insurance program. Most of the remaining risk would be transferred with the second part of the NCGA program, which would provide coverage against individual losses. The American Farmland Trust has proposed something similar. Its proposal would create a target revenue program at the national level that would take a significant amount of risk away from the crop insurance program, especially in major production regions. The remaining residual risk would be covered by a modified crop insurance program that would deduct payments made by the national program from individual losses before an insurance claim is settled.

Any of these modifications of current farm policy would significantly shift tax support away from the crop insurance industry to direct support of farm income. If Congress ultimately concludes that its efforts to wean agriculture away from disaster assistance programs through an expanded crop insurance program have failed, then some combination of these three proposed new approaches would seem to offer a viable, cost-effective alternative. Combining bottom-up base coverage at the individual farmer level with top-down coverage of a target revenue program is one alternative. The bottom-up coverage could be in the form of the so-called wrap coverage proposed by American Farmland Trust, a standing disaster program, as proposed by Congressman Peterson, or the NCGA’s individual revenue insurance program.