S.C. TRATTEL

December 1987

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# New York Economic Handbook 1988

# AGRICULTURAL SITUATION and OUTLOOK

Prepared by
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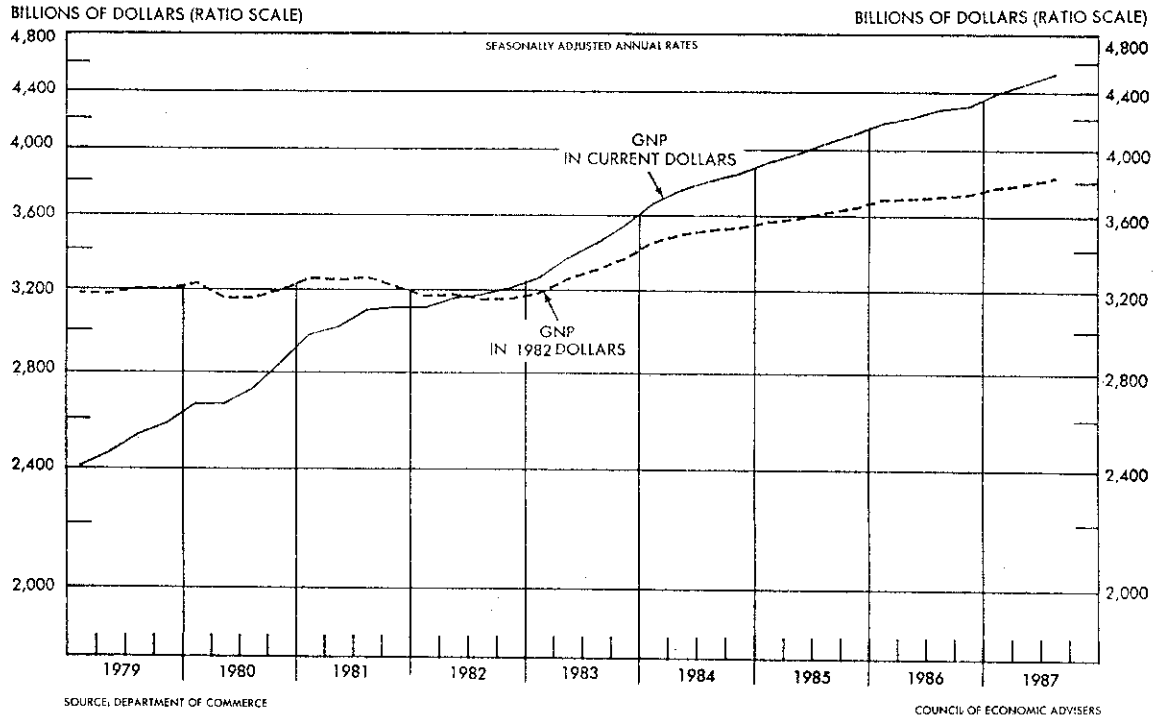
This publication contains information pertaining to the general economic situation and New York agriculture. It is prepared primarily for use of professional agricultural workers in New York State. USDA reports provide current reference material pertaining to the nation's agricultural situation.

"Current Economic Situation" is a two-page monthly release that carries the latest figures for selected economic indicators and highlights current developments. This release is a supplement to the Economic Handbook and is available to anyone requesting to be on the mailing list by writing to Department of Agricultural Economics, Cornell University, 40 Warren Hall, Ithaca, New York 14853-7801.

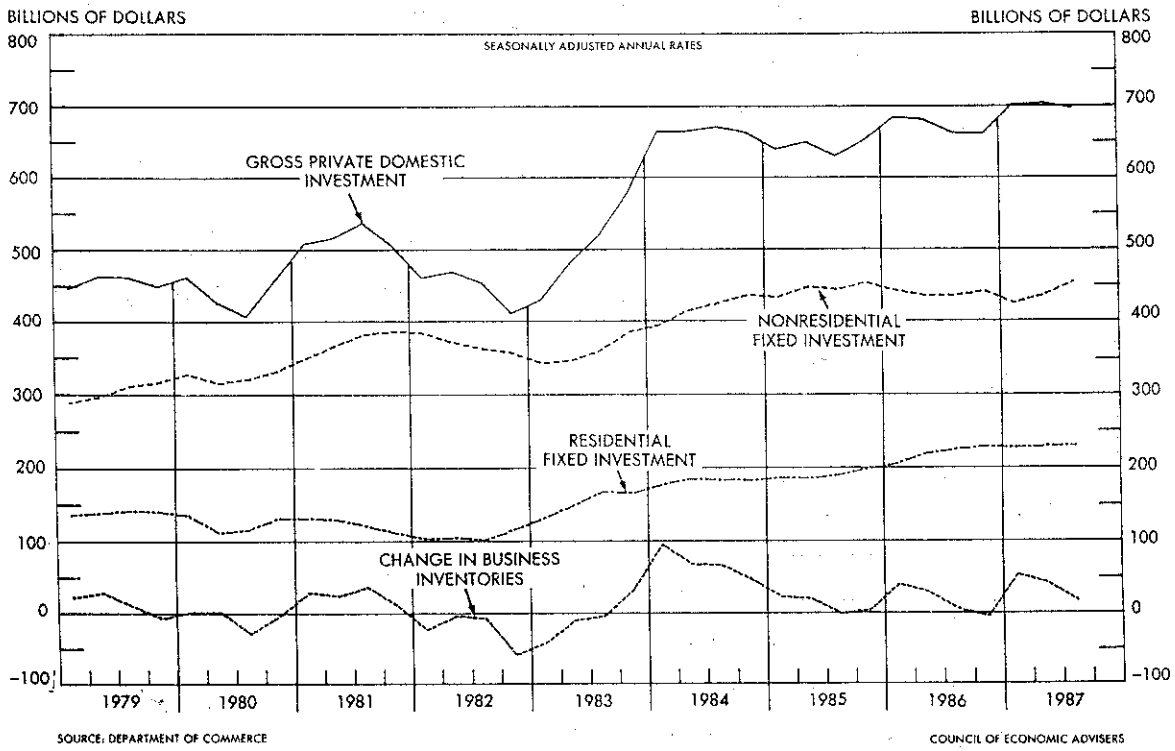
## TOTAL OUTPUT, INCOME, AND SPENDING
Components of Gross National Product




| | Gross national product | Personal consumption expenditures | Gross private domestic investment | Government purchase goods and services | Net exports |
|---|---|---|---|---|---|
| | | - billions of current dollars - | | | |
| 1980 | 2732 | 1733 | 437 | 530 | 32 |
| 1981 | 3053 | 1915 | 516 | 588 | 34 |
| 1982 | 3166 | 2051 | 447 | 642 | 26 |
| 1983 | 3406 | 2235 | 502 | 675 | -6 |
| 1984 | 3772 | 2430 | 665 | 736 | -59 |
| 1985 | 4010 | 2629 | 642 | 818 | -79 |
| 1986 | 4235 | 2800 | 671 | 870 | -106 |
| 1987 | (4480) | (2975) | (700) | (925) | -120 |

The economy has continued to grow slowly but steadily since the final quarter of 1982. In the third quarter of 1987, real GNP increased at a rate of ~~3.8~~ 4 percent completing nearly five years of expansion without a quarter with a decrease in real GNP. Personal consumption expenditures have increased from 62.7 percent of GNP in 1981 to over 66 percent in both 1986 and 1987. Personal consumption has come at the expense of private domestic investment which fell from 17.6 percent of GNP in 1984 to 15.6 percent in 1987. Much of increased government expenditure and personal consumption has been paid for by the negative balance in exports since 1982. We are consuming more than we produce.

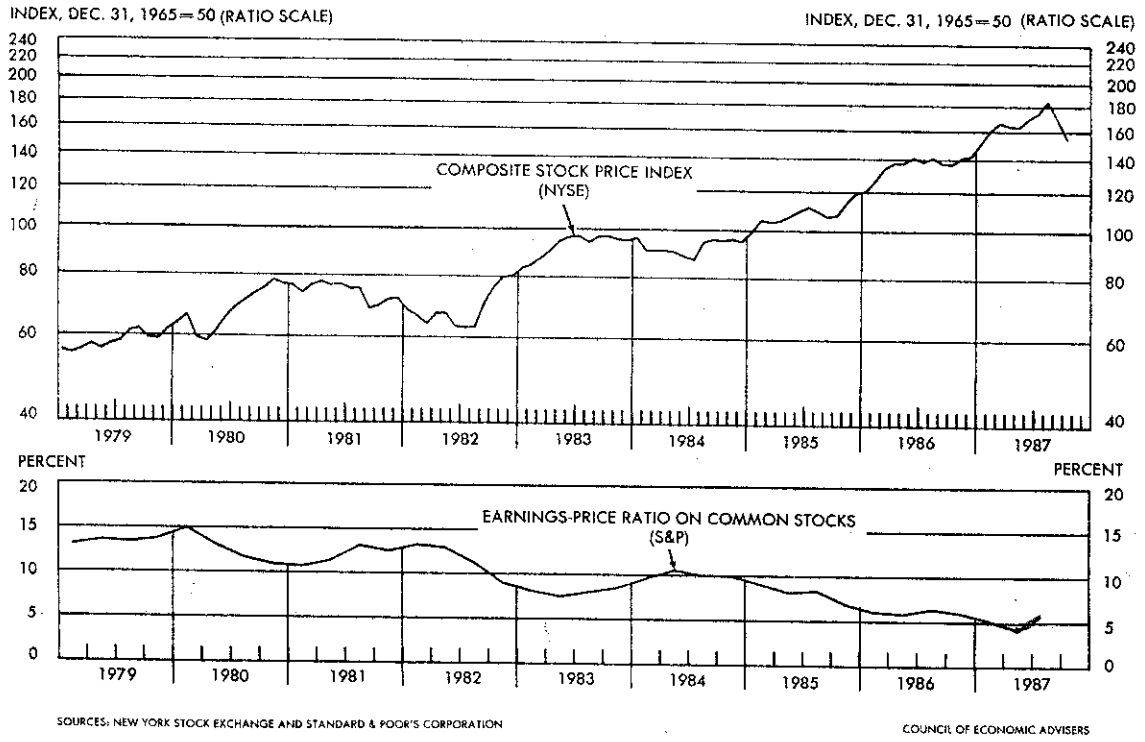
## GROSS PRIVATE DOMESTIC INVESTMENT




| | Gross private investment | Residential fixed | Non-residential Structures | Non-residential Durables Equipment | Changes in business inventories |
|---|---|---|---|---|---|
| | | - billions of current dollars - | | | |
| 1980 | 437 | 122 | 114 | 209 | -8 |
| 1981 | 516 | 122 | 139 | 231 | 24 |
| 1982 | 447 | 105 | 143 | 223 | -24 |
| 1983 | 502 | 152 | 124 | 233 | -7 |
| 1984 | 665 | 181 | 141 | 275 | 68 |
| 1985 | 642 | 189 | 153 | 290 | 10 |
| 1986 | 671 | 218 | 137 | 300 | 16 |
| 1987 | (700) | 228 | 132 | 312 | 28 |

The components of private domestic investment are a closely watched indicator of growth or slowdowns in the economy. Investment by business in durables and equipment has increased steadily while that for plants and structures has slowed since 1985. Residential investment has steadily increased every quarter since 1983. October 1987 provided a sharp downturn of eight percent in housing starts reflecting increased mortgage rates and uncertainty in the economy. Another sign of business concern is a decrease in rates of adding to inventories in each successive quarter in 1987.

