Policy and Market Changes Improve U.S. Farm Outlook

Agriculture in the United States has been on a roller coaster for the past 15 years. Farmers' fortunes rose steeply in the 1970s and then fell suddenly; now, they are headed for recovery. U.S. farm exports, which constitute 40 percent of domestic crop production, are on the rise again (Chart 1). A major reason for the turnaround is that current agricultural legislation has reduced government price supports to free-market levels. That makes U.S. commodities less expensive to foreign buyers and discourages marginal production overseas. Regaining export markets will keep domestic output high without accumulations of large carryover stocks, and government subsidy payments will recede as prices of commodities firm.

Export Boom of the 1970s

The volume of U.S. agricultural exports grew, on average, 8 percent per year during the 1970s. Growth was sustained for a number of reasons. In some countries, local farmers were unable to satisfy food demands as population increased steadily, as much as 3 percent per year in various areas of the world. In addition, per capita incomes rose, particularly in less developed countries (LDCs), permitting increased food purchases and more varied diets. Centrally planned economies upgraded diets to include more animal proteins, which required larger imports of feed grains to expand livestock production. Finally, export sales were financed by liberal extensions of credit to LDCs, larger foreign exchange earnings from higher sales of raw materials in some countries, and fast-rising oil revenues in petroleum-producing countries.

A major catalyst for booming export sales in the 1970s was the relatively inexpensive U.S. dollar that allowed foreigners to buy more dollars and, in turn, larger quantities of U.S. products. Spurred by expectations of continued export growth, American farmers expanded operations. With total acreage under cultivation and crop yields both rising 16 percent from 1972 to 1982, production advanced 35 percent.

Boom to Bust

The boom began to unwind in 1980, when drought cut crop production by 12 percent. Higher prices prompted (Continued on page 2)

Gyrations in the Potash Fertilizer Market: Mining Versus Agriculture

Increases in fertilizer prices since mid-1987 are only partly attributable to market forces. At the request of a small segment of the domestic potash industry, the U.S. Government threatened duties on imports of low-cost Canadian potash, a fertilizer component. To avoid the duties, Canadian producers agreed to raise prices. Higher prices will reduce farm consumption of potash, but farmers in Eleventh Federal Reserve District states will still pay as much as $4.5 million more for potash in 1988 than in 1987. Since almost all U.S. potash is mined in the Eleventh District, however, higher prices will help maintain some mining companies' profit and employment levels in the short run.

Fertilizer Prices End Decline

The level of fertilizer use mirrors agricultural production. The agricultural boom of the 1970s, which was led by rapid growth in farm exports, pushed up both fertilizer use and prices. Fertilizer contains nitrogen (N), phosphorus (P), and potassium (K). Sources for NPK include natural gas for nitrogen, diammonium phosphate for phosphorus, and potash for potassium.

The agricultural boom went bust after 1981, as the market for exports shrank because of a global recession and a Third World debt crisis. Despite large increases in natural gas prices and hence nitrogen costs, U.S. fertilizer use rose from 1978 to 1981, only to trend downward thereafter (Chart 3). Broad segments of the fertilizer industry have been struggling to maintain (Continued on page 5)

NOTICE TO OUR READERS

This is the final issue of Agricultural Highlights. The Federal Reserve Bank of Dallas will continue to report on agricultural developments in The Southwest Economy, a new publication about which you will soon be hearing more. Agricultural Highlights did not appear in February.

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Farmers to Intensify Their Efforts in 1981 to Make up for the Shortfall. The result was a 15-percent increase in farm output that coincided with downturns in consumer and export demands. Unsold commodities piled up, depressing prices and farm incomes.

Several events reduced demand for U.S. farm products. A doubling of oil prices following the 1979 Iranian revolution plus successful efforts by monetary authorities to rein in high rates of inflation were followed by recessions in the United States and other industrial countries in 1982. Those downturns depressed export sales in LDCs, limiting their ability to buy U.S. products. Moreover, investments and extensions of credit to LDCs were stemmed as their economies weakened. Just as importantly, the value of the U.S. dollar rose 64 percent from 1980 to 1985, making U.S. goods even more expensive to foreign buyers. Finally, prior U.S. efforts to help LDCs become more self-sufficient in food production began to bear fruit, and the reliance on food and feedstuffs from the United States was cut sharply in many countries.

