

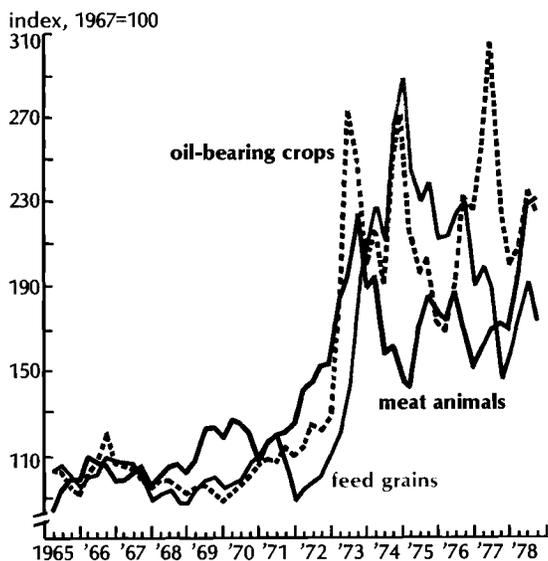
Agriculture in the seventies— a decade of turbulence

Don A. Langford

Historians may someday look back on the seventies as one of the most significant decades in the history of American agriculture. In many ways, the seventies have capsulized agriculture in this century, providing farmers some of their best times and some of their worst.

Some trends—like the declining number of farms, the shrinking amount of land in farms, the dwindling farm population, and the expanding average farm size—have continued. Others—such as rising production costs, increased use of debt financing, higher farm earnings from off the farm, the rising value of farm assets, and increasing proprietor equities—have continued at accelerated paces.

Prices received by farmers
fluctuated widely in the 1970s



But not everything has been simply a matter of continuing trends. Perhaps more than for anything else, agriculture in the seventies will be remembered for its extreme swings. Cattle and hog cycles have been far more pronounced than in the past. Grain stocks have fluctuated from surplus to shortage and back to surplus. The long uptrend in values of farmland turned into a boom unparalleled in this century. Government payments to farmers have varied from a record high to a 20-year low. During a cycle of four short years, net farm income doubled, and then fell by a third.

Government policy

To a great extent, farm legislation in the seventies has followed a fairly natural progression from the sixties. Policies of the 1970s for supporting farm income, encouraging farm exports, and maintaining the viability of family farms have been carried out largely through such long-established measures as price supports, transfer payments, voluntary supply management, P.L. 480 programs, and loans from various government agencies. However, a basic difference has arisen from the boom and bust conditions in agriculture during the seventies. Administrations have been able to use the latitude allowed under legislation to greatly shift the emphasis and direction of farm programs.

Government involvement in agriculture was especially apparent early in the decade, with payments to farmers setting a new record in 1972. But crop shortfalls in many parts of the world between then and 1975 pushed grain prices to new highs.

The government's role in agriculture temporarily became less visible as high prices reduced the need for income support and as production controls were relaxed. Nearly 60 million acres previously held out of production through such programs as acreage set-aside, land diversion, and cropland adjustment were released for cultivation in the mid-seventies.

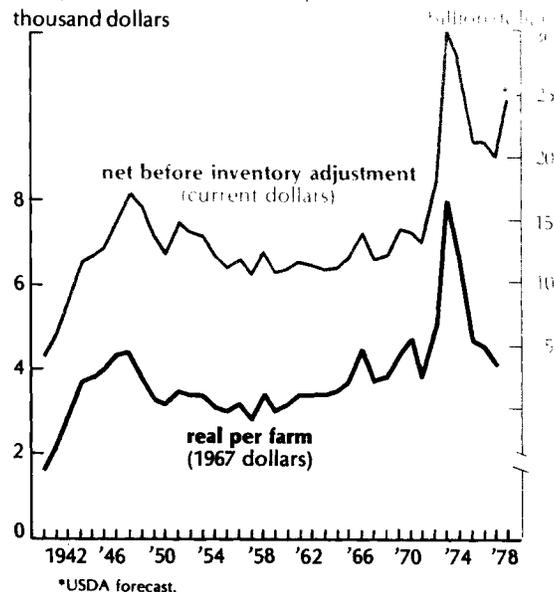
But as farmers planted fencerow-to-fencerow, grain stocks began to increase, boosted by good yields at home and bountiful harvests in other parts of the world. Farm income trended downward because of the erosion in grain prices and prolonged losses to cattlemen. This deterioration was highlighted last winter by demonstrations that focused attention on the problems of farmers and generated momentum for increased government support. From this background, the Food and Agricultural Act of 1977 and subsequent administrative actions have been characterized mostly by higher levels of farm income support, reintroduction of set-aside programs, and a new grain reserve program to manage the accumulation of large stocks.