COMMON STOCK PRICES AND YIELDS
New York Stock Exchange, 1979-1987

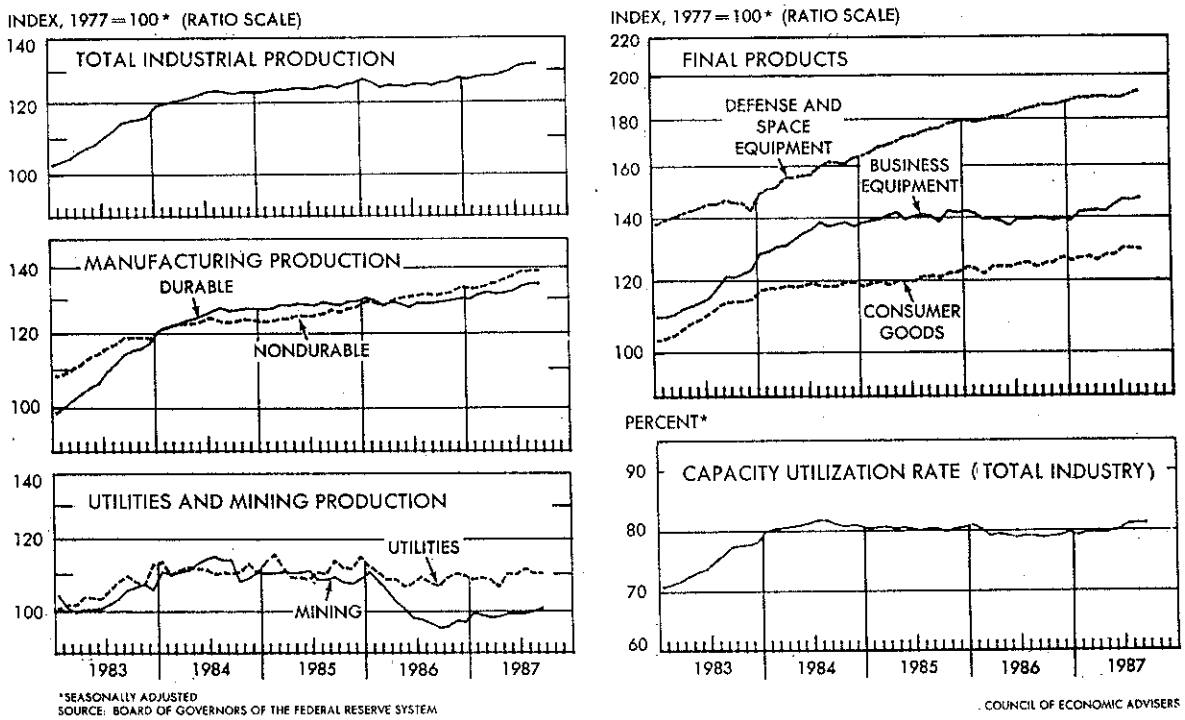



The Dow Jones average and other stock market indices are among the most closely followed economic indicators in both the United States and the rest of the industrialized world. Expectations about the economy are reflected in changes in stock prices and the ratio of earnings to prices. A major correction in stock prices occurred in October and November 1987 bringing the composite index back to year earlier levels. Uncertainty about rates of growth in the U.S. and world economies, the continuing government deficit, and questions about U.S. ability to manage debt have made investors nervous.

Corporate profits before and after taxes in 1987 have been positive and did not signal the market downturn in October.

| | Profits before taxes | Profits after taxes |
|---|---|---|
| | - billions - | |
| 1982 | $170 | $107 |
| 1983 | 208 | 130 |
| 1984 | 240 | 146 |
| 1985 | 225 | 128 |
| 1986 | 232 | 127 |
| 1987 (I) | 257 | 129 |
| (II) | 269 | 135 |

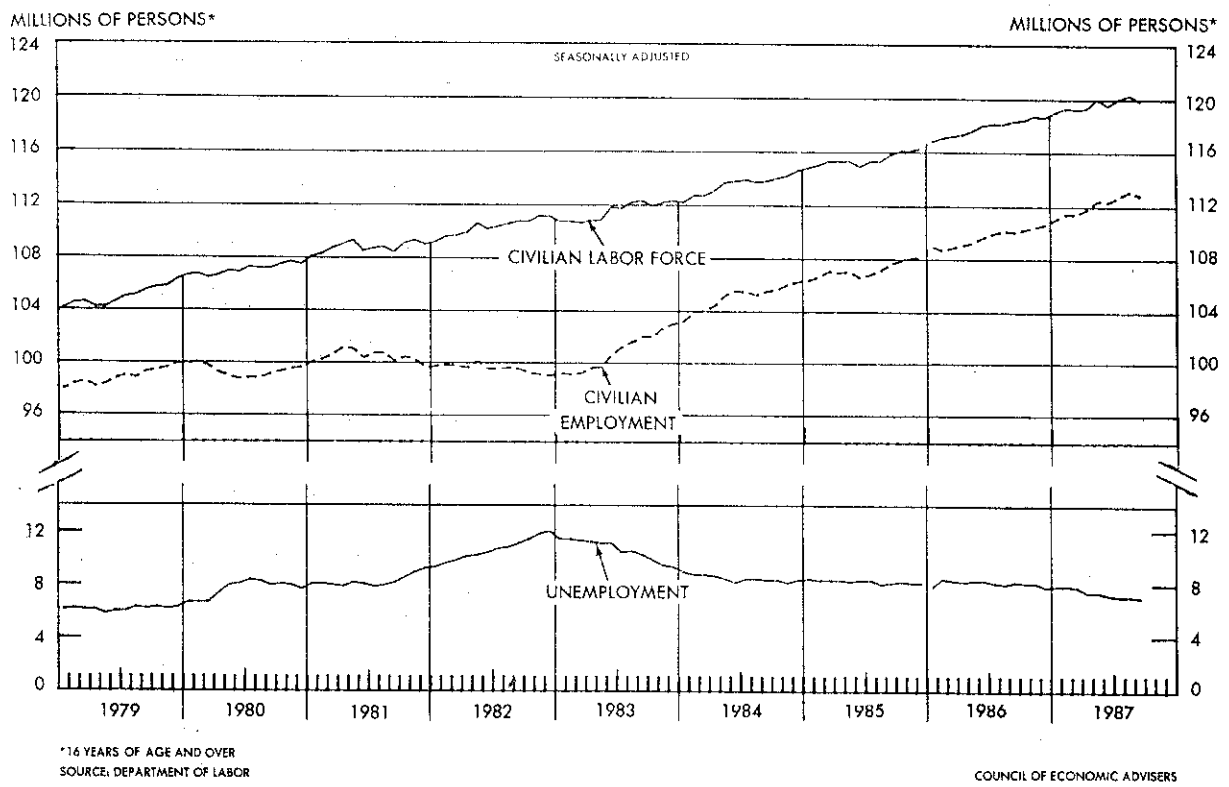
## INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION




Industrial production has been a strong point for the economy in 1987. In September 1987, the index was more than five percent above the level of 12 months earlier. The rise was slow but steady throughout the year. Production of both durables and nondurables rose. Even mining moved upward slightly. Trends were generally upward in all the index numbers including capacity utilization. These small, but steady gains reflected the general climate of business optimism during much of 1987.

Industrial production in 1988 is likely to level off except in those markets where the falling dollar relative to other currencies may allow exports to increase. Areas like construction equipment, aircraft, specialty tools and business equipment will benefit. Defense spending is likely to hold steady but not increase. Consumers are spending almost all their incomes already. With both Presidential and Congressional elections in 1988, there will be substantial efforts to keep the economy moving on a steady and even keel. After five years without a substantial downturn, the possibility of recession remains very real, especially if world confidence in the U.S. economy deteriorates. In an uncertain environment, stable industrial production is a positive forecast.

## STATUS OF THE LABOR FORCE




The civilian labor force has grown steadily since 1983 at about two million per year and in September 1987 numbered 120 million people. A little over 65 percent of the people 16 and over are in the labor force as compared with 63 percent a decade ago.

Unemployment rates have fallen steadily each year from the peak levels at the end of 1982. In 1987, the numbers of people unemployed dropped by one million over a span of 12 months; the number of part-time workers decreased as full-time workers increased.

Employment in the service industries continues to claim higher proportions of the total labor force. Traditional manufacturing and industrial jobs are a less important component of the total. If the economy continues to grow steadily in 1988, the job market should recover from the scare of the October-November 1987 stock market correction. A relatively small number of people lost substantial buying power in the stock market correction. Employment should continue to increase unless there is a major shock in the world economy.

CHANGES IN PRODUCER AND CONSUMER PRICES

| Year | Consumer Price Index | | Producer Prices | | |
|---|---|---|---|---|---|
| | All items | Foods | All finished goods | All intermediate goods | All crude materials |
| | | | (1967 = 100) | | |
| 1979 | 217.4 | 234.5 | 217.7 | 242.2 | 274.3 |
| 1980 | 246.8 | 254.6 | 247.0 | 280.3 | 304.6 |
| 1981 | 272.4 | 274.6 | 269.8 | 306.0 | 329.0 |
| 1982 | 289.1 | 285.7 | 280.7 | 310.4 | 319.5 |
| 1983 | 298.4 | 291.7 | 285.2 | 312.3 | 323.6 |
| 1984 | 311.1 | 302.9 | 291.1 | 320.0 | 330.8 |
| 1985 | 322.2 | 309.8 | 293.7 | 318.7 | 306.1 |
| 1986 | 328.4 | 319.7 | 289.7 | 307.6 | 280.3 |
| 1987 | (340.0) | (332.0) | (297.0) | (314.0) | (302.0) |

Sources: Department of Commerce; Council of Economic Advisers.

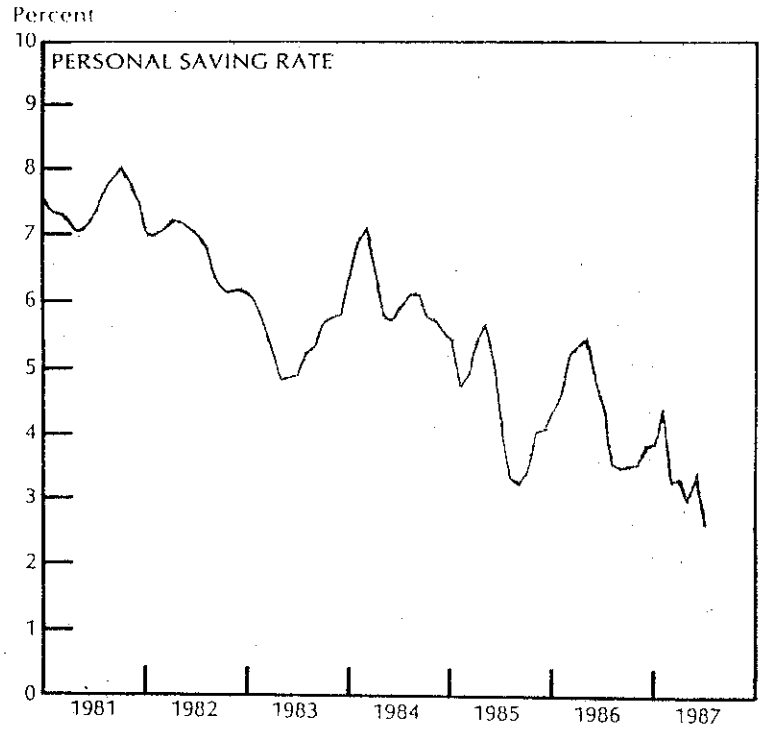
Double digit inflation so evident for all five of the consumer and producer index numbers listed above between 1979 and 1980 has been held in check from 1983 onward. Annual rates of increase have held between two and five percent for the past five years. Producer prices for finished and intermediate goods actually decreased between 1985 and 1986. Now that oil prices have risen again in 1987, other producer and consumer prices have increased accordingly and that trend is likely to continue.

