### Agriculture: farm income recovers

Farm earnings rose substantially last year, breaking a four-year slide. The index of prices received by farmers averaged a record 209 (1967=100). That was 14 percent over the previous year and 9 percent over the previous high in 1974.

Livestock led the upturn as smaller supplies of meat and milk and decidedly stronger demand pushed prices of livestock 23 percent higher than in 1977.

Crop prices contributed to the rise, but with increases that averaged only 6 percent. Crop production surpassed the record 1977 harvest, providing abundant grain supplies throughout last year. But with record foreign purchases and the new grain reserve programs, grain and soybean stocks were not as burdensome as expected.

Higher prices and higher government payments boosted gross farm income to about \$125 billion. Despite another substantial rise in production expenses, gross returns were enough to boost net farm income about

Strong livestock markets boosted farm prices to a new high in 1978...



two-fifths higher than the depressed \$20 billion in 1977.

This strong performance contrasted sharply with initial forecasts of another year of low earnings. It also belied much of the concern that had prompted the American Agricultural Movement to mount one of the strongest farm lobbying efforts ever seen.

#### Land values and capital spending rose

Improved farm earnings led to a strong recovery in capital spending and aggressive bidding for farmland. It is estimated that farmland values rose a tenth last year, marking a threefold increase since the beginning of the 1970s. Even bigger increases were seen in the Midwest, where surveys by the Federal Reserve Bank of Chicago showed farmland values rose about 17 percent. For many farmers that own their land, the unrealized gain from appreciation in land values again surpassed the net operating returns to land.

## ... ending the 4-year slide in net farm income per farm



With the remarkable appreciation in land values has come concern that nonfarmer investors may be a stronger component in the demand for land. Concern focused last year on foreign investors, partly because of the bidding advantages that accrued to some foreign buyers from the decline in the value of the dollar. Although it is generally believed that foreign ownership of land is at most nominal, the facts are not known. To provide information for an objective assessment of the situation, Congress passed the Agricultural Foreign Investment Disclosure Act late last year. The act set up a nationwide system for keeping track of the amount of land foreigners own and the amount they buy in the future.

The recovery in capital expenditures showed up particularly in purchases of machinery and equipment and construction of grain storage facilities. In the first 11 months of the year, unit retail sales of farm tractors were 6 percent higher than in the corresponding period a year earlier. Sales of combines were up 9 percent. These increases were in sharp contrast to the sluggish sales forecast in early 1978 that led to layoffs and caused some manufacturers to shut down plants for a while.

Information on expenditures for new grain storage facilities is sketchy. It is clear, however, that substantially more was spent than in other recent years. A liberalized government loan program helped finance over 750 million bushels in new on-farm storage capacity in fiscal 1978. That was equivalent to nearly a third of the storage facilities built under the loan program during the previous 29 years it had been in existence. Other facilities were built, no doubt, with private financing. Overall, farmers probably expanded their storage capacity about a tenth last year.

The reason for the surge in construction of on-farm storage facilities was the new grain reserve program authorized in late 1977. The program is designed to withhold grain from the market for three years or until prices at the farm rise up to established trigger levels. By late December, 33 million metric tons of grain

# The buildup in carryover stocks of grain is expected to continue into next year



had been accumulated under the program, including 410 million bushels of wheat and 720 million bushels of corn. That represents about half of the projected carryover stocks of grain.

#### Agriculture and the rest of the economy

Improved farm earnings reflected strength in both domestic and foreign markets but left divergent implications for two measures of the economy overall. The value of agricultural exports rose to a new high in fiscal 1978, helping offset the ballooning deficit in nonagricultural trade. But there was also an ominous development in agriculture's contribution to the rekindling of inflationary pressures.

Nearly 122 million metric tons of farm commodities were shipped abroad in the fiscal year that ended in September. That was nearly a fifth more than the shipments in fiscal 1977 and a seventh more than the previous high in fiscal 1976. The increase was made despite transportation snarls during the winter and shortages of rail cars during the spring and summer, when grain and soybean shipments were exceptionally high.

