Budget Cuts Continue to Pressure the Agricultural Sector

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Figure 1. China's net pork import trade with and without market access

prohibited for health reasons. In the baseline China is projected to export approximately 200 tmt of pork annually. Net exports are indicated in figure 1 by negative unumbers. According to the Uruguay Agreement on Agriculture, if China attains WTO membership in 1998 and the phytosanitary restrictions are relaxed, China could be required to establish a TRQ for pork products.

Although the specifics of the TRQ are negotiable, Annex 5, Section B, of the Agreement on Agriculture outlines the standard schedule for a developing country as 1.0 percent of consumption over some base period growing to 4.0 percent over 10 years. Using this schedule and 1994 to 1996 as the base period, Figure 1 shows China's potential net pork imports given market access requirements. Figure 1 displays China's net imports of pork, but total import levels following WTO accession are calculated as the difference between the WTO and baseline net import numbers. Following accession, China could import approximately 350 tmt of pork in 1998. By 2006, total pork imports could grow as large as 1.2 mmt, roughly ten times U.S. net exports of pork in 1996.

China's accession to the WTO is likely to increase the market for U.S. exports of agricultural commodities. China already imports significant quantities of wheat and some rice and corn. However, the future growth in import demand is expected to be in feed grains to satisfy the needs of China's rapidly growing livestock sector and oilseeds to meet the growing demand for vegetable oils. If WTO accession opens up China's meat markets to significant levels of imported meat products, China's demand for grain imports may grow more slowly. On the surface it appears that U.S. livestock producers stand to gain the most from China's accession to the WTO. However, stronger meat exports will increase the domestic demand for feed grains, raising prices and increasing returns to U.S. grain farmers. More thorough analysis is needed to assess the full impact of China's accession to the WTO on world grain and meat markets.

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When Congress passed the 1996 Farm Bill, many agricultural reports gave the impression that U.S. agriculture would be spared further federal cutbacks. It is true that the ag producers have signed seven-year production flexibility contracts (PFCs) with the U.S. government. The contracts do stipulate a declining flow of income support payments. However, there is no guarantee that the agricultural sector will not suffer further budget reductions. Legislators and other policymakers from agricultural states are still defending agriculture from proposed budget cuts.

One example of current budgetary pressure on agriculture can be seen in the most recent CRP enrollment (see CRP article in this issue). The 1996 Federal Agriculture Improvement and Reform (FAIR) Act capped CRP enrollment at 36.4 million acres. With the recent sign-up, the CRP enrollment on October 1, 1997, will total 27.6 million acres. The Secretary of Agriculture wants flexibility to enroll acres over the duration of the FAIR Act, thus the 9 million acre difference between current enrollment and the cap. This is not a direct budget cut. However, the east-west movement of land enrolled in CRP does constitute a budget reduction because the average rental rate that accompanies this movement drops from $50 per acre to $44 per acre.

The current congressional debate over the elimination of the excise tax exemption for fuel ethanol is another example of budgetary pressure on the agricultural sector. Ethanol now receives a $.54 per gallon federal tax exemption, which translates into a savings of $.054 per gallon at the pump for 10-percent ethanol blend gasoline.

In the past, the Food and Agricultural Policy Institute (FAPRI) has been involved in several studies of the effectiveness of the ethanol tax exemption. However, these analyses were conducted under a very different underlying federal agricultural policy than is now in place. The FAIR
Act places the agricultural sector in a new situation. Under the 1990 Farm Bill, the ability to shift from one crop to another was severely limited. Additionally, any reduction in crop price translated directly into an increase in government farm program cost. The FAIR Act allows producers to move freely from crop to crop. Consequently, any price effects caused by reduced ethanol demand will result in alternative planting decisions by the producers but will have little impact on government costs. Further, the new law fixes the level of government expenditure. The removal of the ethanol tax exemption will not result in an associated increase in government farm program costs. “Effects on Agriculture of Elimination of the Excise Tax Exemption for Fuel Ethanol” is the first analysis on the tax exemption conducted by FAPRI under the new farm program.1

The analysis assumes that the tax exemption will end with the start of the 1997/1998 crop marketing year and will take effect at the start of the 1998 fiscal year (October 1, 1997). It is assumed that the exemption will remain off through the remainder of the baseline. It is assumed that the use of corn for ethanol production will drop by 50 percent in the 1997/1998 crop year from the baseline levels of 504 million bushels to 252 million bushels. This level of decline is forced on the modeling system. It is further assumed that the level of demand continues to decline as processing plants shift to alternative uses for their starch stream, or that plants would work though cash reserves and other assets before finally halting production.

Before changes occur in the price of corn it is expected that ethanol demand drops to 180 million bushels in the 1998/1999 crop year and to 115 million bushels by 1999/2000, and that the base level of demand holds at 115 million bushels throughout the remainder the projection. It is important to note that these are absolute levels. The change from the baseline is much larger.