Wage rates, which contribute more to changes in consumer prices than producer prices, have been held at modest levels in both 1986 and 1987 averaging between five and six percent. Thus, productivity gains (real output per worker) have averaged one to two percent annually. The major components of the Consumer Price Index and their rates of change between September 1986 and 1987 are listed below:

| Component | Weight | Sept. 86 | Sept. 87 | Percent Change |
|---|---|---|---|---|
| | (percent) | (1967 = 100) | | (percent) |
| Housing | 42.9 | 361.8 | 373.1 | 3.1 |
| Transportation | 17.2 | 302.2 | 320.5 | 6.1 |
| Food | 16.2 | 323.9 | 335.6 | 3.6 |
| Apparel | 6.3 | 208.9 | 218.3 | 4.5 |
| Medical care | 5.4 | 440.6 | 468.6 | 6.4 |
| Total | 100.0 | 330.2 | 344.4 | 4.3 |

Both producer and consumer prices should not be expected to change rapidly in the years ahead unless the world economy experiences some kind of shock.

PERSONAL SAVING RATE AND CONSUMER DEBT



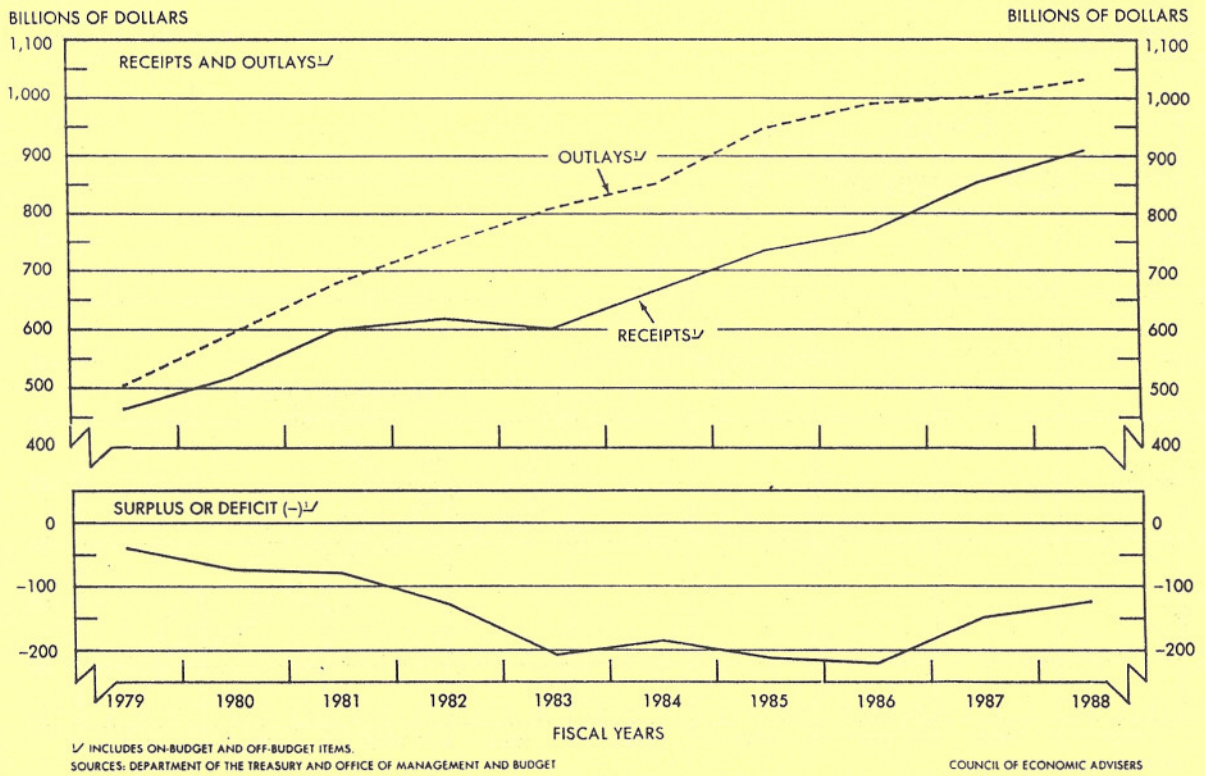

Sources: U.S. Department of Commerce, Bureau of Economic Analysis; and The Conference Board.

CONSUMER INSTALLMENT CREDIT

| Year | Total credit outstanding | Auto loans | Auto loans as percent of total |
|---|---|---|---|
| | - billions - | | - percent - |
| December 1978 | $262 | $ 99 | 38 |
| December 1980 | 296 | 112 | 38 |
| December 1982 | 325 | 125 | 38 |
| December 1984 | 446 | 172 | 39 |
| December 1985 | 523 | 208 | 40 |
| December 1986 | 577 | 245 | 42 |
| December 1987 | (610) | (265) | 43 |

Personal savings as a percentage of personal disposal income has persistently trended downward in the 1980s. At the same time, consumer installment credit has steadily increased with auto loans the largest component making up an increasing share of the total. An optimist views these trends as indicating that Americans have tremendous confidence in the economy and the future. Pessimists (some say realists) note that we are spending more than we earn. The danger point in the American economy is reliance on steady expansion based on consumption, short-term debt, and low rates of saving compared to West Europeans or the Japanese.

## FEDERAL FINANCE
## The Federal Deficit and Debt

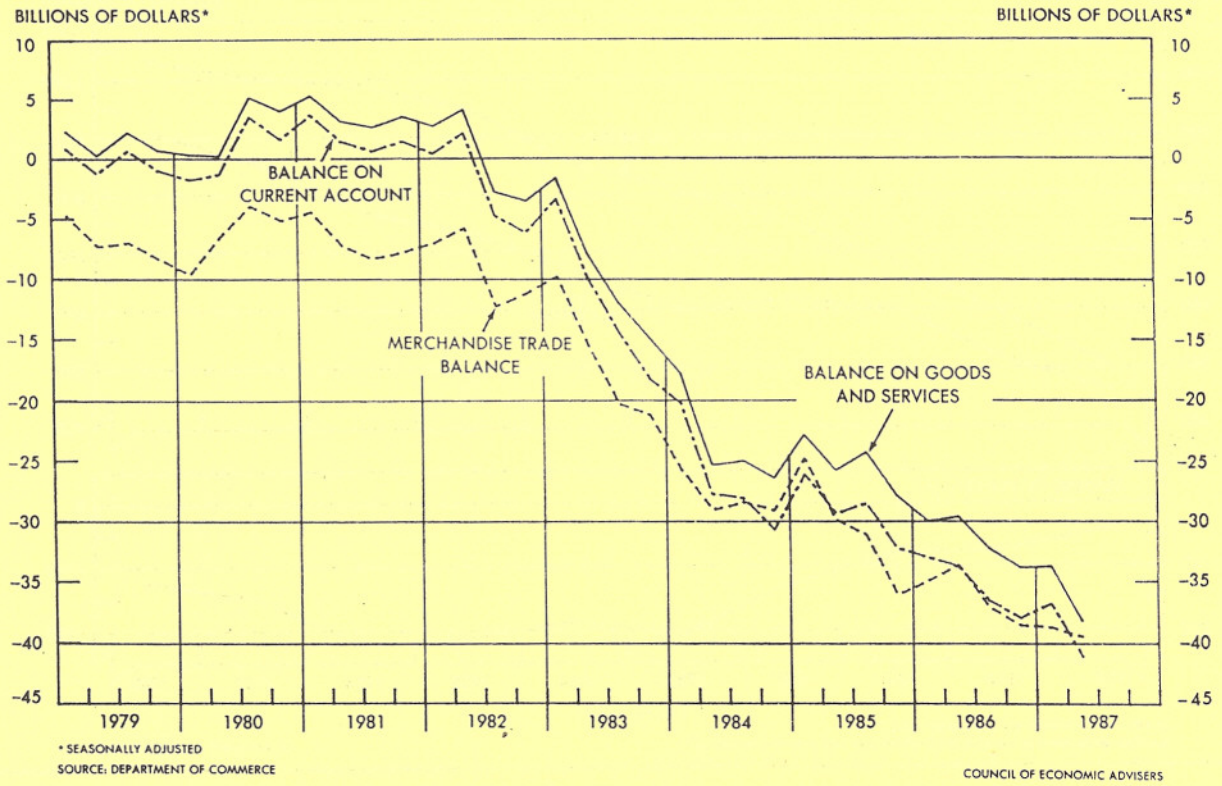



| Year | Government Receipts | Government Outlays | Government Deficit | Accumulated debt |
|---|---|---|---|---|
| | | - billions of dollars - | | |
| 1975 | $279 | $ 332 | -53 | $ 544 |
| 1980 | 517 | 591 | -74 | 914 |
| 1985 | 734 | 946 | -212 | 1828 |
| 1986 | 769 | 990 | -221 | 2130 |
| 1987 | 854 | 1002 | -148 | 2354 |
| 1988 (est) | (909) | (1032) | (-123) | (2587) |

The size of the federal deficit and escalation in the growth of the federal debt continues as a major issue for the national economy. The gap between receipts and outlays has begun to narrow but progress has been slow and painful. In 1975, the federal debt was equivalent to 34 percent of GNP that year. In 1987, it amounted to 53 percent as this generation has consumed now at the expense of future generations.

Control of the federal deficit remains a top priority issue both for the U.S. economy and for international economic stability. Progress on this issue is fundamental to the nation's economic health.

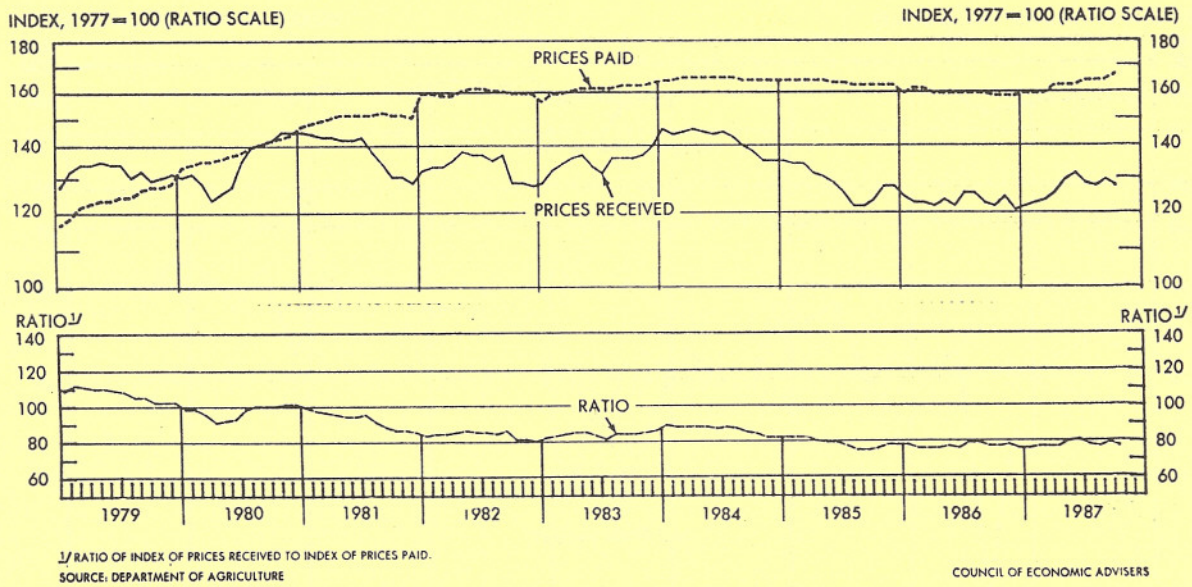
## U.S. INTERNATIONAL TRANSACTIONS




The seriousness of the trade deficit and its long-term implications are dramatically illustrated in the figure above. The degree to which the rest of the industrialized world has had to finance American consumption since 1981 is strikingly evident. The negative merchandise trade balance had been roughly equalized by positive returns in investments and services until mid-1982. The negative balance, however, continued to grow each successive year despite a turnaround in the value of the dollar relative to the currencies of Japan and Western European countries in 1985. The first signs of a change in direction appeared in October 1987. This important economic indicator will be closely watched in 1988. If confidence in the U.S. economy is to be restored, these balances must turn upward in the next four quarters. Further deterioration will be extremely difficult to manage without loss of confidence in the U.S. economy.

