REPRESENTATIVE FARMS ECONOMIC OUTLOOK: UPDATE TO THE 1998 FAPRI/AFPC BASELINE

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An update of the January 1998 FAPRI/AFPC Baseline for the representative crop and hog operations is provided in this Briefing Paper. FAPRI's update of prices in the January 1998 Baseline for 1998 conditions are projected at the farm level in terms of their likely impacts on net farm income.

The analysis was conducted over the 1996-2002 planning horizon using AFPC's whole farm simulation model (FLIPSIM). Emphasis is placed on the projected net farm income values for 1997 and 1998. These values reflect the impacts of lower feed grain, wheat, and soybean prices in 1998. Additionally, the crop yields for 1998 have been updated for higher than average 1998 wheat yields in the Great Plains and the effects of the current drought in Texas. Data to simulate representative farming operations in the nation's major production regions came from two sources:

- Producer panel cooperation to develop economic information to describe representative crop, livestock, and dairy farms. Wheat yields for 1998 were updated based on preliminary information from USDA-NASS and Texas crop yields in 1998 were updated based on information from Texas Agricultural Statistical Service.

- Projected prices, policy variables, and input inflation rates from the Food and Agricultural Policy Research Institute (FAPRI) January 1998 Baseline, with updates for 1998 market conditions.

The primary objective of the analysis is to provide an update to the 1998 January Baseline for selected representative farms.

The FLIPSIM model incorporates the historical risk faced by farmers for prices and production. This Briefing Paper presents the results in a risk context using selected probabilities. The probability that a farm will experience an annual cash flow deficit and the probability of having to refinance these cash flow deficits using outside capital are provided as indicators of the financial risk faced by selected representative farms.

Average annual values for net cash farm income are reported for each farm. Net cash farm income equals total cash receipts minus all cash expenses. Net cash farm income is used to pay family living expenses, principal payments, income taxes, self employment taxes, and machinery replacement costs. The values are the averages for each year in the planning horizon.

The probability of a farm experiencing a cash flow deficit is the number of years out of 100 that the farm's annual net cash farm income does not exceed cash requirements for family living, principal payments, taxes (income and self-employment), and machinery replacement expenses. This probability is reported for each year of the planning horizon to indicate whether the cash flow risk for a farm increases or decreases over the planning horizon.

The probability of a farm refinancing deficits is the number of years out of 100 that cash flow deficits are greater than cash reserves. This probability is reported for each year of the planning horizon to indicate whether the financial risk for a farm increases or decreases over the planning horizon.

Results

- Texas Southern High Plains cotton farms have been hard hit by the 1998 drought. This is particularly important to economic viability for non-irrigated Texas farms because the 1998 drought came on the heels of the 1996 drought. Projected 1998 net cash farm income for a large cotton farm in the Texas Southern High Plains (TXSP3697) shows $325,000 decline from 1997 when yield was about equal to its 10 year average. The probability that the farm would have a cash flow deficit on 1998 is 99 percent. Net cash farm income during the 1996 drought was more than $177,000 greater than the projected income for 1998. If yields return to normal after 1998 and mean prices follow the January Baseline, the farm will continue to experience cash flow deficits more than 60 percent of the time.

- South Central Kansas wheat farms experienced above average (record) yields in 1998. However, wheat prices for 1998 have been lower than 1997 levels by $0.50 per bushel. The large representative wheat farm in South Central Kansas (KSSC3080) was used to demonstrate the economic impacts of these two opposing forces on net cash farm income. The benefit of the higher yields more than offset the lower prices for the representative farm, as average net income is projected to be $50,000 greater than 1997. The increased yield contributed to reducing the farm's probability of having a cash flow deficit and refinancing deficits. Assuming prices return to the levels in the January Baseline the farm will experience increases in the probability of experiencing cash flow deficits.

- The North Dakota wheat farms are expected to harvest slightly below average wheat yields for 1998. Lower wheat and barley prices will reduce net cash farm incomes from their 1997 levels. The probability of the large representative North Dakota wheat farm (NDW4600) experiencing cash flow deficits is projected to increase over the 1997, 1998 and 1999 period due to lower than normal income levels. Net cash farm incomes for these years are almost $200,000 less than the value for 1996 when grain prices were at record levels. Higher wheat prices in 1999 will likely raise net cash farm income about $15,000, but not enough to reduce the probability of cash flow deficits in 1999.

- Hog producers are presently experiencing much lower prices for barrows and gilts than they had in 1997. Additionally, hog prices are expected to remain at their current level for another year. The large Missouri hog farm (MOH225) is projected to have substantially lower (64 percent) net cash farm incomes for 1998 and 1999 than it experienced for 1997. Lower incomes increase the farm's probability of cash flow deficits to about 90 percent in 1998 and 1999. Consecutive bad years will increase the farm's probability of refinancing, but not substantially. Smaller hog farms in the

Midwest (MOH100) will, however, experience substantial cash flow problems in the future as a result of low hog prices in 1998 and 1999.

- Grain farms in the Midwest are expected to have average yields in 1998, however, they are presently experiencing lower corn and soybean prices. Corn prices are down $0.25 per bushel from 1997 levels and soybean prices are down $1.00 per bushel. These lower prices are projected to reduce net cash farm income for a large Iowa grain farm (IAG2200) about $30,000 in 1998 from the $220,000 level in 1997. Lower net cash farm income results in a small increase in the farm's probability of having a cash flow deficit, relative to 1997. If grain and oilseed prices return to the levels in the FAPRI January Baseline after 1999, the farm will see its probability of a cash flow deficit fall 10 percentage points from its high in 1998.