Farm Legislation out of Step

Lower demand and exchange rates were not the only contributors to the declines in U.S. exports. Rising government price supports also played a major role. For example, the loan rate, or government-guaranteed price, for corn was increased from $1.10 per bushel in 1975 to $2.00 in 1977. The relatively weak dollar helped offset the immediate effects of higher price supports. But the ante was raised in advance of the 1981 farm bill, which enacted a series of fixed increases in loan rates. This upward ratcheting of farm supports was deemed necessary because high inflation was thought to be endemic to the U.S. economy. At the time, however, inflation was slowing, so the price effects of higher loan rates were twofold. First, American farmers were encouraged to produce more at the very time world demand was beginning to slip. Second, the U.S. price-support system acted as a "price umbrella" for foreign producers, under which they could profitably expand production and capture U.S. market share.

With export sales shrinking and with domestic production expanding, stocks of major commodities piled up quickly. For example, at the end of the 1982 crop year, 43 percent of that season's total grain production was put in storage, and 66 percent of the cotton crop was warehoused. Such huge inventories depressed prices, and efforts were made to reduce plantings sharply in 1983 and to pare stocks. The payment-in-kind (PIK) program was enacted, and farmers were "paid" the commodities in storage to idle land and cut back production. The PIK program was successful, but at a high cost. Direct government payments to farmers totaled $9.3 billion in 1983, or 73 percent of net farm income (Chart 2). Because of its high cost, PIK was abandoned after one season, and inventories quickly built up again.

Managing Surpluses

The Food Security Act of 1985 (FSA) took a fresh tack in agricultural policy. Like its predecessors, the act included an acreage reduction program to hold down production. The most dramatic policy change, however, was a systematic reduction in price-support levels. This measure has already boosted the competitiveness of U.S. farmers by pricing commodities closer to market-clearing levels and lowering the price umbrella that allowed foreign producers to expand market share.

The use of generic commodity certificates has also sped the reduction of inventories and prices. Under FSA, certificates are paid to farmers instead of cash for participating in several programs and to merchants as bonuses for increasing farm exports to targeted countries. Within a specified period, farmers can exchange certificates for cash or, like merchants, redeem them for commodities held in government storage. Redemption frees inventories that would otherwise be unavailable to the market and thereby holds down prices. But once the overhang of stocks is lowered to normal levels, prices will firm.

While agricultural policy was redirected by FSA, other economic (Continued on page 6)
AGRICULTURAL BRIEFS

- Average agricultural land values in the District seem to have stopped their four-year decline. Average land values peaked in 1984 and have declined every year since then as local and farm economies sputtered. Quarterly survey results from April 1988, however, show that average District land values have increased modestly for the first time since 1984. Although a single quarter’s results do not make a trend and land values in some areas are still falling, the continued strong income outlook for the farm and ranch sector raises the probability that average land values in the District have bottomed out.

- The deficit reduction bill, signed into law by President Reagan on December 22, 1987, calls for $900 million in cuts in farm programs. Almost two-thirds of the cuts will come by paying corn and sorghum farmers to idle land rather than have them use the more expensive alternative of price-support loans and income assistance, or so-called deficiency payments. Another major change comes in 1989 with a new definition of “person” for the purposes of deciding who is eligible for farm program benefits. Originally the thrust for change was to prevent individuals from evading the $50,000 payment limitation, but it now appears that the law, in effect, sets higher limits instead.

- Chapter 12, the bankruptcy chapter enacted in 1986 for farmers, continues to alarm many bankers. Over 92 percent of District bankers surveyed thought that agricultural lending was more risky with Chapter 12 available to farmers. To cope with the increased risk, bankers plan to raise credit standards for all agricultural borrowers, even for those who do not qualify for Chapter 12. Over time, such actions could lead to a reduction in credit to the agricultural sector as the marginal-but-solvent farm or ranch borrowers are turned away.