| Year | Net balance on goods and services - billions - |
|---|---|
| 1980 | $ 9.5 |
| 1982 | 0.2 |
| 1984 | -94.8 |
| 1985 | -101.1 |
| 1986 | -125.7 |
| 1987 | (-140.0) |

## PRICES RECEIVED AND PAID BY FARMERS




1/ RATIO OF INDEX OF PRICES RECEIVED TO INDEX OF PRICES PAID.
SOURCE: DEPARTMENT OF AGRICULTURE

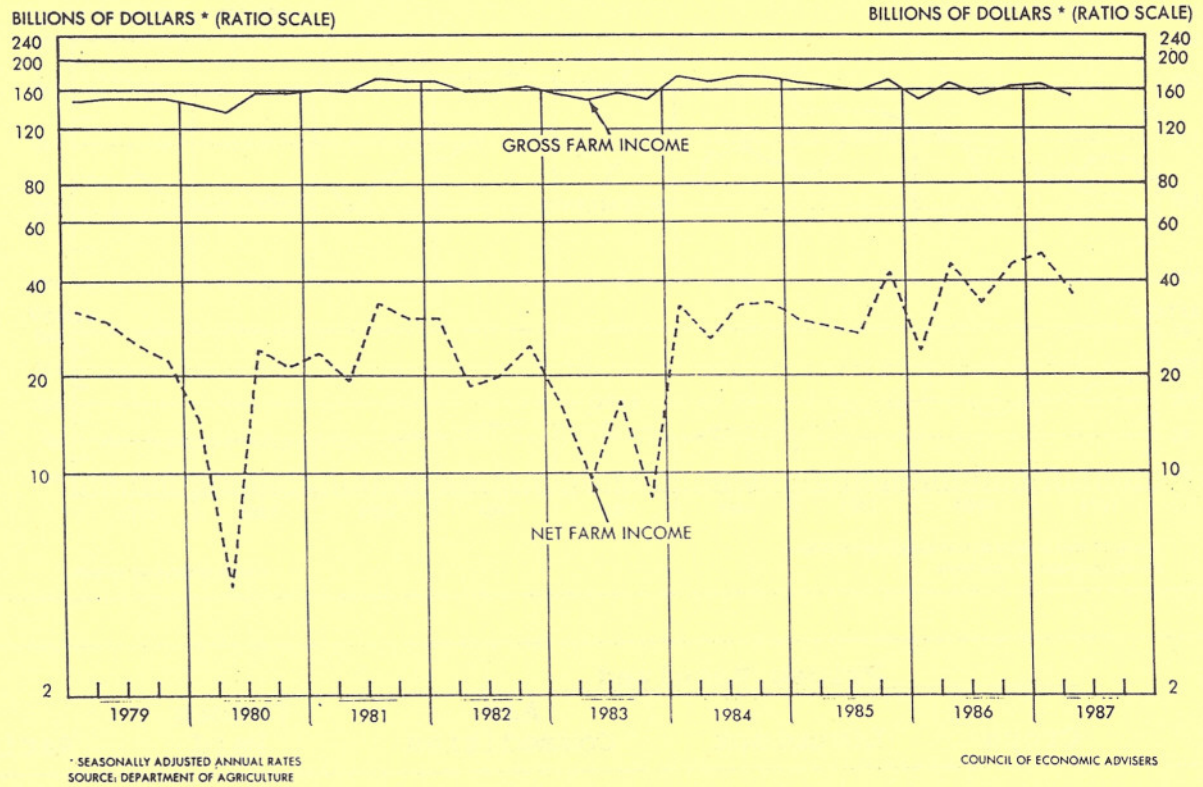
COUNCIL OF ECONOMIC ADVISERS

| Year | Prices Received: Crops | Prices Received: Livestock | Prices Received: All Commodities | Prices Paid | Ratio |
|---|---|---|---|---|---|
| | | | (1977 = 100) | | |
| 1980 | 125 | 144 | 134 | 138 | 97 |
| 1981 | 134 | 143 | 139 | 150 | 92 |
| 1982 | 121 | 145 | 133 | 159 | 84 |
| 1983 | 128 | 141 | 135 | 161 | 84 |
| 1984 | 139 | 146 | 142 | 165 | 86 |
| 1985 | 120 | 136 | 128 | 163 | 79 |
| 1986 | 106 | 138 | 123 | 159 | 77 |
| 1987 | (105) | (146) | (126) | (163) | (78) |

The gap between prices received and prices paid by farmers has grown larger in the 1980s especially for crop producers. The conscious decision to drop price supports for grains (loan rates) in the Food Security Act of 1985 further widened the gap that already existed. If one calculated separate ratios for the index of prices received and paid, for crop producers and livestock producers in 1986, the ratios would have been 67 and 87, respectively. But, even though the overall index of crop prices fell dramatically in 1986, direct government payments of more than $10 billion made up much of the difference. Livestock producers have benefitted from lower feed grain prices in both 1986 and 1987.

Corn prices in both cash and futures markets remain close to national loan rates ($1.82 per bushel) adjusted for storage costs and distance from market. Wheat prices in contrast have been maintained above loan rates ($2.17 per bushel) and range from $2.50-3.00 per bushel in cash and futures markets. Stocks of grains in the United States and other exporting countries strongly influence these major components of the prices received index.

## FARM INCOME AND EXPENSES




| Year | United States | | | New York |
|---|---|---|---|---|
| | Gross farm income | Production expenses | Net farm income | net farm income |
| | | - billions - | | millions |
| 1980 | $149 | $133 | $16 | $345 |
| 1981 | 166 | 139 | 27 | 401 |
| 1982 | 164 | 140 | 24 | 389 |
| 1983 | 153 | 140 | 13 | 173 |
| 1984 | 175 | 143 | 32 | 365 |
| 1985 | 166 | 134 | 32 | 450 |
| 1986 | 160 | 122 | 38 | (598) |
| 1987 | (160) | (117) | (43) | (550) |

Gross farm income and aggregate production expenses for all farms in the United States have decreased in each of the years since 1984. At the same time, net farm income in the aggregate has held steady or increased. Direct government payments amounting to $7.7, $11.8, and approximately $15 billion in 1985, 1986, and 1987, respectively, have been important factors in keeping net farm income from falling. Lower grain prices have aided livestock producers so that financial stress on farms, particularly in the Corn Belt and Great Plains, has been reduced in 1987. Livestock farmers may fare less well in 1988 in comparison to 1987 as somewhat lower prices for meat animals, milk and poultry seem likely and petroleum-related inputs increase in prices.

CROPLAND USE AND EXCESS CAPACITY

| Year | Principal crops planted | Government set aside | Conservation reserve | Planted plus idled |
|---|---|---|---|---|
| | | - million acres - | | |
| 1982 | 359 | 11 | | 370 |
| 1983 | 310 | 78 | | 388 |
| 1984 | 345 | 27 | | 372 |
| 1985 | 342 | 31 | | 373 |
| 1986 | 328 | 42 | 2 | 372 |
| 1987 | 304 | 70 | 23 | 397 |
| 1988 | (295) | (75) | (30) | (400) |

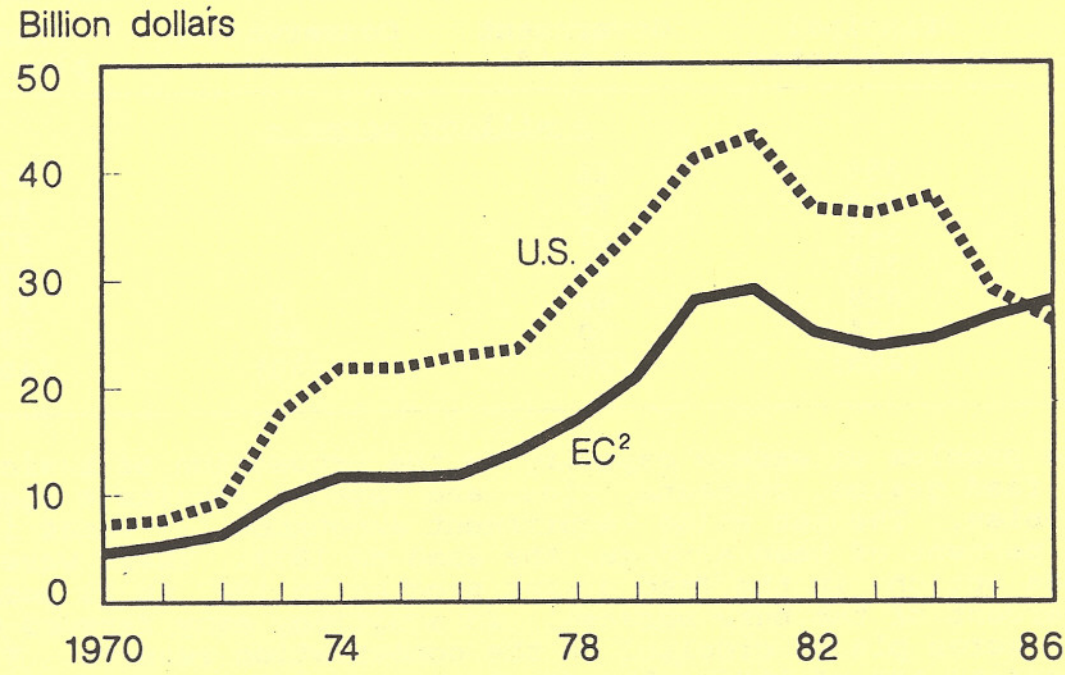
The problem of excess capacity in the production of basic crops (wheat, feed grains, soybeans, rice, and cotton) remains a significant problem. The set aside requirement announced for wheat in 1988 is 27.5 percent of base acreage, the same as 1987. There were two set aside options in the feed grains program in 1987 at 20 percent or 35 percent of the base acreage. In addition, many farmers with eligible acres placed cropland in the conservation reserve. The Food Security Act of 1985 calls for a minimum of 40 and a maximum of 45 million acres to be brought into this program before 1990. These are ten-year rental agreements with land committed to conservation uses. A total of 536,300 acres are eligible for the reserve in New York State. The largest areas eligible are in the Great Plains and Corn Belt.

CARRYOVER STOCKS OF WHEAT AND CORN
AS PERCENT OF PRODUCTION IN U.S.

| Year | Production | Ending stocks | Stocks as percent of production | Farm price per bushel |
|---|---|---|---|---|
| | - million bushels - | | - percent - | |
| Wheat: | | | | |
| 1982-83 | 2765 | 1515 | 55 | $3.45 |
| 1983-84 | 2420 | 1399 | 58 | 3.51 |
| 1984-85 | 2595 | 1425 | 55 | 3.39 |
| 1985-86 | 2425 | 1905 | 79 | 3.08 |
| 1986-87 | 2092 | 1821 | 87 | 2.42 |
| 1987-88 | 2105 | (1386) | 66 | (2.50) |
| Corn: | | | | |
| 1982-83 | 8235 | 3523 | 43 | $2.55 |
| 1983-84 | 4175 | 1006 | 24 | 3.21 |
| 1984-85 | 7674 | 1648 | 21 | 2.63 |
| 1985-86 | 8877 | 4040 | 46 | 2.23 |
| 1986-87 | 8253 | 4882 | 59 | 1.50 |
| 1987-88 | (7166) | (4325) | (60) | (1.75) |

Source: USDA.