With the exemption still in place, demand for corn to produce ethanol is expected to reach 664 million bushels by the end of the baseline period (the 2005/2006 crop year). Given the present U.S. capacity to produce ethanol, such a growth in demand is not unreasonable. It is highly unlikely that further ethanol plant construction will occur in the future if the tax exemption is canceled. Consequently, the constant price difference in ethanol demand grows from 250 million bushels in the 1997/98 crop year to nearly 550 million bushels by the 2005/2006 crop year.

The loss in ethanol demand will be partially offset, but the overall effect will be a reduced level of corn utilization. With reduced demand will come price adjustments. The gross loss of 252 million bushels of corn to meet the ethanol demand in the first year of the analysis will result in a price decline that will decrease the rate of utilization in other demand categories, over and above the adjustments discussed above. Corn prices are expected to fall by $10 per bushel in the 1997/1998 crop year. Prices for other feed grains, such as sorghum, also come under pressure with the lower corn price. Sorghum prices are expected to fall by $0.08 per bushel, with smaller adjustments in barley, oats, and wheat prices.

Under the 1990 Farm Bill, this price decline would have had a minimal effect on plantings in the subsequent crop year. To adjust for the reduction in utilization, it is likely that the Secretary of Agriculture would have reduced the rate of set-asides, for example. This policy adjustment would have increased acreage under the previous law more than the effect of price changes. However, under the 1996 FAIR Act, producers are able to shift freely from one crop to another. Consequently, the price decrease lowers corn production returns by $12.49 per acre in the 1997/1998 crop year. Producers observe that decline and then shift from corn production to alternative crops. In the Corn Belt, such an alternative would likely be soybeans. Higher soybean exports and domestic meal utilization would help raise soybean prices marginally in 1997/1998, moving additional acreage for the 1998/1999 crop year into soybean production, rather than into corn and other feed grains. Some marginal acreage in other regions move land into wheat, cotton, and rice production.

The net effect of these shifts is lower prices for commodities across the board for the 1998/1999 crop year and beyond. In the 1998/1999 crop year, corn acreage falls by 1.2 million acres. With adjustments in the out years, corn acreage drops 1.1 to 1.2 million acres below baseline levels. Soybean plantings are expected to increase by 1.0 million acres with the 1998/1999 crop. After an adjustment period, soybean acreage will average 0.8 to 0.9 million acres higher than indicated on the baseline. Sorghum, barley, and oat acreages decrease marginally, while cotton and rice acreages increase even less. Overall, the planted area is expected to drop by 0.2 to 0.5 million acres. The net reduction in corn use caused by the elimination of the excise tax exemption is 174 million bushels, an amount that

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requires 1.3 million acres to be planted in corn. It is expected that more than half of the corn acreage will be planted in other crops, but it is also expected that there will be a marginal reduction in overall crop planting due to the reduced demand for corn for ethanol production.

The demand for corn for other purposes changes with the reduction in the ethanol demand. Corn exports are expected to rise due to both the reduction in gluten supplies into Europe and the price decrease. Feed use is also expected to increase as the livestock sector adjusts to the reduced feed costs and changes in gluten feed available.

Soybean demand is slightly more complex. While meal utilization rises under the ethanol tax scenario, note that soymeal export demand falls, even with adjustments to meal exports to account for the protein equivalent of the reduced gluten shipments. Meal prices decline less than 1 percent under the scenario. Oil prices decline by less than the fall in soybean prices as soyoil demand also picks up with reduced corn oil supplies. This relative strength in meal and oil prices when compared to soybean prices makes importing and crushing soybeans somewhat more attractive than meal and oil importing. The net effect is increased exports for the soybean sector, but with a shift to more soybean exports and less product exports.

Lower feed costs provide incentives to increase livestock production. After the first year of the scenario, pork and broiler production rise slightly, leading to a reduction in prices for those products. Normally, the beef sector would react similarly to the change in feed costs. However, the decline in retail prices of other meats overwhelms the change in feed costs. Consequently, beef production and prices are both lower in the scenario compared to the baseline. Milk production increases slightly, with prices off as well. In the last year of the analysis, feed costs for dairy production are down by $0.11 per cwt, with milk prices down by $0.08 per cwt.

Farm income declines under the scenario relative to the baseline. Crop receipts in particular are down by $0.7 billion in 1998 and by $1.9 billion by the end of the period. Livestock receipts are also down, but feed expenses are expected to decline somewhat more than receipts, indicating that the livestock sector is somewhat improved under the scenario. Production expenses for the sector as a whole are also expected to fall. Net cash income is off by $300 million in 1998 and down by $1.1 billion at the end of the period. After adjustments for inventory changes and other nonmoney effects, net farm income decreases by $1.2 billion under the scenario at the end of the period.

The budgetary pressures on agriculture will continue to build. The agricultural community must continue to recognize and analyze the impacts of these changes. By determining net farm income under proposed policy changes, we can at least estimate whether the proposed changes will be positive or negative on the agricultural sector. Informed evaluation of policy alternatives will continue to support a healthy agricultural sector of the U.S. economy.