



## **Agricultural Policy Questions: How Have Crop Exports Performed With the Price and Income Farm Policy Changes of the Last Two Decades?**

The importance of exports to the farm economy is one of several forces that have driven farm policy changes over the last two decades. As a means to improve price competitiveness in international markets, farm policy shifted from supporting crop prices through market intervention to supporting incomes with direct payments.

While earlier legislation contained some export-related changes, the drop-off in exports during the early-to-mid 1980s and subsequent price and income problems set the stage for legislation in the 1985 Farm Bill especially designed to expand crop exports. Support prices were reduced by about one-quarter initially and, in the case of corn, by nearly forty percent by 1990 using a combination of moving averages of market prices and discretion of the Secretary of Agriculture. Now, with the implementation of the loan deficiency payment program (LDP), support prices no longer support prices; their current major use is to determine LDP rates.

By allowing prices for program crops to fall, several things were expected to happen. In the short-run, by being more price competitive, the U.S. would increase its export share as importers purchased more from us and less from other suppliers. In the longer-run, in addition to further increases in our market share, the size of the world export pie would increase. With lower prices and time to adjust, importers would consume more and, if they produced the crop, produce less. Export competitors would respond to the lower prices by devoting fewer resources to agriculture and producing less for the export market. The overall expectation was that in-

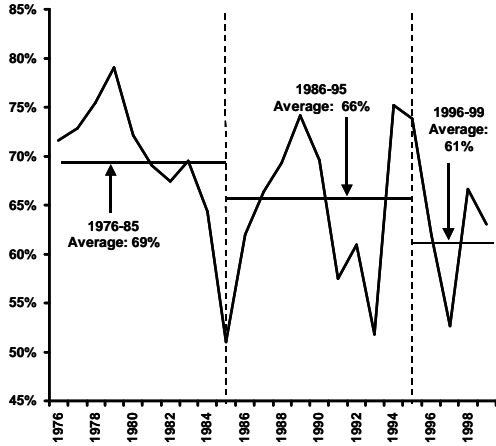
creased U.S. exports would again drive demand growth and foster prosperity for U.S. agriculture.

The question is: Have the expectations generated by this shift in policy been realized? In this issue, we look at changes in U.S. market share and growth in exports compared to domestic demands for U.S. corn, soybeans, and wheat since the 1985 Farm Bill. Figure 1 shows U.S. export volume as a percentage of world export volume for each of the three crops. While there is significant year-to-year variation, trend for all three crops is down. For comparison purposes, average percentage shares were computed for three time periods: the ten years prior to the 1985 Farm Bill, the ten years after the 1985 Farm Bill (covers the 1985 and 1990 Bills), and the first four years of the 1996 Farm Bill.

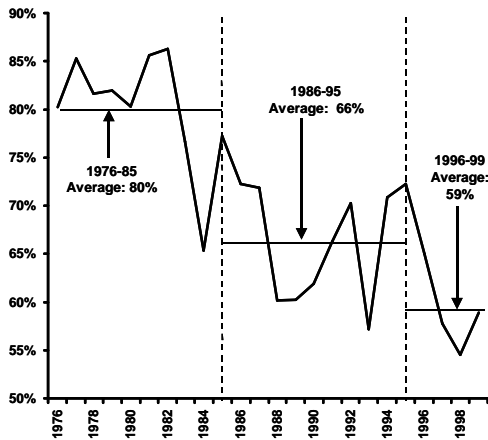
In the case of corn (Panel A), the overall downward trend in the U.S. share of the world export market is evidenced by the 69, 66, and 61 percent average shares for the ten years before the 1985 legislation, the next ten years, and the most recent four years, respectively. Looking year-to-year, the dips in market share in 1985, 1993, and 1997 are especially sharp and occur under widely different U.S. production and price conditions. In the 1985 marketing year, the U.S. experienced record level corn production, price averaged 40 cents below the previous year, but U.S. share of world corn exports dropped to 51 percent from 64 percent in 1984. Similar U.S. circumstances surrounded the drop in market share in 1997. In 1993, on the other hand, U.S. corn yield and production were down significantly from the past and corn price was about 40