Price controls, import quotas, embargoes on exports, and trade agreements were all

part of farm policy in the seventies. Embargoes on some agricultural commodities in 1973 and again in 1975 exemplified government efforts to ensure an adequate supply of food and feed would be available in domestic markets. Other government actions included the imposition of ceilings on red meat prices in 1973 and the relaxation at various times of restrictions on meat imports in an effort to stop the rise in retail meat prices.

Resumption of trade with communist countries, one of the key export developments in the seventies, led to several trade agreements. The three-year \$750 million grain agreement signed with the Soviet Union in 1972 was hailed as a boon to farmers because of the then burdensome stocks. But trade with communist countries has since fluctuated widely, sometimes compounding grain shortages. For that reason, subsequent trade agreements have been designed either to assure trading partners, such as Japan, that adequate supplies would be available from the United States or to stabilize patterns of future trade with communist countries. The five-year grain trade agreement with the Russians in 1975 was the most publicized of several agreements made with other countries to show a willingness to export farm products and at the same time bring enough stability to the pattern of foreign grain purchases to facilitate planning of farm policies based on production needs.

Farm income surged in 1973 only to fall for four years



Crop production

Several factors have influenced the fortunes of crop producers in the seventies—each to some extent unique. The arab oil embargo in 1973, which triggered the rise in prices of hydrocarbons, also contributed to shortages in fertilizer. And with prices for fertilizer sharply higher in 1974 and 1975, the long uptrend in fertilizer application rates was broken.

An unprecedented boom in farmland values also affected the fortunes of farmers, though with varying results. For farmers who had acquired their land in the past, the boom brought tremendous gains in net worth. But for operators that bought additional land or

rented much of their cropland, the boom resulted in considerably higher production costs. Higher land costs became a factor in the squeeze on cash flows that began in 1977 when mounting surpluses pushed crop prices sharply lower.

Changes in weather and fluctuations in world demand have also affected the well-being of crop producers. Long-range weather observers contend that weather patterns have shifted from the “abnormally good” conditions of the fifties and sixties to a “more normal” pattern of variability in the seventies. At any rate, the seventies have experienced wide swings in domestic and world crop production, largely because of weather conditions.

Foreign demand for grains and soybeans has risen to new highs in the seventies, largely as a result of the resumption of trade with communist countries and the decline in the dollar relative to the value of many currencies. Shipments of grain and soybeans surged to 85.6 million metric tons in the 1972/73 crop year. That was nearly 70 percent more than the average for the five previous crop marketing years. The volume, having continued to trend irregularly upward, is ex-

pected to exceed 100 million metric tons in the 1977/78 marketing year.

The greater volume of shipments has combined with generally higher prices to bring marked increases in the value of agricultural exports. Current estimates show farm exports approaching \$27 billion in fiscal 1978. That is more than a fourfold increase since 1969.