EC AND U.S AGRICULTURAL EXPORTS[1]




1/ Excluding intra-EC trade.
2/ EC-6 from 1970 through 1973; EC-9 1974-80; EC-12 from 1985.

Source: USDA, ERS, WAS-49, September 1987.

Accumulated stocks of wheat and feed grains have led to intense competition for shares in world markets between the U.S., the EC, Canada, Australia, and Argentina. Export prices have fallen rapidly. Export subsidies from the EC have been met by the U.S. in 1987. Canada and Australia are pushing hard to bring an end to the export subsidy war. A small reduction in ending stocks for grains is forecast at the end of the 1987-88 marketing year, both in the U.S. and the rest of the world. Increasingly, the potential market for U.S. wheat and feed grains will be the richer of the developing countries of the third world where cash to pay for grains can be found.

WORLD SUPPLY AND USE OF GRAINS
USDA Estimates, 1981-87

| Production Year | Production | Utilization | Exports | Ending stocks | Stocks as percent of use |
|---|---|---|---|---|---|
| | - million metric tons - | | | | percent |
| 1981-82 | 1496 | 1462 | 210 | 229 | 16 |
| 1982-83 | 1548 | 1505 | 200 | 271 | 18 |
| 1983-84 | 1484 | 1553 | 208 | 204 | 13 |
| 1984-85 | 1644 | 1592 | 219 | 256 | 16 |
| 1985-86 | 1665 | 1574 | 181 | 346 | 22 |
| 1986-87 | 1680 | 1643 | 188 | 384 | 24 |
| 1987-88 | (1614) | (1647) | (191) | (351) | 21 |

## HIGHLIGHTS OF THE MARKETING COSTS SECTION

Marketing costs include all expenses incurred in transporting food from the farm to consumers. All transformations of the raw product through packing, shipping, processing, manufacturing, and retailing activities are components of marketing costs and represent the value added by marketing.

Page 16
Many of the major marketing input costs declined in 1986, but preliminary 1987 figures indicate smaller declines or in some cases increases. The market basket indices show that the farmer's share of the retail food dollar fell to 30 percent in 1986 continuing the long term decline.

Page 17
Changes in market basket statistics in year to year changes show that although the retail value has steadily increased, the farm value has declined with major dips occurring in 1983 and 1985. The distribution of the food dollar in the table "What a Dollar Spent on Food Paid for in 1986" shows clearly that the value of marketing activities outweigh farm level activities. The labor portion (34%) of the marketing bill alone is greater than the farm value (25%).

Page 18
The 1986 distribution of consumer expenditures shows the difference between the farmers' share of the "at home" food dollar (30%) and "away from home" food dollar (16%). This difference reflects the much greater value added to away-from-home foods in terms of preparation and service. Total food expenditures as a percent of disposable income, declined from 15.0 percent in 1985 to 14.7 percent in 1986, continuing a long-term downward trend.

Page 19
A comparison of the distribution of the average household's weekly food spending in grocery stores shows that total spending increased by 3.3 percent in 1986 over the 1985 level. However, the increases in several individual categories, including fresh fish, in-store delis, and prepared drinks were considerably above this average. Conversely, the largest category, fresh meat and provisions, representing over 14 percent of the average household's total weekly grocery store purchases, declined 1.4 percent during this period. The category with the largest decline, 33.7 percent, was wine, liquor and coolers. Interestingly, in 1985, this category showed the second highest growth rate. These dramatic shifts reflect the growth and decline of the market for wine coolers.

Page 20
In the past ten years, the total marketing bill portion has increased from two-thirds to three quarters of consumer food spending. In measuring the food retailing efficiency the final table in this series shows that the after tax earnings of food chains have improved since 1980 but still hover around 1 percent of sales.

## MEASURING PRICE CHANGES IN FOOD MARKETING INPUTS[1]

| Cost Item | 1982 | 1983 | 1984 | 1985 | 1986 | 1987[2] |
|---|---|---|---|---|---|---|
| | Annual Percentage Change | | | | | |
| Labor[3] | 6.7 | 4.1 | 2.4 | -0.7 | -0.9 | 1.5 |
| Packaging materials | -2.1 | 2.0 | 9.6 | 1.5 | 1.7 | 3.7 |
| Paperboard boxes and containers | -1.3 | -1.5 | 12.0 | -3.4 | -1.0 | 7.2 |
| Metal cans | 5.1 | 2.9 | 6.1 | 4.9 | 3.2 | 0.8 |
| Transportation | 7.3 | 0.9 | 4.4 | 0.8 | -0.6 | -2.2 |
| Fuels & electricity | 5.4 | 0.0 | 1.1 | -1.8 | -15.7 | 0.4 |
| Electricity | 10.4 | 2.9 | 5.3 | 3.1 | 1.0 | -3.0 |
| Petroleum | -4.2 | -11.5 | -1.8 | -6.7 | -39.2 | 13.3 |
| Natural gas | 19.8 | 16.7 | 0.6 | -0.4 | -5.3 | -4.9 |
| Maintenance & repair | 6.9 | 4.0 | 3.6 | 2.9 | 2.3 | 4.2 |
| Supplies | 1.9 | -.9 | 0.7 | -0.3 | -1.8 | 1.4 |
| Interest, short term | -19.5 | -25.2 | 14.3 | -20.9 | -20.4 | 4.7 |
| Total marketing cost index (FMCI) | 5.2 | 2.5 | 4.3 | 0.5 | -1.0 | 1.8 |

[1]Data measure changes in prices for fixed quantities of labor and other inputs used in processing, wholesaling, and retailing farm foods sold through foodstores.
[2]Second quarter 1987 data versus second quarter 1986 data.
[3]Hourly earnings and benefits.

Source: Agricultural Outlook, USDA, September 1987.

## PRICE INDICES OF MARKET BASKET OF FARM FOODS

| Period | Retail Price | Farm Value | Farm Retail Spread | Farmer's Share |
|---|---|---|---|---|
| | | | | (Percent) |
| 1980 | 238.8 | 239.8 | 238.3 | 37 |
| 1981 | 257.1 | 246.4 | 263.4 | 36 |
| 1982 | 266.4 | 247.8 | 277.4 | 34 |
| 1983 | 268.7 | 242.3 | 284.3 | 33 |
| 1984 | 279.3 | 255.4 | 293.3 | 34 |
| 1985 | 282.6 | 237.1 | 309.3 | 31 |
| 1986 | 288.7 | 234.1 | 320.8 | 30 |
| 1987 July | 305.2 | 248.4 | 338.5 | 30 |

Source: Agricultural Outlook, USDA, October 1987.

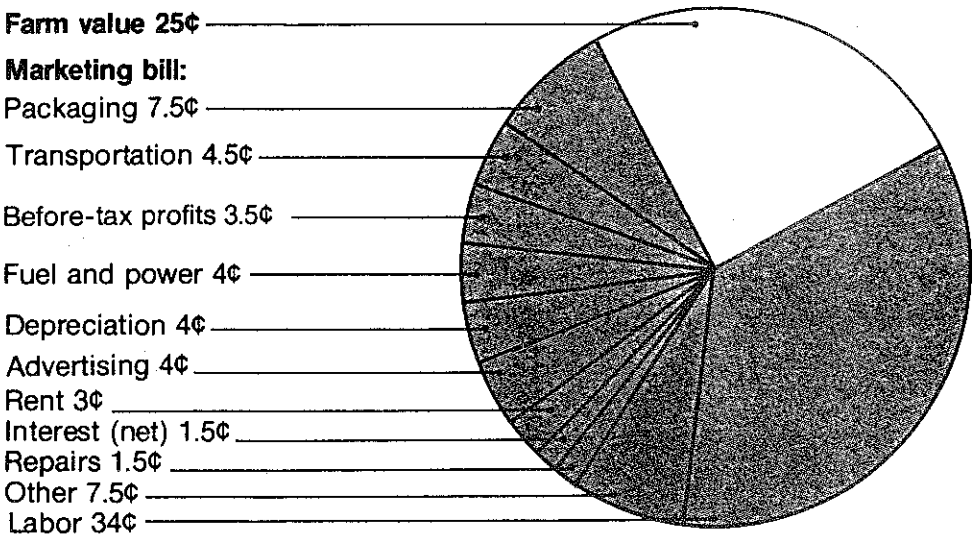
## MARKET BASKET STATISTICS

| Category | Changes from Previous Years | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | July[1] 1987 |
| | (Percent) | | | | | | |
| Retail cost | 7.7 | 3.8 | 0.8 | 3.9 | 1.2 | 2.2 | 5.6 |
| Farm value | 2.8 | 1.0 | -2.6 | 1.4 | -7.2 | -1.3 | 3.8 |
| Farm-to-retail spread | 10.5 | 5.1 | 2.7 | 3.1 | 5.5 | 3.7 | 6.5 |

[1]July 1987 data versus July 1986 data.

Source: Agricultural Outlook, USDA, October 1987.

## WHAT A DOLLAR SPENT ON FOOD PAID FOR IN 1986

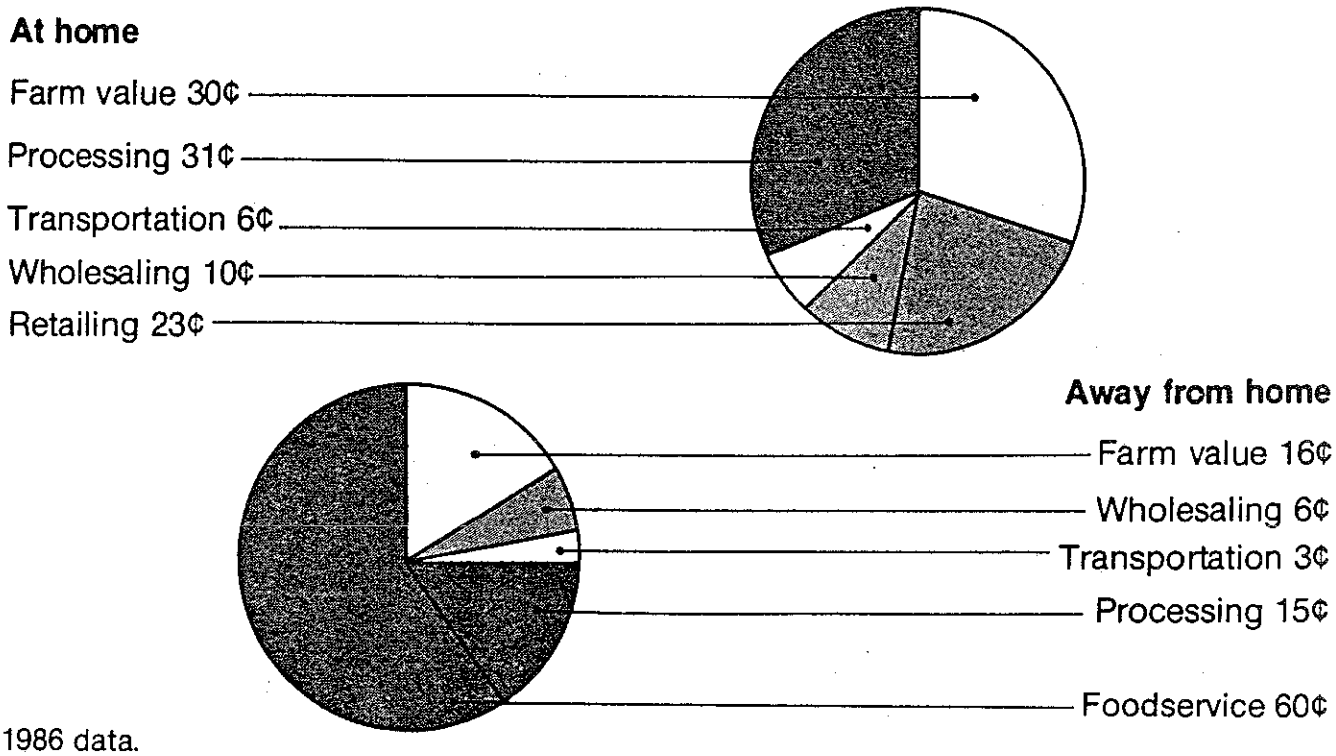



1986 preliminary. Other costs include property taxes and insurance, accounting and professional services, promotion, bad debts, and miscellaneous items.