With feed grain and soybean prices down

from the year before, not all the increase in shipments was reflected in the value of exports. The value of farm exports, nevertheless, rose to \$27.3 billion in fiscal 1978—14 percent more than the previous year. Imports of agricultural products, on the other hand, were up only nominally, leaving an agricultural trade surplus of \$13.4 billion.

Despite the declining value of the dollar, exports to such strong currency countries as Japan and those in Western Europe increased little in fiscal 1978. At a combined \$13 billion, farm exports to Japan and Western Europe were up only 4 percent.

By contrast, exports to the Soviet Union increased about three-fourths, nearly equaling the \$2 billion in 1976. Mainland China, after three years of virtual absence from American farm markets, imported over \$350 million in agricultural products from here last year. Agricultural exports to Latin America increased nearly a third, to \$2.8 billion. Exports to African countries were up about a fifth, and exports to Asian countries—excluding Japan and mainland China—were up a sixth.

#### Food prices soared

Retail food prices soared at an annual rate of 18 percent in the first half but slowed to an annual rate of 5 percent in the second half. For the whole year, food prices averaged a tenth higher, twice the increase forecast a year ago. Higher prices for raw food materials accounted for about half of the rise. Higher costs for processing and distribution accounted for two-fifths.

Prices for red meats, poultry, fish, and eggs averaged 15 percent higher last year, largely because of the pronounced recovery in demand. Per capita supplies of all meat, although less than expected, were down only 1 percent from the 1977 record. The mix in meat production shifted, however, resulting in more poultry and less beef. Pork production was virtually unchanged.

Retail prices of fruits and vegetables averaged 11 percent higher last year. Much of the rise was related to weather. For the second winter in a row, produce in Florida was

## Consumers ate more poultry than pork in 1978

pounds per capita\*



trimmed by a freeze. And in California, an unusually warm winter coupled with high winds and excessive rain in the spring and summer reduced the production of several different fruits and vegetables.

Government programs also put pressure on food prices last year. The ratcheting up in dairy supports, for instance, contributed to an average rise of 7 percent in retail dairy product prices. Likewise, changes in government programs that boosted wheat prices helped push average retail prices of cereals and bakery products 9 percent higher. And government actions to support domestic sugar producers led to a 12 percent average rise in retail prices of sugars and sweets. This was despite the most burdensome world sugar surplus in years.

#### **Review and outlook by commodities**

One of the surprises in 1978 was the lack of an increase in pork production. The consensus a year ago was that pork production would increase at least a tenth, causing hog prices to plunge. Instead, pork production was virtually unchanged. And hog prices, reflecting smaller supplies of beef and a pronounced recovery in demand, rose nearly a fifth to average \$48.50 per hundredweight. The failure of pork production to respond to the strongest incentives for expansion in decades is not fully understood. The harsh winter was a contributing factor, however. And many analysts believe the shift in recent years to more capital-intensive production facilities may have lengthened the production-response cycle.

Whatever the reason for the performance last year, conditions still point to a substantial rise in pork production. A December survey of recent and prospective actions by hog farmers showed that pork production could rise a tenth in 1979. An increase of that size would push hog prices lower and offset much of the expected decline in beef production. With the further likelihood of substantially larger poultry production, per capita consumption of all meats could increase slightly this year.

The mix in cattle slaughter last year moved closer to the norm of the early 1970s as the liquidation phase of the cattle cycle wound down. The movement of cattle through feedlots rose to a near-record level, boosting fed cattle slaughter 7 percent. But nonfed steer and heifer slaughter was cut in half and cow slaughter was reduced 13 percent, resulting in a 4 percent decline in total beef production. The decline, buttressed by strong demand, pushed choice steer prices to a record average of \$52.25 per hundredweight, nearly 30 percent higher than the year before.