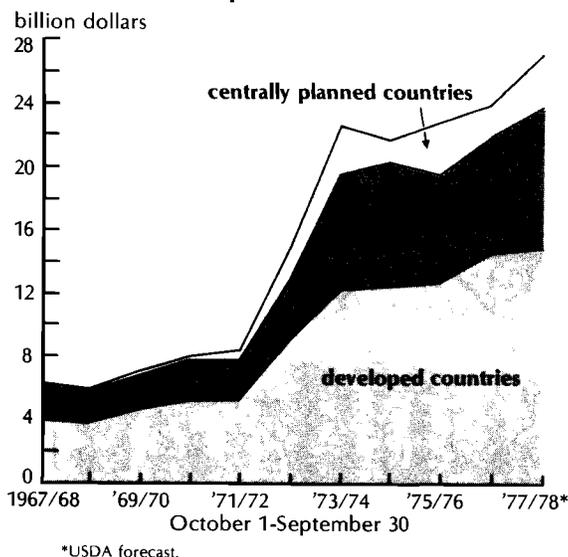
Producers began the decade under adverse conditions. Planting in 1970 was delayed by rain and followed by summer drought. Corn farmers had yields further reduced by southern corn leaf blight. Production of soybeans and grains (corn, sorghum, oats, barley, wheat, rye, and rice) fell 8 percent that year to 217 million metric tons, 3 percent less than the annual average of the second half of the sixties. Corn production fell 11 percent from the year before and was the smallest harvest since 1965.

With supplies short, farmers increased their plantings of soybeans and grains the next year and, with improved yields, crop production was boosted to a new high. Despite an increase in utilization, grain stocks at the end of the 1971/72 marketing year were again at the burdensome levels of the mid-sixties. On the other hand, soybean stocks tightened as utilization held at a relatively high level.

There were bumper grain and soybean harvests again in 1972, hinting that prices, for grains at least, would continue at support levels. Later in the year, however, the Soviet Union abandoned its longstanding practice of belt tightening when crops were short and turned to the United States to buy large amounts of grains and soybeans. Moreover, exports to traditional trading partners surged in response to the declining value of the dollar. As a result, grain exports jumped nearly two-thirds in the 1972/73 marketing year, and soybean exports increased 15 percent. Combined with a level of domestic utilization that still stands as a record, these developments brought a marked decline in ending stocks of grains and soybeans and triggered a rapid escalation in prices.

The 1973/74 crop marketing year was a near replay of the previous year. Boosted by a

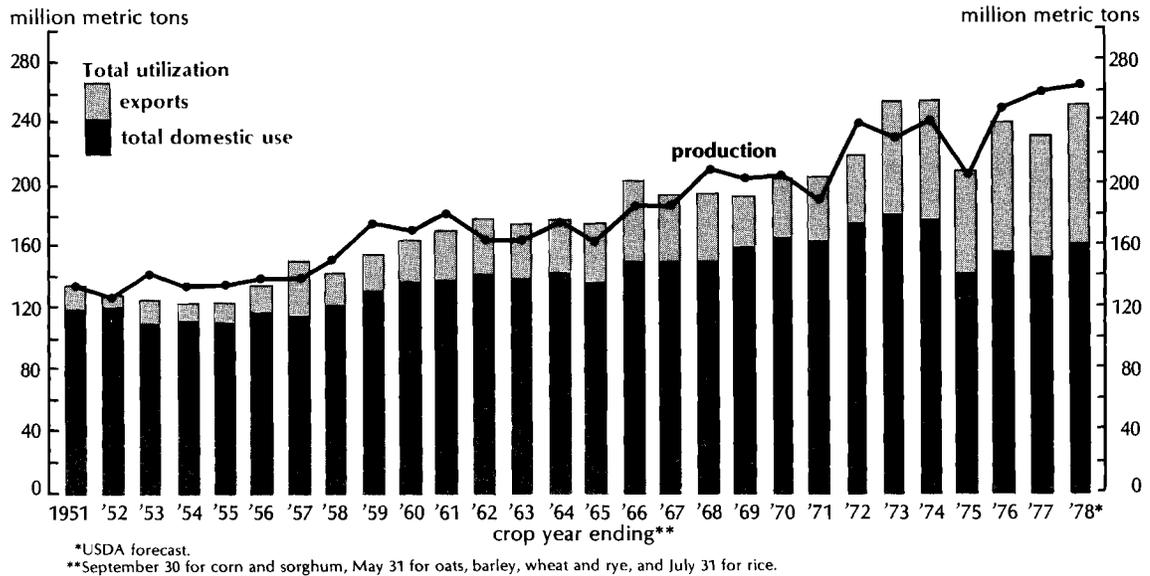
All types of economies contributed to boom in U.S. farm exports