- The loan-to-deposit (L/D) ratios at the banks surveyed have declined over the last seven quarters, indicating that while there is money to lend, the volume of attractive loan propositions is lower. In October 1986, bankers reported an average L/D ratio of 55.3. By April 1988, that average ratio had fallen to 50.0.

TEXAS COMMODITY MARKET PRICES

UPLAND COTTON

65 CENTS PER POUND

SOURCE: U.S. Department of Agriculture.

ALL WHEAT

3.3 DOLLARS PER BUSHEL

SOURCE: U.S. Department of Agriculture.

GRAIN SORGHUM

5.0 DOLLARS PER HUNDREDWEIGHT

SOURCE: U.S. Department of Agriculture.

SLAUGHTER STEERS

78 DOLLARS PER HUNDREDWEIGHT

SOURCES: Texas Department of Agriculture. Federal Reserve Bank of Dallas.

FEEDER STEERS

110 DOLLARS PER HUNDREDWEIGHT

SOURCES: Texas Department of Agriculture. Federal Reserve Bank of Dallas.

CORN

3.0 DOLLARS PER BUSHEL

SOURCE: U.S. Department of Agriculture.
SELECTED INDICATORS OF THE TEXAS AGRICULTURAL ECONOMY

TEXAS FARM REAL ESTATE VALUES
700 DOLLARS PER ACRE
(THREE-QUARTER CENTERED MOVING AVERAGE)

DRYLAND


PRICES RECEIVED/PRICES PAID
90 (1977 = 100)

NOTE: Index is constructed by dividing prices received by farmers in Texas by prices paid by farmers nationwide. (No separate series exists for prices paid in Texas.)

SOURCES: U.S. Department of Agriculture.

TEXAS CASH RECEIPTS FROM LIVESTOCK AND CROPS
8.5 BILLION DOLLARS
(JANUARY–DECEMBER TOTALS)

SOURCE: U.S. Department of Agriculture.

FARM DEBT OUTSTANDING AT TEXAS BANKS
4.0 BILLION DOLLARS

NOTE: Nonperforming loans consist of loans past due 90 days or more and still accruing plus nonaccrual loans.

SOURCES: Board of Governors, Federal Reserve System.

INTEREST RATES ON TEXAS FARM LOANS
13 PERCENT

BANKS: FIXED

BANKS: VARIABLE

PCAs

FLB

NOTE: PCA rate is for farm operating loans at production credit associations. FLB rate is for farm real estate loans at the Federal Land Bank.

SOURCES: Farm Credit Banks of Texas. Quarterly Survey of Agricultural Credit Conditions, Federal Reserve Bank of Dallas.

NONPERFORMING LOANS AT AGRICULTURAL BANKS
6.00 PERCENT OF TOTAL LOANS

NOTE: Nonperforming loans consist of loans past due 90 days or more and still accruing plus nonaccrual loans.

Potash Market (cont.)

tain profitability as real (inflation-adjusted) NPK prices fell from 1980 through 1987. According to some estimates, only 35 percent of all U.S. operations are profitable.

For spring 1988, however, fertilizer prices are expected to be an average of 10 percent higher than for spring 1987. Because nitrogen and phosphorus are exported, the declines in the value of the dollar have pushed up foreign demand. Further, as the result of negotiations among potash producers, prices have increased more than 25 percent over the past year.

Potash Production on the Decline

Most of the U.S. potash comes from mines in Southeast New Mexico, which are within the Eleventh District. Until 1968, not only was the United States self-sufficient in potash, it also was the world’s largest producer. But since that time, U.S. reserves have rapidly played out.

