

# The Main Street Economist

Regional and rural analysis



2007

FEDERAL RESERVE BANK of KANSAS CITY

## FARM SPENDING SURGES WITH RECORD INCOMES

MARIA AKERS, ASSISTANT ECONOMIST, AND JASON HENDERSON, ASSISTANT VICE PRESIDENT AND OMAHA BRANCH EXECUTIVE

High hopes have come true, or so it seems for the farm sector in 2007. At the beginning of the year, a rush of optimism spread through the U.S. farm sector after strong ethanol demand fueled a sharp rise in crop prices in 2006. Increased precipitation, bountiful harvests, robust demand, and high prices fueled a surge in U.S. farm incomes and spurred a wave of spending on farm real estate and farm equipment. The outlook for 2008 also appears bright, as futures markets indicate persistently high prices.

The agricultural sector, however, is not without risks. Thinner ethanol profits, higher input costs, straining grain storage and transportation systems, and nervous financial markets are just some issues threatening the ag outlook. This article examines the rise in farm spending that has resulted from record farm incomes and highlights some of the risks to the agricultural outlook for 2008.

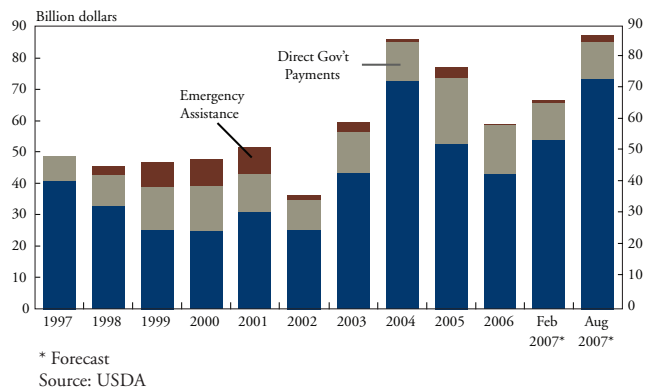
### FARM INCOMES SOAR

Farm income expectations have soared heading into the fall harvest, according to Federal Reserve agricultural credit surveys and USDA forecasts. In the second quarter, bankers responding to various Federal Reserve agricultural credit surveys reported that farm incomes were

substantially higher than a year ago and were expected to strengthen in the third quarter. In fact, the Kansas City District bankers in the third quarter report that farm incomes surged again.

Rising expectations for farm income by bankers coincided with strong upward revisions in USDA forecasts. In February, USDA projected that net farm incomes in 2007 would jump 12.7 percent above 2006 levels (Chart 1). In August, net farm incomes experienced a sharp upward revision. Now, USDA expects 2007 net farm incomes to be a nominal record of \$87.1 billion,

CHART 1  
U.S. NET FARM INCOME



47.6 percent above 2006 levels and 30.9 percent above the February 2007 forecast.

The strong upward revision was driven by a substantial jump in crop revenues and robust livestock receipts. The values of both crop and livestock production are expected to surpass previous record highs recorded in 2004 and 2005, respectively. Bumper crops, strong demand, and high prices have led to a surge in 2007 crop receipts, with the biggest gains emerging from corn production. Higher crop revenues, however, will cut government payments in 2007 with counter-cyclical payments projected to drop 75 percent below 2006 levels. The value of livestock production is also expected to rise due to improved market conditions and increased demand for exports. Surging farm income will more than offset rising input costs, up almost 10 percent in 2007, led by higher prices for fuel, fertilizer, seed, and energy.

### FARM CAPITAL SPENDING AND LOAN DEMAND RISE

Record farm incomes are fueling a sharp rise in farm capital spending. Spending on farm equipment and grain storage facilities have surged in 2007. Agricultural bankers report that capital spending increases are supporting a rise in loan demand.