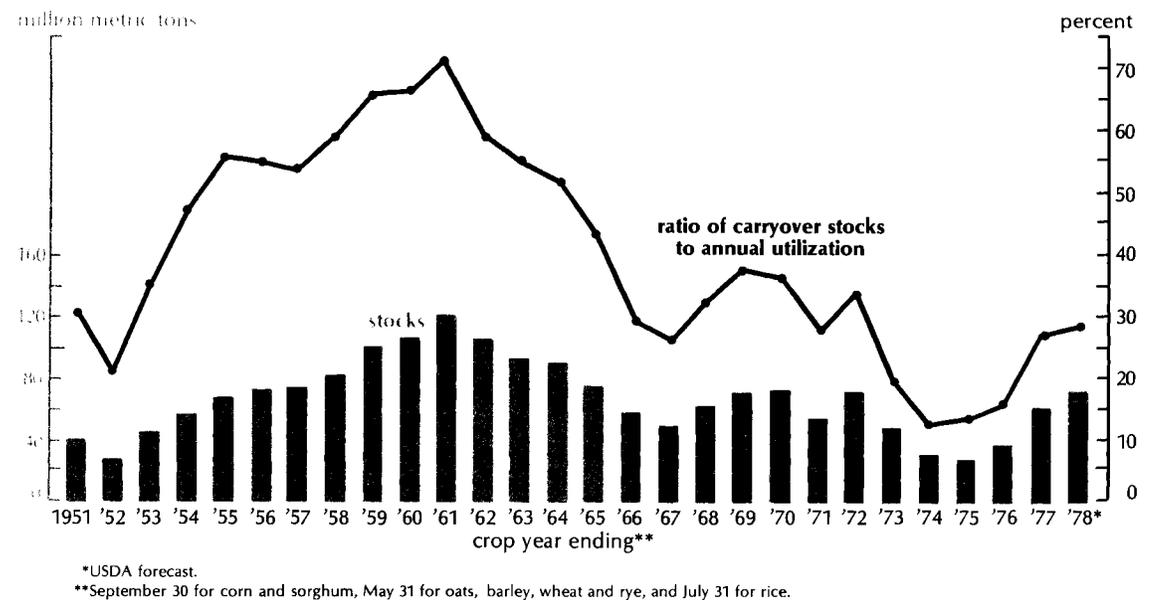
marked increase in soybean production, the 1973 harvest was 6 percent larger than in 1972. But emerging concerns about the condition of the 1974 crop resulted in even stronger world demand for grains and soybeans.

Plantings of most crops were increased further in 1974 as the last vestiges of acreage production controls were relaxed. Production suffered, however, from rain-delayed plantings, a summer drought in the Corn Belt

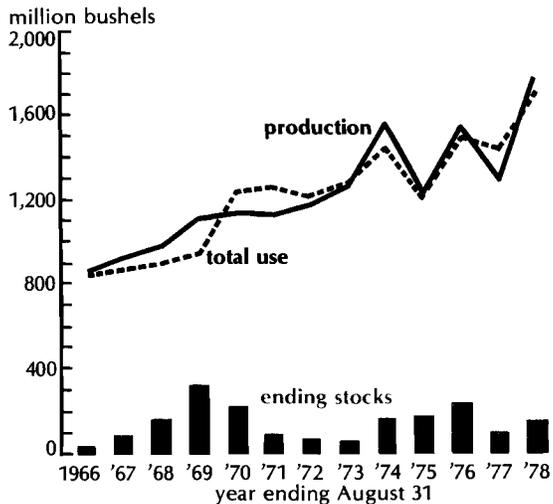
Imbalances between production and utilization of grains . . .



. . . led to precariously low carryover stocks in the mid-1970s



Expanding utilization kept pace with increases in soybean production



and early frosts, all of which combined to cut average yields to a ten-year low. Per acre corn yields fell 21 percent from the year before. Soybean yields fell 16 percent, and wheat yields fell 14 percent.

The decline in crop production coupled with depleted carryover stocks cut grain and soybean supplies for the 1974/75 marketing year by 17 percent and mandated a major price rationing response. Much of the rationing was confined to domestic markets where it proved especially disruptive for livestock producers. Because of high feed costs, domestic utilization of grains in 1974/75 was reduced nearly a fifth, dropping to a ten-year low. By contrast, grain exports fell only an eighth.