**Figure 1. U.S. Exports as a Percentage of World Export Volume.**

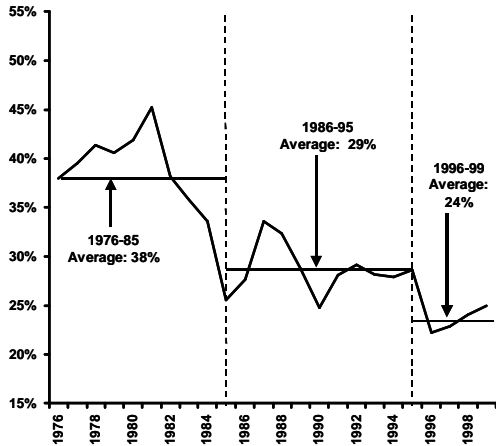
**Panel A. Corn**



**Panel B. Soybeans**



**Panel C. Wheat**



Source: USDA PS&D Database

cents higher than the previous year. Contrasts in U.S. production/price circumstance also occur during years in which our market shares are relatively large. In 1995, for example, corn season average price was record high at \$3.24 per bushel and the U.S. captured a 73 percent share of the world export market. While price is always a factor, it is evident that other events in a given year, especially yield-determined production levels of our export competitors and export customers, are of considerable importance.

Compared to corn, the U.S. average share of world soybean exports (Panel B) dropped considerably further the ten years after 1985 and slightly more than corn the last four years. These numbers do not include meal exports. If they did, the scale would change and the percentage point drops between the first and second period averages would be greater since export market share eroded at a faster rate for soybean meal than for soybeans during that time. The percentage point drop between the second and last period would be slightly less if meal were included. Again, on a year-to-year basis, note that the lowest U.S. market share for soybeans during the 24-year period occurred when the season average price of soybeans was \$5 per bushel in 1998. The 1999 expected share is only slightly improved and the season average price is expected to be record or near-record low for the 1976-99 period.

Panel C shows information on the changes in U.S. wheat export share since 1976. The trend is clearly down with the rate of decline steeper than for corn and roughly comparable to soybeans. Note that wheat export shares varied very little the last four years but wheat price went from \$4.30 per bushel in 1996 to \$2.50 per bushel in 1999.

Figure 2 contains graphs of domestic and export demand for each of the three crops over the 1976 to 1999 period along with averages for the ten-year periods before and after the beginning of the 1985 Farm Bill and the first four years of the current bill.

Corn exports trended upward from 1976 to about 1980 and then flattened out. Domestic demand, on the other hand exhibits an upward trend over the full period. The average for domestic corn demand for the 1996-99 period is 2.3 billion bushels above average domestic use during 1976-85. On the other hand, the average of corn export for the last period, 1996-99, is 122 million bushels less than the average for the first period, 1976-85.

Corn use numbers are not adjusted for corn fed to export-bound livestock and livestock products. More accurately, the corn numbers are not adjusted to reflect net exports of livestock products on corn usage. Even though livestock exports have increased significantly of late, the U.S. continues to import more red meat than it exports. So we are also importing feed via livestock product imports as well as exporting feed via livestock product exports.

Also, much of the poultry exports, including giblets, necks and dark meat, are complements to the preferred poultry cuts or portions in the U.S. So it is not clear how much less corn the poultry industry would demand without this segment of poultry exports. By simply multiplying U.S. corn feed demand by the ratio of livestock exports to livestock production, 400 to 500 million bushels of corn would switch from domestic to export averages in the 1996-99 period if livestock imports and the composition of poultry exports are ignored. Assume the actual shift to exports in the last period is 100 to 300 million bushels. Then, comparing averages for the first and the last periods, the difference in export demand would not decline as shown in Panel A, but increase by 100 million bushels or so, while domestic demand between the first and last period would increase by about 2 billion bushels.