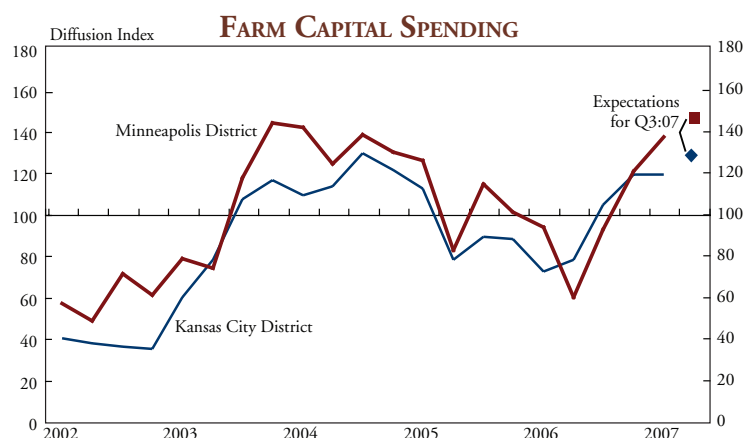
Bankers responding to the Federal Reserve agricultural credit surveys report strong capital spending. Bankers in the Kansas City District cite additional capital investment by farmers, with a flurry of on-farm grain storage construction near ethanol plants (Chart 2). With rising farm income expectations, bankers in the Minneapolis District also report robust growth in capital spending. In the Richmond District, bankers note increased spending on tobacco harvesting equipment and barn construction.

Farm equipment manufacturers also indicate that the agricultural community is plowing profits into upgrading machinery and equipment. Through August 2007, the Association of Equipment Manufacturers has seen an 8.6 percent annual increase in sales of four-wheel-drive farm tractors. Sales of combines have also increased 14.2 percent through August. This reflects the strongest sales growth for heavy farm equipment since record farm incomes in

2004. Moreover, irrigation equipment companies are also reporting robust sales. For example, Valmont Industries, a large supplier of irrigation equipment, reported second quarter sales 22 percent above last year.

Given the surge in farm spending and steady to slightly lower interest rates, agricultural bankers report agricultural loan demand is on the rise. Loan demand strengthened in 2007 for all Federal Reserve districts except San Francisco (Chart 3). In the second quarter, the Chicago District reported that the index of non-real estate agricultural loan demand reached its highest level in a decade, driven by investments in machinery, equipment,

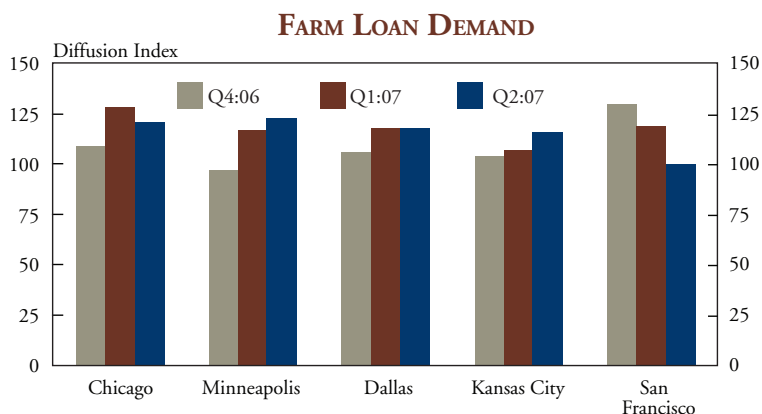
CHART 2



Note: Bankers responded to each item by indicating whether conditions during the current quarter were higher than, lower than, or the same as in the year-earlier period. The index numbers are computed by subtracting the percent of bankers that responded "lower" from the percent that responded "higher" and adding 100.

Source: Federal Reserve Banks of Minneapolis and Kansas City

CHART 3



Note: Bankers responded to each item by indicating whether conditions during the current quarter were higher than, lower than, or the same as in the year-earlier period. The index numbers are computed by subtracting the percent of bankers that responded "lower" from the percent that responded "higher" and adding 100.

Sources: Federal Reserve Banks of Chicago, Minneapolis, Kansas City, Dallas, and San Francisco (computed by Kansas City).

and grain storage facilities. High crop prices and increased corn production led to a rise in operating loans in the Chicago and Kansas City districts as producers boosted production expenses to maximize yields. The Dallas District experienced some strengthening in the demand for cattle feeder loans, and the Minneapolis District reported that a geographical shift in livestock production was supporting new hog production facilities. Bankers in the Minneapolis District noted that farmland sales have been more common throughout the year and less seasonal, which has boosted the demand for real estate loans. Steady or easing interest rates through the second quarter for operating, machinery, and real estate loans were also cited as facilitating borrowing for the agricultural sector.