Grain stocks at the end of the 1974/75 marketing year, at 27.6 million metric tons, were the lowest in more than 25 years. Ending grain stocks represented only 13 percent of that year's reduced utilization compared with an average of 46 percent during the fifties and sixties.

Even with lingering concerns over drought, every year since 1974 has set a new record for U.S. production of grains and soybeans. And even with another huge increase in exports in 1975/76—resulting mostly from the Soviet Union's crop disaster in

1975—grain production has continually exceeded utilization. The result has been a rise in grain stocks every year with attendant declines in season average grain prices. During the summer of 1977, grain prices averaged well below the cost of production, setting off farmer demonstrations that continued into early 1978.

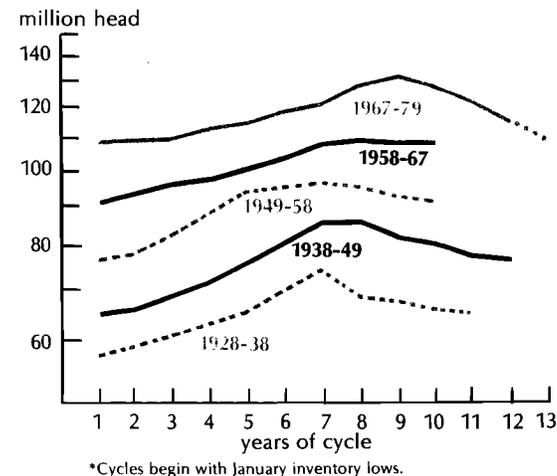
Relative to the variability in production and prices of grains in the seventies, soybeans have provided crop farmers a degree of comfort. Rising world demand for U.S. soybeans—fueled most recently by the drought-reduced production in Brazil—has kept soybean prices high, and highly volatile. For the past four years, soybean prices have averaged more than \$6 a bushel. That is twice the average for the four preceding years.

Livestock production

The seventies have recorded cattle and hog cycles that have been more pronounced than usual. Wide swings in crop prices, probably more than anything else, have contributed to marked fluctuations in livestock production—and in the welfare of producers.

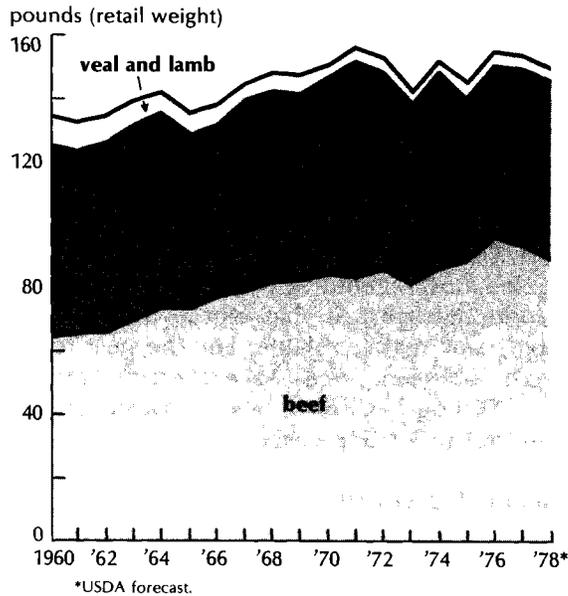
But other contributing factors included the imposition of ceilings on red meat prices in 1973, unusually hard winters, heavy death losses, an influx of outside investors, a con-

Downturn in this cattle cycle is the most pronounced since the Depression



*Cycles begin with January inventory lows.

Per capita red meat consumption averaged higher in the 1970s



sumer boycott, and relaxation of quotas on meat imports.

Meat production has trended upward in the seventies, despite wide swings in the production of both cattle and hogs. As one fell off, the other usually rose, leaving generally high levels of production overall. Consumption, meanwhile, has also trended upward. Only in 1973 and 1975 was per capita meat consumption less than before the start of the decade. By the end of the seventies, the uptrend will likely result in per capita consumption averaging over 8 percent higher than in the sixties.