Includes food at home and away from home.

Source: USDA 1987.

WHERE THE FOOD DOLLAR GOES AT HOME VERSUS AWAY




1986 data.

Source: USDA 1987

FOOD EXPENDITURES AS PERCENT OF DISPOSABLE INCOME

| Year | Total Food, Except Alcoholic Beverages | Food Except Alcoholic Beverages | |
|---|---|---|---|
| | | At Home | Away From Home |
| 1976 | 16.3 | 12.0 | 4.3 |
| 1977 | 16.1 | 11.7 | 4.4 |
| 1978 | 15.9 | 11.4 | 4.5 |
| 1979 | 15.9 | 11.3 | 4.6 |
| 1980 | 15.5 | 11.2 | 4.3 |
| 1981 | 15.4 | 10.9 | 4.5 |
| 1982 | 15.5 | 11.0 | 4.5 |
| 1983 | 15.2 | 10.6 | 4.6 |
| 1984 | 15.0 | 10.4 | 4.6 |
| 1985 | 15.0 | 10.4 | 4.6 |
| 1986 | 14.7 | 10.0 | 4.7 |

Source: National Food Review, 1987 Yearbook, Summer 1987.

## HOW AN AVERAGE HOUSEHOLD SPENDS ITS DOLLARS IN GROCERY STORES EACH WEEK

| | 1985 | 1986 | Change |
|---|---|---|---|
| PERISHABLES | | | |
| Baked goods | $ 2.41 | 2.46 | + 1.8% |
| Dairy | 4.12 | 4.19 | + 1.4 |
| Frozen foods | 2.87 | 2.98 | + 3.8 |
| Fresh meat and provisions | 8.84 | 8.73 | - 1.4 |
| Fresh fish | .60 | .68 | +13.5 |
| Fresh poultry | 1.57 | 1.58 | + 0.1 |
| Produce | 5.33 | 5.46 | + 2.3 |
| Instore bakery | .91 | .95 | + 4.4 |
| Instore deli | 1.29 | 1.44 | +11.7 |
| Total | $27.97 | $28.47 | + 1.8 |
| DRY GROCERY (FOOD) | | | |
| Beer | $ 2.87 | 2.95 | + 2.9 |
| Wine, liquor, coolers | 1.00 | .66 | -33.7 |
| Baby food | .38 | .38 | -- |
| Breakfast foods | 1.16 | 1.22 | + 5.3 |
| Candy and chewing gum | .68 | .69 | + 1.0 |
| Canned foods | | | |
| Fruits | .33 | .34 | + 3.2 |
| Juices and drinks | .72 | .74 | + 3.0 |
| Meat and poultry | .34 | .32 | - 5.3 |
| Milk | .09 | .09 | -- |
| Seafood and fish | .40 | .41 | + 1.8 |
| Soups | .45 | .41 | - 9.5 |
| Vegetables | .67 | .65 | - 3.0 |
| Prepared drinks | 1.64 | 1.77 | + 8.2 |
| Dried foods | .52 | .54 | + 4.0 |
| Jams, jellies and preserves | .41 | .41 | -- |
| Macaroni, spaghetti, noodles | .21 | .22 | + 1.0 |
| Desserts | .13 | .13 | -- |
| Soft drinks | 1.49 | 1.53 | + 2.4 |
| Sugar | .33 | .32 | - 4.2 |
| Miscellaneous | 2.50 | 3.75 | +50.0 |
| Total | $17.13 | $17.50 | + 2.3 |
| Total Foods | $45.10 | $46.00 | + 2.0 |
| DRY GROCERY (NON-FOOD) | | | |
| Paper goods | 2.02 | 2.04 | + 1.1 |
| Soaps, detergents | 1.18 | 1.17 | - 0.6 |
| Other households supplies | 1.09 | 1.12 | + 2.8 |
| Pet foods | 1.22 | 1.20 | - 1.6 |
| Tobacco products | 2.38 | 2.44 | + 2.1 |
| Total | $ 7.92 | $ 7.97 | + 0.6 |
| GENERAL MERCHANDISE/HBA | | | |
| Health and beauty aids (non-Rx) | $ 2.28 | $ 2.36 | + 3.7 |
| Prescriptions | .35 | .39 | +11.1 |
| Housewares | .19 | .23 | +21.6 |
| All other general merchandise | 1.58 | 1.82 | +15.2 |
| Total | $ 4.59 | $ 4.80 | + 4.6 |
| All other sales | 1.24 | 2.01 | +62.1 |
| GRAND TOTAL | $58.85 | $60.78 | + 3.3 |

Source: Supermarket Business, September 1987.

COMPONENTS OF CONSUMER FOOD SPENDING

| | 1975 | 1985 | 1986 |
|---|---|---|---|
| | Billion Dollars (Percent) | | |
| Consumer expenditures | 167.0 (100) | 345.6 (100) | 361.1 (100) |
| Farm value | 55.6 (33) | 88.3 (26) | 89.0 (25) |
| Total marketing bill | 111.4 (67) | 257.1 (74) | 272.1 (75) |
| Labor[1] | 48.3 (29) | 116.5 (34) | 123.7 (34) |
| Packaging | 13.3 (8) | 27.6 (8) | 28.8 (8) |
| Transportation[2] | 8.4 (5) | 16.5 (5) | 16.8 (5) |
| Energy | 4.6 (3) | 13.1 (4) | 13.6 (4) |
| Corporate Profits (before taxes) | 7.1 (4) | 17.0 (5) | 17.8 (5) |
| Other[3] | 29.7 (18) | 66.4 (19) | 71.4 (20) |

Source: Agricultural Outlook, USDA, May 1987.

[1]Includes supplements to wages and salaries such as pensions and health insurance premiums. Also includes imputed earnings of proprietors, partners, and family workers not receiving stated remuneration.
[2]Excludes local hauling charges.
[3]Includes business taxes, depreciation, rent, advertising, interest, and other costs.

FOOD CHAIN EARNINGS AFTER TAXES, UNITED STATES 1980-1986

| Year | Earnings as a Percent of Sales | Total Assets | Net Worth |
|---|---|---|---|
| 1980 | 0.89 | 4.92 | 12.55 |
| 1981 | 0.88 | 4.75 | 11.53 |
| 1982 | 0.86 | 4.33 | 9.90 |
| 1983 | 0.94 | 4.52 | 9.87 |
| 1984 | 0.93 | 4.42 | 10.35 |
| 1985[1] | 1.17 | 5.50 | 12.03 |
| 1986[1] | 1.45 | 6.41 | 15.01 |

Source: Operating Results of Food Chains, Cornell University 1986-87.

[1]1985 & 1986 data based on smaller sample of firms than past years.

**United States Farm Balance Sheet**
**Current Dollars, January 1**

| Item | 1960 | 1970 | 1980 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|
| | billion dollars | | | | | |
| *Assets* | | | | | | |
| Real Estate | 137.2 | 215.8 | 755.9 | 693.7 | 607.4 | 554.0 |
| Livestock | 15.3 | 23.5 | 61.4 | 49.6 | 45.9 | 47.6 |
| Machinery | 22.7 | 32.3 | 96.7 | 99.4 | 97.6 | 84.5 |
| Crops | 7.7 | 10.9 | 33.5 | 33.7 | 37.1 | 37.2 |
| Household | 9.2 | 9.6 | 17.2 | 26.1 | 26.1 | 30.5 |
| Deposits & Currency | 9.2 | 11.9 | 15.9 | 19.8 | 21.1 | 24.8 |
| U.S. Savings Bonds | 4.7 | 3.7 | 4.0 | 3.6 | 3.9 | 4.5 |
| Coop. Invest. | 4.2 | 7.2 | 20.2 | 29.8 | 27.7 | 24.9 |
| TOTAL | 210.2 | 314.9 | 1004.8 | 955.7 | 866.8 | 808.0 |
| *Claims* | | | | | | |
| RE Debt | 12.0 | 29.2 | 85.4 | 112.4 | 105.9 | 95.8 |
| NonRE Debt | 12.8 | 23.8 | 80.4 | 100.3 | 99.2 | 89.7 |
| TOTAL | 24.8 | 53.0 | 165.8 | 212.7 | 205.1 | 185.5 |
| Owner Equity | 185.4 | 261.9 | 839.0 | 743.0 | 661.7 | 623.5 |
| TOTAL | 210.2 | 314.9 | 1004.8 | 955.7 | 866.8 | 808.0 |
| % Equity | 88 | 83 | 83 | 78 | 76 | 77 |

*Source: Economic Research Service, USDA*

**Changes in Structure, U.S. Farm Balance Sheet**
**Current Dollars, 1960-87**

| Item | 1960 | 1970 | 1980 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|
| | percent of total | | | | | |
| *Assets* | | | | | | |
| Real Estate | 65 | 68 | 75 | 73 | 70 | 69 |
| Livestock | 7 | 8 | 6 | 5 | 5 | 6 |
| Machinery | 11 | 10 | 10 | 10 | 11 | 10 |
| All Other | 17 | 14 | 9 | 12 | 14 | 15 |
| TOTAL | 100 | 100 | 100 | 100 | 100 | 100 |
| *Liabilities* | | | | | | |
| RE Debt | 49 | 55 | 52 | 53 | 51 | 52 |
| NonRE Debt | 51 | 45 | 48 | 47 | 49 | 48 |
| TOTAL | 100 | 100 | 100 | 100 | 100 | 100 |

**Distribution of United States Farm Debt by Lender**
**Current Dollars, January 1**

| Lender | 1987 % | 1987 Bil $ | Percent Change From 1986 | Percent Change From 1982 |
|---|---|---|---|---|
| *Real Estate* | | | | |
| Federal Land Bank | 20 | 37.7 | -16 | -21 |
| Individuals & Others | 13 | 24.0 | -12 | -25 |
| Insurance Companies | 6 | 10.9 | - 8 | -15 |
| Commercial Banks | 7 | 12.7 | +12 | +51 |
| Farmers Home Admin. | 5 | 10.4 | - 1 | +12 |
| CCC - Storage | a | .1 | -60 | -89 |
| TOTAL | 51 | 95.8 | -10 | -14 |
| *Nonreal Estate* | | | | |
| Commercial Banks | 17 | 31.2 | -12 | -14 |
| PCA's and FICB's | 6 | 11.0 | -24 | -45 |
| Merchants & Dealers | 7 | 12.4 | -19 | -36 |
| Farmers Home Admin. | 9 | 16.4 | - 2 | +12 |
| CCC - Crop Loans | 10 | 18.7 | + 8 | +29 |
| TOTAL | 49 | 89.7 | -10 | -16 |
| TOTAL DEBT | 100 | 185.5 | -10 | -15 |

[a] Less than .5 percent.