Farmers are also using increased incomes to strengthen farm balance sheets by paying off existing debts. Farm loan repayment rates strengthened further in 2007. Bankers in the Kansas City and Chicago districts report loan repayment rates are at their highest levels in two years. Further improvements are expected, if higher farm income expectations are realized.

The number of loan renewals and extensions has fallen in 2007 as farmers pay off farm loans. Loan renewal and extension indices have declined in the Kansas City, Chicago, Minneapolis, and Richmond districts. In the

second quarter of 2007, delinquency rates on non-real estate farm loans fell sharply, while the delinquency rates on farm real estate loans eased. Net charge-offs on nonperforming loans remained low.

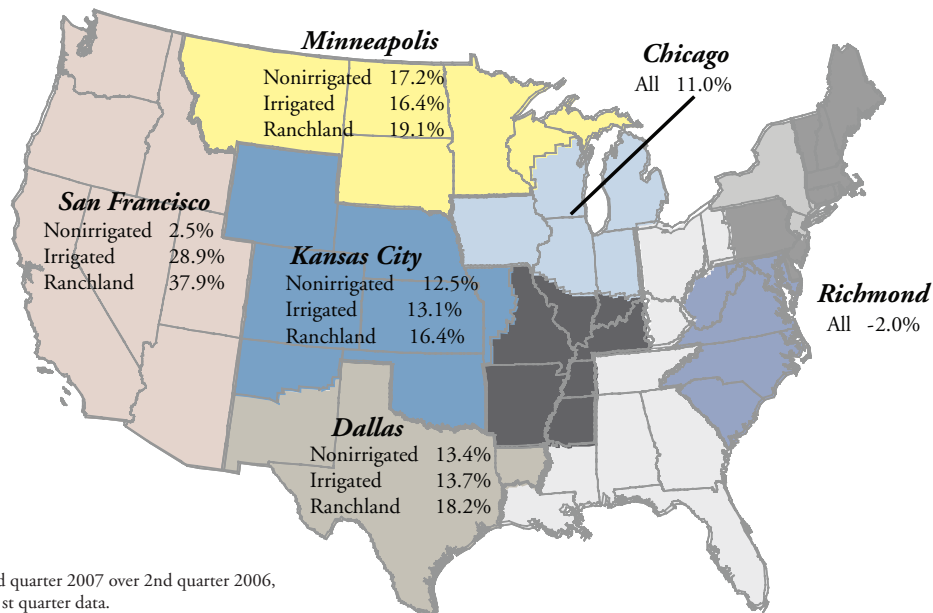
### FARMLAND VALUES CLIMB FURTHER

Rising farm income expectations have also quickly translated into higher farmland values. Most Federal Reserve districts report double-digit percentage gains in cropland values. Irrigated and nonirrigated cropland values are equally robust. In the Great Plains in the second quarter, nonirrigated cropland value gains ranged from 12.5 percent to 17.2 percent above year-ago levels and irrigated cropland value gains ranged from 13.1 percent to 16.4 percent (Map 1). Ranchland has continued to post the strongest gains, ranging from 16.4 percent to 19.2 percent above year-ago levels, largely driven by recreational demand. Richmond was the only district where first quarter farmland prices were below both the previous quarter and year-ago levels, but bankers in the Richmond District expect farmland values to rebound.

The pace of farmland value gains slowed during the second quarter. The sharpest increases in farmland values were posted prior to spring planting, as district surveys showed the pace of appreciation typically slowed between

MAP 1

### U.S. FARMLAND VALUE GAINS



Note: Percent changes are 2nd quarter 2007 over 2nd quarter 2006, except Richmond which are 1st quarter data.  
Sources: Federal Reserve Banks of Richmond, Chicago, Minneapolis, Kansas City, Dallas (San Francisco computed by Kansas City)

the first and second quarters. For example, between the first and second quarters of 2007, nonirrigated farmland values in the Kansas City District rose a more modest 7.3 percent on an annualized basis. A rise in the number of farms up for sale may have damped farmland value gains. Bankers in the Kansas City, Minneapolis, and Chicago districts cited an increase in the amount of farmland offered for sale as escalating values are motivating some investors to cash out of the market. Even with potentially more farmland on the market, bankers indicate that buyer interest remains high, which is facilitating the sale of more farms and spurring value gains.