Cattle production—Cattlemen are apt to remember the seventies as coming in three distinct stages. Demand for beef was strong in the beginning of the decade, bolstering cattle prices and encouraging producers to hold back heifers to build breeding herds. Feedlots expanded, in part because of tax incentives that many investors found appealing.

Early in 1973, while cattlemen still reveled in high profits, consumers began protesting against rising prices. A beef boycott was organized, and ceilings were imposed to curb further price increases. Despite ceilings at the

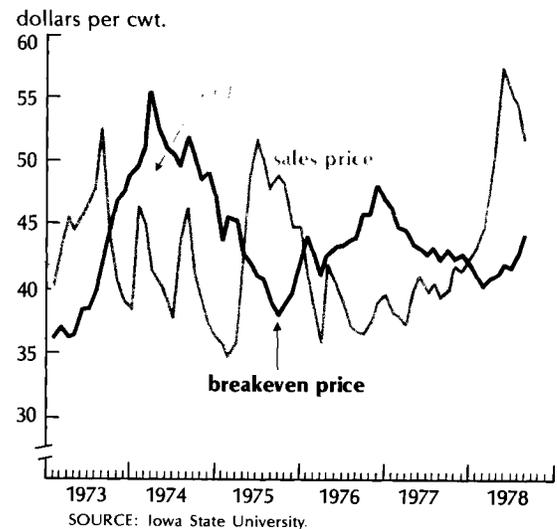
retail level, cattle prices continued to rise at the farm level—ironically, reaching their peak during a time of price controls. The resulting squeeze on margins caused many meat packers to close plants or curtail their operations.

When the government announced the ceiling on beef prices would be extended for two months beyond the release of prices on other foods, consumers and producers alike moved in anticipation of further increases as soon as controls were removed. Cattle feeders tried to wait out the price freeze, holding fed cattle beyond the time when they were properly finished for market. Sales of home freezers picked up sharply as consumers stocked up on beef at controlled prices. For a while, reports of empty meat counters were common.

The second stage, from late 1973 through late 1977, was hard for cattlemen. When ceilings on beef prices were finally lifted, cattle prices actually fell. There were several reasons—the slaughter suddenly increased, providing an abundance of beef; cattle, being overweight, yielded meat that was excessively fat, and with consumers still eating stockpiled beef, demand was lackluster.

Feeders quickly felt the squeeze on profit margins. Ranchers and investors alike were

Cattle feeders had large losses in the mid-1970s



caught holding high-priced feeder cattle just as grain prices escalated, raising costs of feeding. As feedlots curtailed operations to cut costs, the financial stress was extended to beef-cow operators, setting off the most pronounced liquidation of herds since the Depression.

Fed cattle slaughter fell to a nine-year low in 1975, down nearly a fourth from the peak three years before. Effects on beef supplies, however, were offset by the liquidation of herds. The high volume of slaughter of cows and nonfed steers and heifers provided fairly abundant supplies of beef through early 1978.

The return to profitability in cattle feeding this year marks the beginning of the decade's third stage for cattlemen. Comparatively cheap feed, sharply reduced cattle inventories, lack of large competing red meat supplies, and rising consumer incomes—all help improve the outlook for cattle producers in 1978 and beyond. Feedlot operators, again realizing profits, have bid up prices of feeder cattle. Fed cattle marketings are accounting for more of the commercial cattle slaughter, and retail beef prices have risen to record levels.

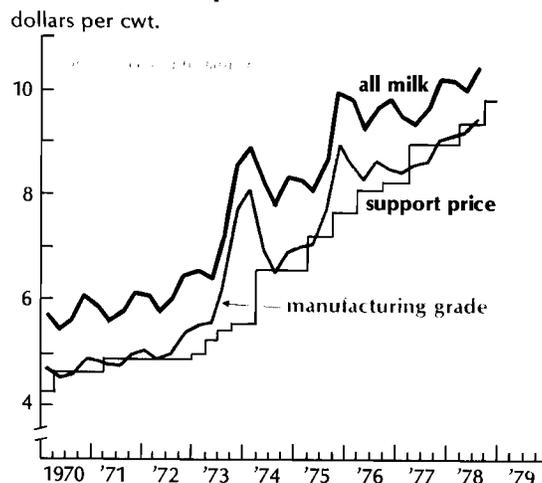
Hog production—Hog production rose sharply early in the decade, pushing slaughter in 1971 to a height that is still unsurpassed. Nearly 96 million hogs were slaughtered that year, 15 percent more than the annual average for the sixties and 9 percent more than the previous record slaughter in 1959.