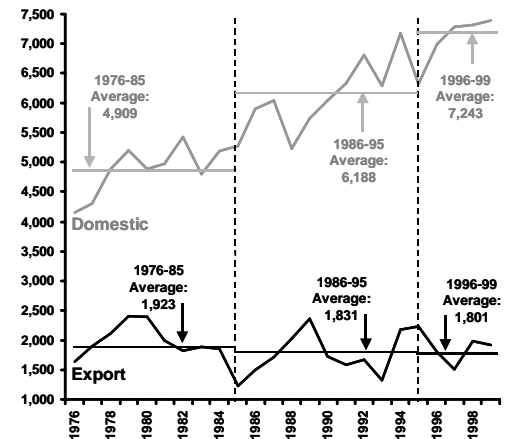
Soybean domestic demand increased over the full period and at a significantly faster rate than soybean export demand. Domestic demand averages for the 1976-85 and 1996-99 periods increased by 600 million bushels while export averages increased by 100 million bushels. If soybean meal equivalent of soybean exports were included in the calculations, the export curve and averages would be scaled upward and the domestic curve and averages would be scaled downward but, since domestic soybean meal use has increased faster than exports over the analysis period, the same general pattern would remain. Just as in the case of corn, adjustments to account for livestock exports have not been made but doing so would not change the overall comparison of domestic versus export demand growth.

Average wheat domestic demand increased by 400 million bushels between 1976-85 and 1996-99 while export demand averages between the two periods decreased by nearly 300 million bushels. During this span of time, export demand and domestic demand switched places. Exports exceeded domestic demand by 400 million bushels, on average, during 1976-85 but for the 1996-99 period, exports averaged 300 million bushels less than domestic demand.

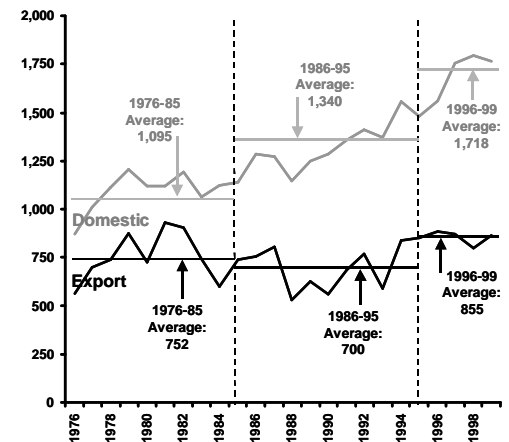
Since the mid-eighties, grain demand has been driven by domestic demand, not exports. Does that necessarily mean that exports could not take off again like they did in the 1970s? No, but the fundamentals that drive world-wide grain supply and demand do not point to exponential growth of grain exports in the next few years, although in ten to thirty years they may. Of course, a series of weather or other events could provide relatively short-lived surges in export demand at anytime. Clearly, changes in farm legislation beginning in 1985 did not offset the tangle of political, sociological, and economic factors that influence the U.S. grain export market.

Figure 2. U.S. Domestic and Export Demand.

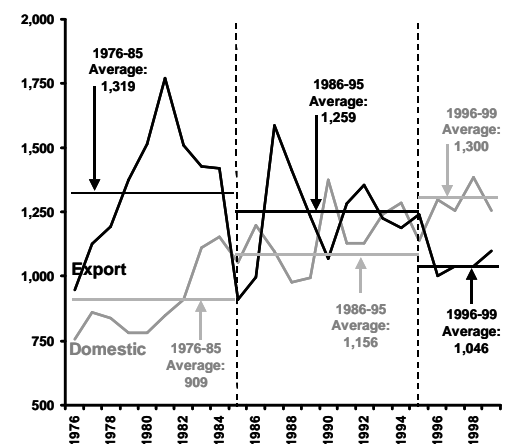
Panel A. Corn



Panel B. Soybeans



Panel C. Wheat



Source: USDA

Policy Matters is a regular publication of the Agricultural Policy Analysis Center (APAC) in the Department of Agricultural Economics and Rural Sociology at the University of Tennessee Institute of Agriculture.

APAC was established in 1992 around the Blasingame Chair of Excellence in Agricultural Policy to conduct research and provide information on the impacts of

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Policy Matters is intended to be a vehicle for APAC to share analyses on farm policy issues and information on the economics of agriculture with farmers, agricultural leaders, policy makers, and researchers in the state and around the nation.

## We Welcome Your Input

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*310 Morgan Hall  
Department of Agricultural  
Economics and Rural Sociology  
University of Tennessee  
Knoxville, TN 37901-1071  
dray@utk.edu  
(865) 974-7407*

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**Agricultural Policy Analysis Center**  
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Dept. of Ag. Econ. and Rural Sociology  
Institute of Agriculture  
The University of Tennessee  
Knoxville, TN 37901-1071