*Source: ERS, USDA*

**Delinquent Farm Loans**
**United States, December 31**

| Lender Group | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
|---|---|---|---|---|---|---|---|
| | | | *Billions of Dollars* | | | | |
| Commercial Banks | n.a. | n.a. | .9 | 1.5 | 2.1 | 2.6 | 2.2 |
| Farm Credit System | .3 | .4 | .7 | 1.3 | 2.1 | 5.3 | 7.1 |
| Life Ins. Companies | .3 | .5 | .8 | 1.1 | 1.2 | 1.8 | 1.9 |
| Farmers Home Adm. | 3.6 | 5.8 | 9.5 | 11.0 | 12.1 | 11.9 | 12.1 |
| | | | *Percentage of Outstanding Loans* | | | | |
| Commercial Banks | n.a. | n.a. | 2.5 | 3.8 | 5.2 | 7.3 | 7.0 |
| Farm Credit System | .5 | .5 | 1.1 | 1.8 | 3.3 | 8.7 | 14.4 |
| Life Ins. Companies | 2.0 | 3.7 | 6.4 | 8.3 | 9.6 | 15.1 | 17.0 |
| Farmers Home Adm. | 18.2 | 24.1 | 37.9 | 43.9 | 45.9 | 41.5 | 42.9 |

*Source: Emanuel Melichar, Board of Governors of the Federal Reserve System.*

**New York Farm Balance Sheet**
**In Current Dollars, Including Farm Households**

| Item | January 1, 1987 Million Dollars | Percent |
|---|---|---|
| *Assets* | | |
| Real Estate | $ 8,100 | 61 |
| Livestock | 1,066 | 8 |
| Machinery & Vehicles | 1,811 | 14 |
| Crops Stored | 378 | 3 |
| Household Items & Equip. | 797 | 6 |
| Deposits & Currency | 472 | 4 |
| Coop. Investments | 518 | 4 |
| Savings Bonds | 69 | 0 |
| TOTAL ASSETS | $13,211 | 100 |
| *Liabilities & Equity* | | |
| Real Estate Debt | $ 1,102 | 41 |
| Nonreal Estate Debt[a] | 1,580 | 59 |
| TOTAL LIABILITIES | $ 2,682 | 100 |
| EQUITY | 10,529 | |
| TOTAL LIABILITIES & EQUITY | $13,211 | |

[a] All emergency loans are included under nonreal estate. This overestimates nonreal estate loan volume and underestimates real estate loan volume.

**Changes in New York Farm Balance Sheet**
**Current Dollars, January 1**

| Item | 1960 | 1970 | 1980 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|
| Total Assets | $3,579 | $5,428 | $11,698 | $13,194 | $13,016 | $13,211 |
| Total Debts | 547 | 842 | 2,527 | 3,020 | 2,855 | 2,682 |
| Owner's Equity | 3,032 | 4,586 | 9,171 | 10,174 | 10,161 | 10,529 |
| Percent Equity | 85 | 84 | 78 | 77 | 78 | 80 |

*Source: ERS, USDA*

**New York Farm Credit Outstanding**
**January 1, 1987**

| Credit Type & Source | Million Dollars | Percent |
|---|---|---|
| *Real Estate Loans* | | |
| Commercial Banks | $ 97 | 3 |
| Federal Land Banks | 429 | 16 |
| Farmers Home Admin.[a] | 205 | 8 |
| Insurance Companies | 19 | 1 |
| Individuals & Others | 349 | 13 |
| CCC - Storage | 3 | c |
| TOTAL | $ 1,102 | 41 |
| *Nonreal Esate Loans* | | |
| Commercial Banks[b] | $ 685 | 25 |
| Production Credit Assn. | 286 | 11 |
| Farmers Home Admin.[a] | 314 | 12 |
| Merchants, Dealers, Individuals and Others | 230 | 9 |
| CCC - Crop Loans | 65 | 2 |
| TOTAL | $ 1,580 | 59 |
| TOTAL DEBT | $ 2,682 | 100 |

[a] All emergency loans are included under nonreal estate. This overestimates nonreal estate loan volume and underestimates real estate loan volume.
[b] Includes loans made outside of New York by New York City banks.
[c] Less than .5 percent.

**Trends in New York Farm Lending**
**January 1**

| Credit Type and Source | Percent Change in Outstanding Loans | | | |
|---|---|---|---|---|
| | 1983 to 1984 | 1984 to 1985 | 1985 to 1986 | 1986 to 1987 |
| *Real Estate Loans* | | | | |
| Commercial Banks | + 6 | -18 | + 3 | + 1 |
| Federal Land Banks | 0 | - 3 | - 6 | -12 |
| Farmers Home Admin. | + 2 | + 3 | + 2 | - 2 |
| Insurance Companies | - 7 | 0 | + 3 | -32 |
| Individuals and Others | + 1 | - 7 | - 9 | -12 |
| CCC - Storage | -22 | -25 | -41 | -53 |
| *Nonreal Estate* | | | | |
| Commercial Banks | +35 | -29 | - 9 | + 9 |
| Production Credit Assoc. | - 5 | - 2 | - 8 | -17 |
| Farmers Home Admin. | - 4 | - 3 | + 6 | - 4 |
| Merchants and Dealers | - 3 | + 2 | - 17 | -20 |
| CCC - Crop Loans | -22 | -50 | +114 | +44 |
| TOTAL DEBT | + 6 | -12 | - 5 | - 6 |

*Source: Economic Research Service, USDA.*

**Trends in the Financial Condition of New York Farmers**

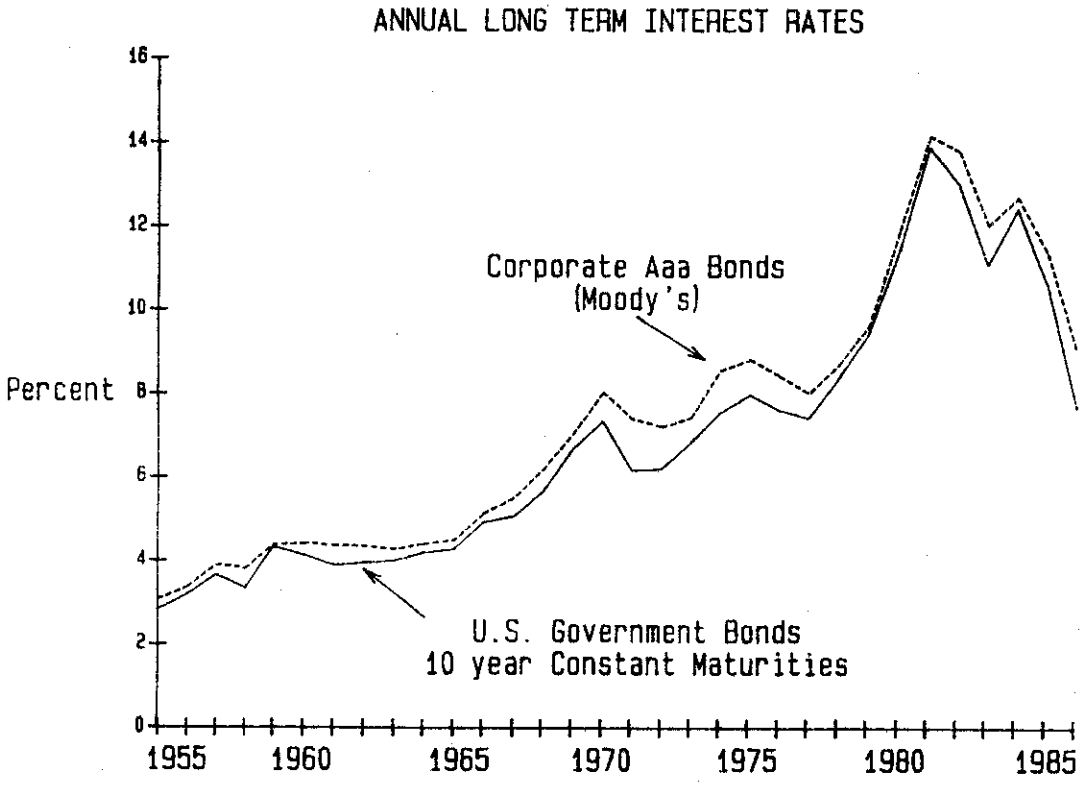
| Category | 1985 | 1986 | 1987 |
|---|---|---|---|
| *Debt/Asset Ratio* | | ----- Percent of All Farms ----- | |
| No Debt | 42 | 32 | 40 |
| 0.1 - 19.9 | 24 | 29 | 28 |
| 20.0 - 39.9 | 15 | 19 | 15 |
| 40.0 - 69.9 | 13 | 15 | 13 |
| 70.0 plus | 6 | 5 | 4 |
| *Type of Farm* | | ----- Debt/Asset Ratio ----- | |
| Dairy | 25 | 27 | 20 |
| Other Livestock | 13 | 12 | 9 |
| Cash Grain | 26 | 27 | 16 |
| Tree Fruits | 24 | 18 | 24 |
| Grapes | 23 | 22 | 16 |
| Vegetables | 17 | 22 | 16 |
| All | 22 | 24 | 18 |
| *Type of Delinquency* | | | |
| Real Estate Loans | 5 | 9 | 9 |
| Other Loans[a] | 17 | 18 | 14 |

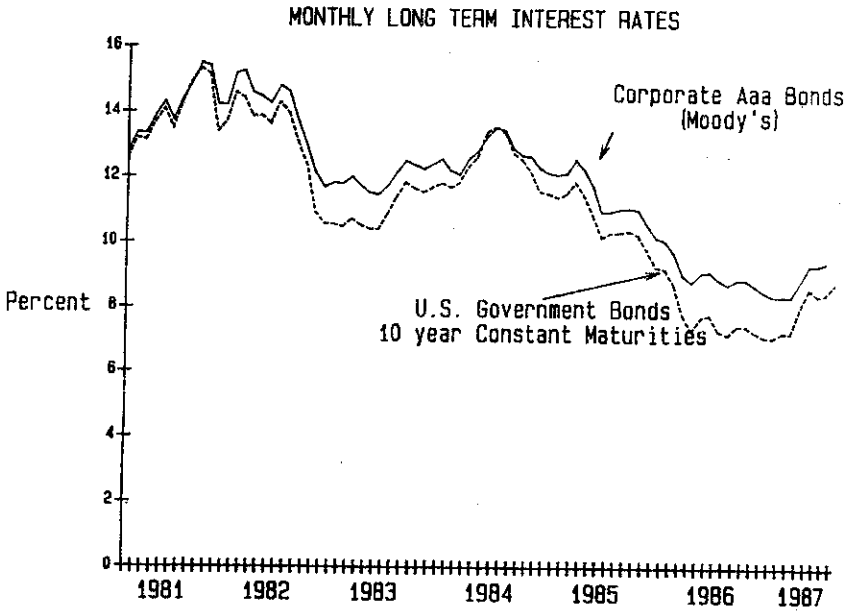
[a] Includes accounts payable, 1985 estimated.