Factors underlying the past two years of decline in beef production are tied to the cattle cycle. The huge financial losses that staggered cattlemen from 1974 to 1977 triggered a massive liquidation of the breeding herd, temporarily swelling beef supplies. The liquidation, however, has reduced the inventory of beef cows (net of additions through replacement heifers) nearly a fifth over the past four years. With fewer cows, calf crops have gotten smaller. Estimates show the 1978 calf crop was the smallest in 11 years. And the crop could be smaller in 1979.

Implications of the sharp reduction in the cow herd are not encouraging for near-term

## The downturn in the cattle cycle is the most pronounced since the 1920s



beef supplies. Calf crops are not large enough to maintain past levels of beef production and accommodate the herd rebuilding that is needed for future growth in consumption.

If market forces encourage herd rebuilding, beef production will trend lower for the next two or three years. Per capita beef consumption could drop to the levels of the late 1960s. And cattle prices could rise to new heights. The extent of the rise in prices will depend mostly on the availability of pork and poultry and the willingness of consumers to switch to these other meats while beef supplies are tight.

Dairy farmers received higher prices and earned more in 1978, and their prospects seem equally bright for 1979. Prices farmers received for milk averaged 9 percent higher than in 1977. The increase came largely as a result of the statutory semiannual increases in dairy support prices. Milk production declined nominally but still exceeded the record amount utilized commercially. The better balance between production and utilization allowed government purchases of manufactured dairy products (the mechanism for supporting prices) to decline more than a half from the high level a year earlier.

Higher support prices will contribute to another rise in earnings of dairy farmers this year. Milk production may edge up a little,





but high cow prices will probably encourage further culling of the dairy herd. Barring a downturn in the general economy, demand is expected to remain strong, fueled in part by a rebuilding in the low commercial stocks of dairy products.

Grain and soybean prices were supported throughout much of last year by the drouth-reduced harvests in the Southern Hemisphere. The combined Australian and Argentinian wheat harvest was cut a third last winter. In Brazil, the soybean harvest last spring was a fourth less than expected. These reductions in competing supplies overseas and transportation problems in Canada gave U.S. exporters a decided edge in meeting the strong world demand for grains and oilseeds.

Prices drifted slightly lower in the second half as it became apparent that grain crops in the Northern Hemisphere would be very large. Final estimates show the United States, Western Europe, and the Soviet Union all brought in record harvests. In the United States, reduced plantings cut wheat production 12 percent. But corn production rose a tenth, to a record 7.1 billion bushels. Per-acre corn yields exceeded 101 bushels, ten bushels above the previous year and four bushels above the previous high in 1972. The soybean harvest, at a record 1.8 billion bushels, was up 5 percent. These levels were reached despite late plantings and the first use of voluntary acreage controls since 1973.

Large crop harvests the past two years have provided more than adequate supplies of grain. Domestic carryover stocks rose to 74 million metric tons in 1978, up a fifth from the year before. Projections show the carryover rising to a 15-year high of 86 million metric tons in 1979. Equal to a third of the expected utilization, that will be the largest stock relative to utilization since early in the decade. Corn accounts for all of the projected increase in carryover stocks of grain.

The relative accumulation of soybean carryover has been far more modest. Projections are the soybean carryover this year will still be less than a tenth of utilization.

Prices of grains and soybeans will be strongly influenced this year by foreign demand and growing conditions around the world. Mainland China will import large amounts of grain from the United States. But exports to other countries may be somewhat eroded by the large world supplies, particularly if wheat and soybean production in the Southern Hemisphere returns to the record levels expected this winter and spring.

Domestic crop production in 1979 will likely reflect larger plantings. Wheat acreage will be up substantially. In the Midwest, farmers will likely substitute soybeans for some corn acreage. Final production prospects, of course, will hinge largely on the vagaries of weather.

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Federal Reserve Bank of Chicago