After a pause during the summer, robust income expectations may reignite a boom in farmland values. Slower price appreciation during the summer may have been driven by seasonal trends, where fewer farms are placed on the market between the planting and harvest seasons. Thus, farmland values may rise again after the harvest season. A number of bankers feel that farmland values have yet to peak. Led by Iowa respondents, 40 percent of bankers responding to the Federal Reserve Bank of Chicago agricultural credit survey expect farmland values to move up rather than down in the third quarter. More than a third of Minneapolis District bankers predict higher farmland values, and a quarter of Kansas City District respondents expect further farmland value gains, particularly in major corn-producing regions of the district. In the Kansas City District, appreciation in farmland values accelerated again in the third quarter (Chart 4).

Recreational and developmental demand for farmland continued to push up prices and fuel competition between farm and nonfarm interests. Bankers in the Dallas District report that local farmers are being priced out of the market for ranchland that is bought for recreational use and subsequently taken out of agricultural production. A Montana lender in the Minneapolis District noted increased farmland sales for hunting and recreational purposes. Kansas City District bankers have also seen more farmland purchases by nonfarmers in areas close to urban centers.

### CONCERNS TO THE OUTLOOK

Record farm incomes, rising capital spending, and healthy farm financial conditions paint a bright outlook for

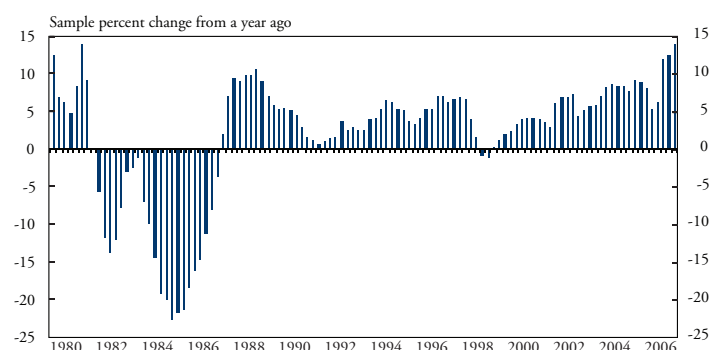
the farm sectors. However, the agricultural sector still faces risks. Thinner ethanol profits, higher production costs, and nervous financial markets are just some issues that could dull the luster of the farm economy going forward.

Robust farm incomes have been driven in large measure by the expansion in the U.S. ethanol industry. The spike in ethanol profits in 2006 fueled a rapid rise in crop prices and increased corn and ethanol production. But the tables are turning for the ethanol industry. Ethanol prices have fallen with a surge in ethanol production. Coupled with higher corn prices, the outlook for ethanol profits has deteriorated. From the farm perspective, leaner ethanol profits should not dramatically impact commodity demand, as long as existing plants remain in operation. If existing ethanol plants continue to operate, they will still consume large amounts of corn. In fact, 24 percent of the U.S. corn supply in 2007 was used by ethanol plants. Demand for corn should continue to support high corn prices directly and other crop prices indirectly as markets battle for planted acres.

The direct challenge for the farm sector emerges in the costs of production. Production costs have risen along with farm revenues. In 2007, farm input costs rose 8.8 percent, led by rapid gains in interest, fertilizer, feed, seed, storage, and transportation expenses (Chart 5). Futures markets indicate that natural gas and crude oil prices are expected

CHART 4

### NONIRRIGATED CROPLAND VALUES KANSAS CITY DISTRICT

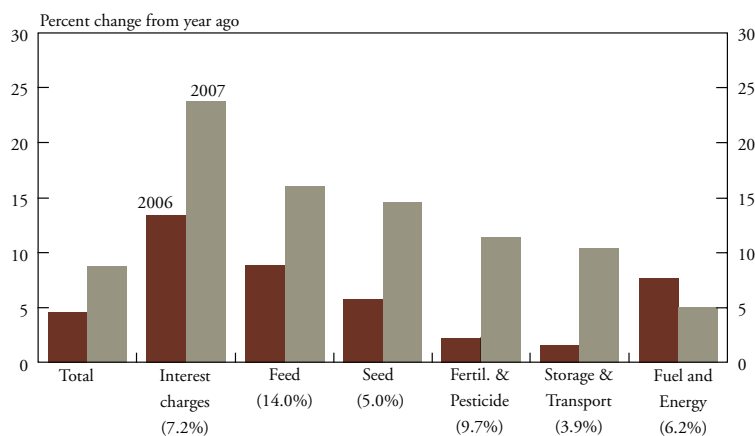


Note: Percent changes are calculated using responses only from those banks reporting in both the past and the current quarter.