For the next four years, however, hog slaughter trended irregularly downward, falling to a seven-year low in 1973 and then plunging in 1975 to the lowest level in decades. From the 1971 peak to the 1975 trough, hog slaughter fell a fourth, as did per capita pork consumption.

Production has been increasing since 1975. But the increases have been surprisingly modest in recent years in light of the favorable profits. Although the uptrend in hog production is expected to continue throughout the rest of the decade, it may be next year before the increases will have boosted per capita pork consumption above the average of the sixties.

Dairy production—Dairy farmers have

Ratcheting of government supports boosted milk prices



also seen profit margins squeezed in the seventies, mostly from high feed costs. Unlike cattle and hog producers, who had to contend as always with cycles, dairy farmers have seen their welfare tied closely to government support prices.

The financial squeeze on dairymen was most apparent from 1973 to 1975. Throughout this period, milk production was the lowest since the early fifties. And in 1974, the milk-feed price ratio—a measure of profitability—dropped to a 17-year low.

Government purchases of dairy products—the means by which milk prices are supported—have fluctuated widely in the seventies. After averaging over 6 billion pounds (milk equivalent) a year from 1970 to 1972, government purchases over the next four years dropped to an annual average of less than 2 billion pounds. But with an increase in milk production and further boosts in the support price, the amount of dairy products the government bought in 1977 surged to 6.1 billion pounds.

Financial position of farmers

The widely fluctuating earnings from agriculture in the seventies brought marked changes in the overall balance sheet of the

farm sector. Estimates at the beginning of 1978 put farm equity and farm debt at levels nearly two and one-third times their totals in 1970. In dollar terms, that was an unparalleled growth for both. And for debt, at least, it was also an unprecedented growth in relative terms.

Farm assets approached \$710 billion at the beginning of this year. Three-fourths of that was in real estate, compared with about 70 percent at the beginning of the decade and 65 percent at the beginning of the sixties. Nationwide, the value of farm real estate averaged two and one-half times the value in 1970. And in the Corn Belt, land prices had nearly tripled.

The unprecedented growth in land values has yielded substantial equity gains for landowners and, in many respects, the collateral to support the huge increase in farm debt.

Two factors have contributed to the rise in farm debt in the seventies. One was the debt-financed boom in capital expenditures and land purchases that came with the surge in farm income beginning in late 1972. Gross expenditures on farm tractors, for example, have increased every year of the decade, but they increased more than a third in 1973 alone. Total farm gross capital expenditures have averaged about \$11 billion a year in the seventies. That is almost twice the average for the sixties.

The other has been the more recent squeeze on cash flows stemming, for cattlemen, from their prolonged losses, and for crop farmers, from the simultaneous buildup in grain stocks and drop in grain prices. With cash flows squeezed, debt repayments slowed. Moreover, the financial squeeze on farmers prompted increased government lending. For the first time, the Small Business Administration was authorized to make loans to farmers. Lending provisions of the Farmers Home Administration were liberalized. And the higher CCC loan rates offered by the Food and Agriculture Act of 1977 encouraged farmers to place large amounts of grain under loan. Commodity Credit Corporation loans last year totaled nearly \$4.5 billion compared with \$1 billion in 1976.