The near-steady decline in U.S. potash production and the rise of imports are shown in Chart 4. Domestic capacity is now only about 1.7 million tons per year, well below the 4.8 million tons of annual U.S. consumption. According to recent estimates, cumulative domestic use (including imports) valued at current prices will exceed reserves by the year 2000. It should be kept in mind, however, that “reserves” is an economic concept, and that billions of tons of lower-grade potassium ore in the United States could be exploited if the price were high enough.

U.S. Potash Producers Complain About Canadian Import Prices

About 90 percent of U.S. imports of potash are from Canada, and much of that comes from Saskatchewan. Once in the 1960s, and again in the 1980s, Saskatchewan potash production capacity rapidly expanded, outstripping demand and resulting in lower prices.

Falling U.S. potash prices in 1969, 1984, and 1987 caused U.S. producers to press charges of “dumping” against Canada and other nations before the U.S. International Trade Commission (ITC). To prove dumping, it had to be shown that Canada was selling potash in the United States below the Canadian cost of production and that there was injury to U.S. producers. As with any dumping case, domestic consumer interests were ignored. An ITC ruling favorable to the U.S. industry and the concomitant threat of antidumping duties usually have been enough to get the various producers to agree on a set of higher prices. Such was the case in 1969 and again in 1988.

Potash Prices Jump: Miners Versus Farmers

Early indications now are that the potash pricing agreement reached with the Canadians on January 8, 1988, will result in price increases of about 27 percent on potash imports. Farmers in District states used about 164,000 tons of potash in 1987 (about 3.4 percent of total U.S. potash consumption) at a total cost of roughly $31.4 million. One study has estimated that U.S. farmers will use 3.8 percent less potash for every 10-percent increase in potash price. Should that prove true for the 27-percent hike in Canadian import prices, then U.S. potash consumption would decline 10.4 percent in 1988.

Combining the price and quantity effects, while holding other factors constant, potash expenditures in District states are estimated to increase $4.5 million in 1988.

Total fertilizer costs for District states in 1987 are estimated to be about $356 million. At that level, the increase in fertilizer costs in 1988 because of higher potash prices would amount to just over 1 percent.

Although U.S. farmers are paying more for potash-based fertilizers in 1988, the District potash mines are benefiting. As shown in the previous example, total potash revenue increases because higher potash prices are not completely offset by the declines in use. Whether the District will actually benefit from the higher revenues earned by companies with mines in New Mexico is difficult to pin down. The employment consequences (fewer layoffs in the short run) are unambiguously positive, but the increase in corporate revenues will accrue to companies based largely outside the District. Thus, any benefit the District receives from higher min-

(Continued on page 6)
Potash Market (cont.)

ing company revenues depends on whether there are higher dividends and/or stock prices and whether there are substantial numbers of company shareholders residing in the District.

Outlook Mixed

The government-enforced price hikes in potash will take money out of farmers' pockets and put it into an industry that appears to be winding down. Some estimates are that 40 percent of the current U.S. potash capacity will have to be shut down by 1990 because of lack of profitability. But with increased potash costs spread among many farmers and the benefits concentrated for owners of mines in New Mexico, the effect on agricultural production will be small, while the mines will get a new, but short-run, lease on life.

—Edward L. McClelland
Hilary H. Smith
Lea Anderson

Farm Outlook (cont.)

forces also helped improve the outlook for farming. The 40-percent decline in the value of the dollar since 1985 further reduced local prices of U.S. goods in most countries and prompted renewed purchases of U.S. farm commodities. A lower inflation rate has helped bring down interest rates both here and abroad, making credit sales more attractive. Finally, such countries as the Soviet Union and the People's Republic of China are again contemplating increased purchases of U.S. farm commodities.

Near-Term Prospects

World supplies of farm commodities are down, consumption is up, and the U.S. share of expanding global agricultural trade is increasing. Farm exports are expected to increase 10 percent in volume this year and total $32 billion in value, or $4 billion higher than last year. The export volume of wheat will rise an estimated 33 percent, feed grains about 10 percent, and cotton 3 percent. Government subsidy payments will edge down, but even with other improvements to date, they will remain a significant share of farm income for some time to come.

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