## CHART 5

### FARM PRODUCTION EXPENDITURES



Note: Data in parentheses are share of total expenditures  
Source: USDA

to rise or remain high through 2008, which could translate into higher farm input costs.

Bumper crops are also straining existing storage and transportation systems. For example, a record wheat crop and full storage bins led the governor of Colorado to temporarily suspend motor vehicle laws so the excess supply waiting on the ground could be trucked to distribution points and not risk spoilage. A similar situation could occur during the fall harvest, threatening farmers with higher transportation costs and limited storage options.

Recent volatility and uncertainty in financial markets could restrain growth by limiting funds availability in the agriculture sector. Although agricultural bankers do not report serious issues with funds availability, recent liquidity issues in financial markets are influencing lending standards. Some lenders in the Kansas City District indicate that credit standards tightened somewhat in the second quarter. The amount of collateral needed for loans moved higher in Chicago and Richmond, but most districts reported little change in collateral requirements through second quarter. In the third quarter, however, Kansas City bankers noted an increase in collateral requirements. Given recent financial market volatility, the ability of lenders to satisfy growing agricultural loan demand will be an issue worth watching.

In addition to financial issues, weather conditions are always of concern to agricultural producers.

Even with increased rainfall and improved growing conditions in most of the country, it will take more than one season of beneficial weather to compensate for extended drought in many areas. This year, freezing temperatures hit many fruit producers just as trees were budding. The timing and intensity of rainstorms in Kansas and Oklahoma damaged a promising wheat crop and even prompted the declaration of disaster areas due to flooding. Currently, the Southeast is experiencing severe drought conditions that will no doubt impact crop yields. The potential of weather patterns to turn fertile fields to parched soil is ever-present in the minds of the agricultural community.

In sum, optimism is running high in farm country as record farm incomes have translated into surging farmland values and robust capital spending. Farm financial conditions have strengthened as farmers use increased incomes to pay off existing debt. Thinner ethanol profits, higher production costs, nervous financial markets, and ever-present weather concerns may cloud the horizon somewhat, but the farm outlook remains bright.

#### *FED SURVEY SUMMARIES ON THE WEB*

CHICAGO: [WWW.CHICAGOFED.ORG/ECONOMIC\\_RESEARCH\\_AND\\_DATA/AG\\_LETTER.CFM](http://WWW.CHICAGOFED.ORG/ECONOMIC_RESEARCH_AND_DATA/AG_LETTER.CFM)

DALLAS: [WWW.DALLASFED.ORG/RESEARCH/AGSURVEY/INDEX.HTML](http://WWW.DALLASFED.ORG/RESEARCH/AGSURVEY/INDEX.HTML)

KANSAS CITY: [WWW.KANSASCITYFED.ORG/AGCRSURV/AGCRMAIN.HTM](http://WWW.KANSASCITYFED.ORG/AGCRSURV/AGCRMAIN.HTM)

MINNEAPOLIS: [WWW.MINNEAPOLISFED.ORG/PUBS/AGCREDIT](http://WWW.MINNEAPOLISFED.ORG/PUBS/AGCREDIT)

RICHMOND: [WWW.RICHMONDFED.ORG/RESEARCH/REGIONAL\\_CONDITIONS/AGRICULTURE/INDEX.CFM](http://WWW.RICHMONDFED.ORG/RESEARCH/REGIONAL_CONDITIONS/AGRICULTURE/INDEX.CFM)

NOTE: A SUMMARY IS NOT AVAILABLE FOR SAN FRANCISCO, BUT ADDITIONAL INFORMATION FROM THEIR SURVEY CAN BE FOUND AT:  
[WWW.FEDERALRESERVE.GOV/RELEASES/EI5/](http://WWW.FEDERALRESERVE.GOV/RELEASES/EI5/)