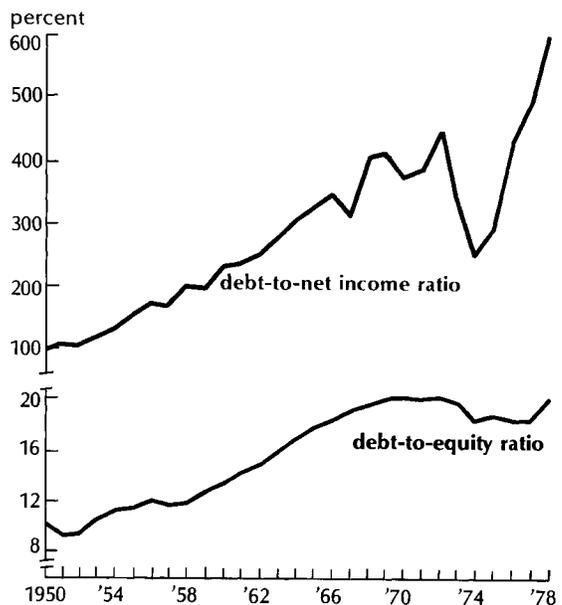
Implications

If nothing else, the seventies have been exciting. Wide swings in farm production and prices have brought short-lived booms and busts. The general public has been aware of both, either because of rapidly rising food prices or because of the debate over policies to be pursued. Concentration on the short-term issues, however, could obscure the longer-term implications arising from the developments in the seventies.

Much of the attention given to the boom in farmland prices is probably deserved. As an investment, farmland has had few equals in recent years. For most of the purchasers—farmers that must pay for the land from farm earnings—the boom has meant an escalation in production costs. It has sharply increased the costs of cash-renting land—where a large part of the nation's crops are grown.

Higher farmland prices, in conjunction with other escalating production costs, have increased the risks inherent in farming. The impact of lower commodity prices on

Farm debt soared to new highs relative to income, but gains in equity kept pace



farmers' cash flows was vividly evident in 1977, and with the reaccumulation of large grain stocks, similar conditions may reappear in the future. Moreover, the increased risks are further heightened by the rapid increase in farm debt in recent years. Although the debt-to-equity ratio has remained fairly stable for years, the debt-to-income ratio has increased markedly. In 1950, farm debt and net farm income before inventory adjustment were nearly equal. Ten years later each dollar of net income was matched by nearly \$2.25 in outstanding farm liabilities. By 1970, there was nearly \$3.75 in debt outstanding for each dollar of net income and projections indicate that in 1978 that ratio approached 6:1.

Over the long haul, one of the more intriguing aspects of the land boom could lie in the implications for who will own or control agriculture in the future. The emotional issue of foreign ownership currently in the limelight may not be resolved quickly. And not far below the surface is the almost equally charged issue of domestic investors, either individuals or companies, that are not themselves farm producers.

One of the most significant developments of the seventies is the increased integration of U.S. agriculture with world markets. During recent years, the importance of farm exports to the U.S. balance of trade has been highlighted by the resumption of trade with communist countries and with other developing and expanding foreign markets for farm products. In the future, year-to-year supply/demand adjustments will be influenced far more by worldwide conditions and will no longer be confined solely to domestic markets. And ongoing efforts to reduce trade restrictions worldwide, if successful, will provide an even greater global environment for U.S. agriculture.

Farmers have become more aware of the importance of marketing skills in the seven-

ties. Wide fluctuations in commodity prices—often in the space of only a few months—have made timing of sales one of the main elements of successful farm management. As a result, there has been a large buildup of on-farm storage facilities. This, too, represents a shift from the past, when many farmers used on-farm storage only for what they expected to use themselves but left most of the risks and responsibilities for the storing and marketing of crops to local grain elevators, large grain companies, and the government. The implications for who will bear the risks of storing crops in the future seems to mark a fundamental change in the seventies, encouraged partly by the implementation of the farmer-controlled long-term grain reserve.

Not only has there been a return to government programs as necessary business considerations for farmers. There has also been an increase in the farm-related activities of government agencies that were not concerned with agriculture in the past.

Regulations of the Environmental Protection Agency and Occupational Safety and Health Administration are apt to become more important in agriculture's future. Despite urgings by some government officials that EPA and OSHA carefully weigh the costs and benefits of regulatory changes, there is little doubt that greater intervention in agriculture by these two agencies could become an aggravation to producers, increasing costs of operation and possibly reducing output.

Issues related to the nutrition and the quality and safety of food are also likely to draw more government influence in the future. Recent government actions regarding nitrite in bacon, mechanical deboning of meat, and the refinement of grading standards for food products may only mark the beginning of things to come in the future of U.S. agriculture.