**Delinquency by Debt Asset Ratio**
**New York Farmers**

| Debt Asset Ratio | Real Estate | | Nonreal Estate | |
|---|---|---|---|---|
| | 1986 | 1987 | 1986 | 1987 |
| | | -----Percent of Farms----- | | |
| Under 19.9 | 6 | 5 | 9 | 6 |
| 20.0 - 39.9 | 6 | 5 | 14 | 9 |
| 40.0 - 69.9 | 11 | 12 | 28 | 23 |
| 70.0 plus | 27 | 27 | 47 | 40 |

*Source: Farm Finance Surveys, New York Agricultural Statistics Service.*

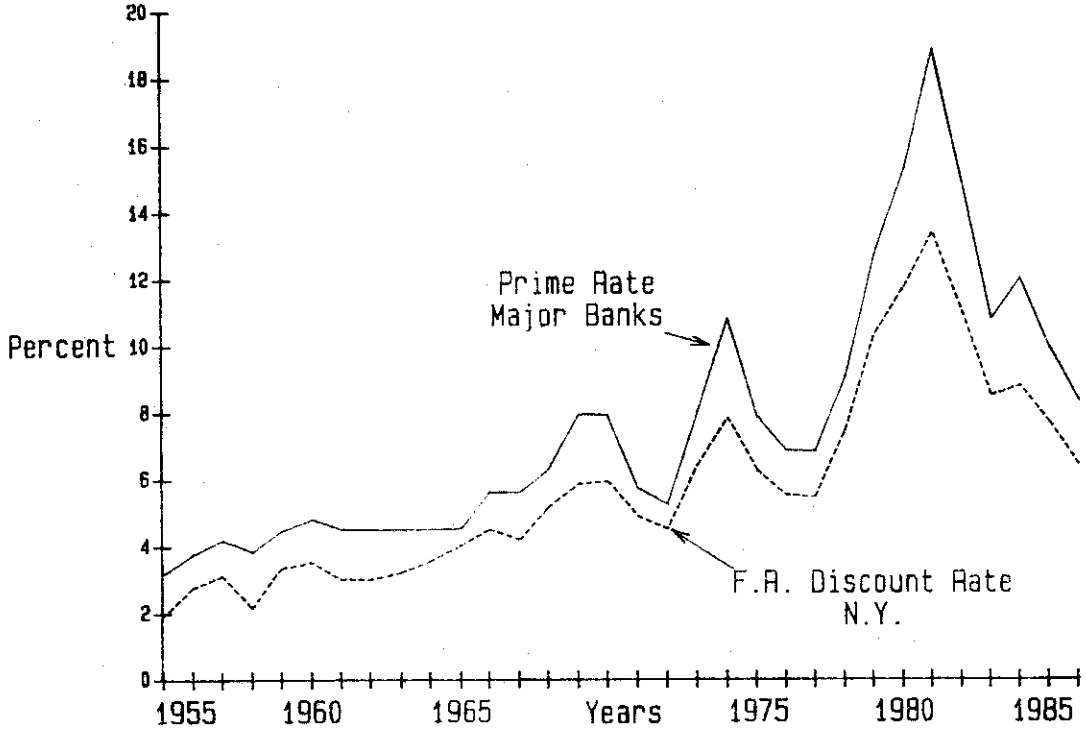


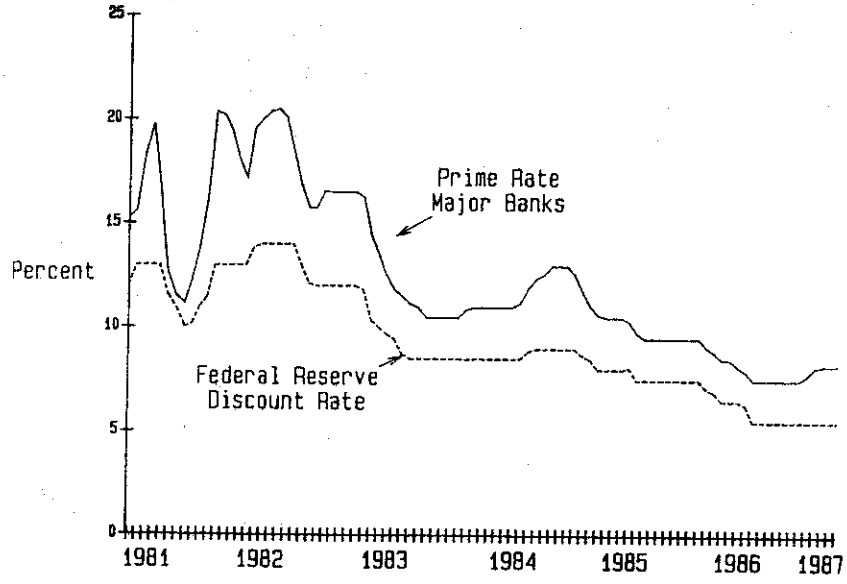

U.S. Government Bonds
10 Year Constant Maturities

| | *1986* | *1987* |
|---|---|---|
| Jan | 9.19 | 7.08 |
| Feb | 8.70 | 7.25 |
| Mar | 7.78 | 7.25 |
| Apr | 7.30 | 8.02 |
| May | 7.71 | 8.61 |
| Jun | 7.80 | 8.40 |
| Jul | 7.30 | 8.45 |
| Aug | 7.17 | 8.76 |
| Sep | 7.45 | ____ |
| Oct | 7.43 | ____ |
| Nov | 7.25 | ____ |
| Dec | 7.11 | ____ |

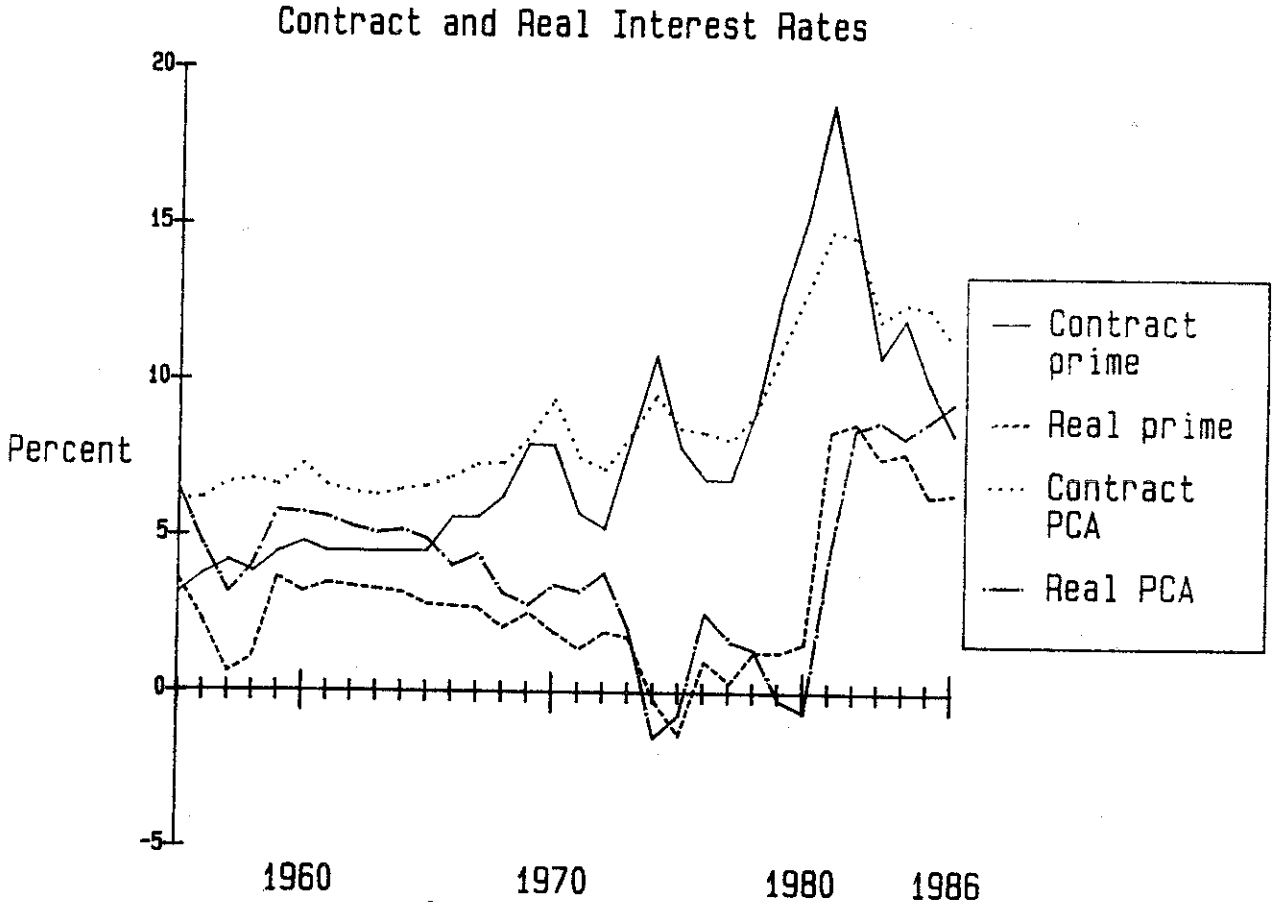
ANNUAL AVERAGE SHORT TERM INTEREST RATES




MONTHLY SHORT TERM INTEREST RATES




| | Prime Rate Major Banks | |
|---|---|---|
| | *1986* | *1987* |
| Jan | 9.50 | 7.50 |
| Feb | 9.50 | 7.50 |
| Mar | 9.10 | 7.50 |
| Apr | 8.83 | 7.75 |
| May | 8.50 | 8.14 |
| Jun | 8.50 | 8.25 |
| Jul | 8.16 | 8.25 |
| Aug | 7.90 | 8.25 |
| Sep | 7.50 | |
| Oct | 7.50 | |
| Nov | 7.50 | |
| Dec | 7.50 | |

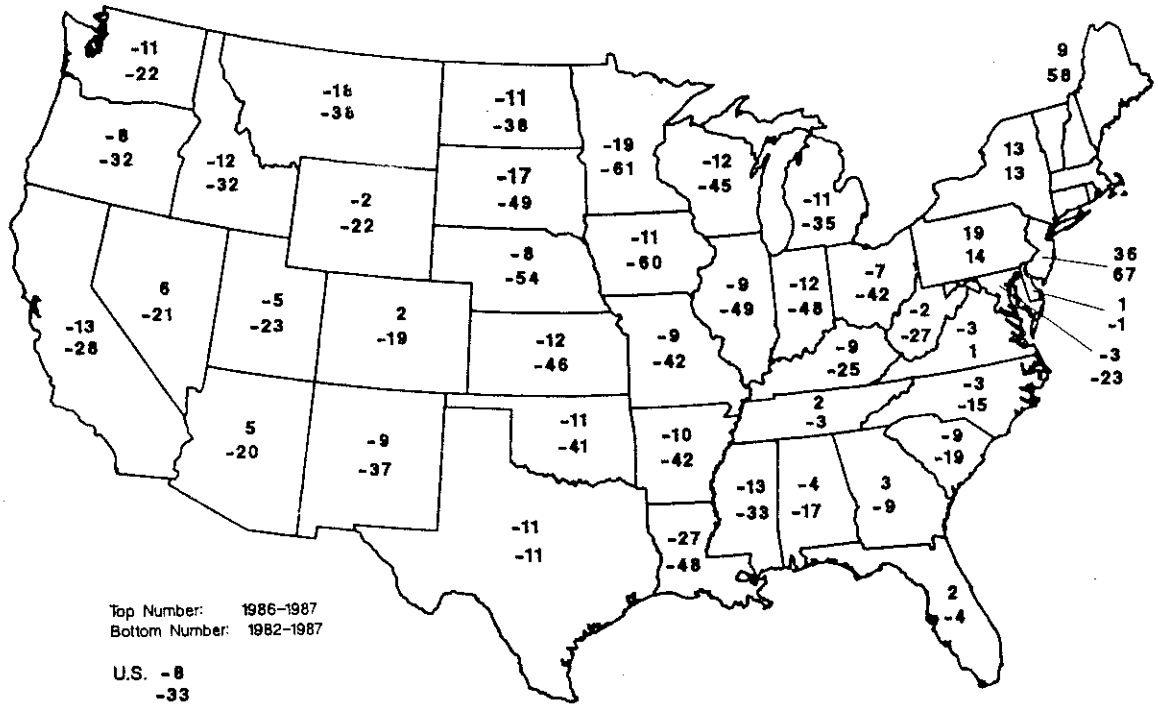



Farm level interest rates were constant to slightly lower in early 1987, and increased during the last half of the year to slightly above late 1986 levels. Compared to the experience of recent years, 1987 was a year of stability in the rates farmers pay. A number of forces could influence interest rates during 1987. The recently developed deficit reduction package will have only a modest effect on the deficit and the approaching election will likely make additional reduction in 1988 an impossibility. Thus, fiscal policy will likely be quite stimulative. The projected 2.0 to 3.5 percent rate of growth of the economy should increase loan demand and, thus, interest rates. Reaction to the perceived wealth effect of the stock market decline could dampen growth rates and its cumulative effects might become important later in the year.

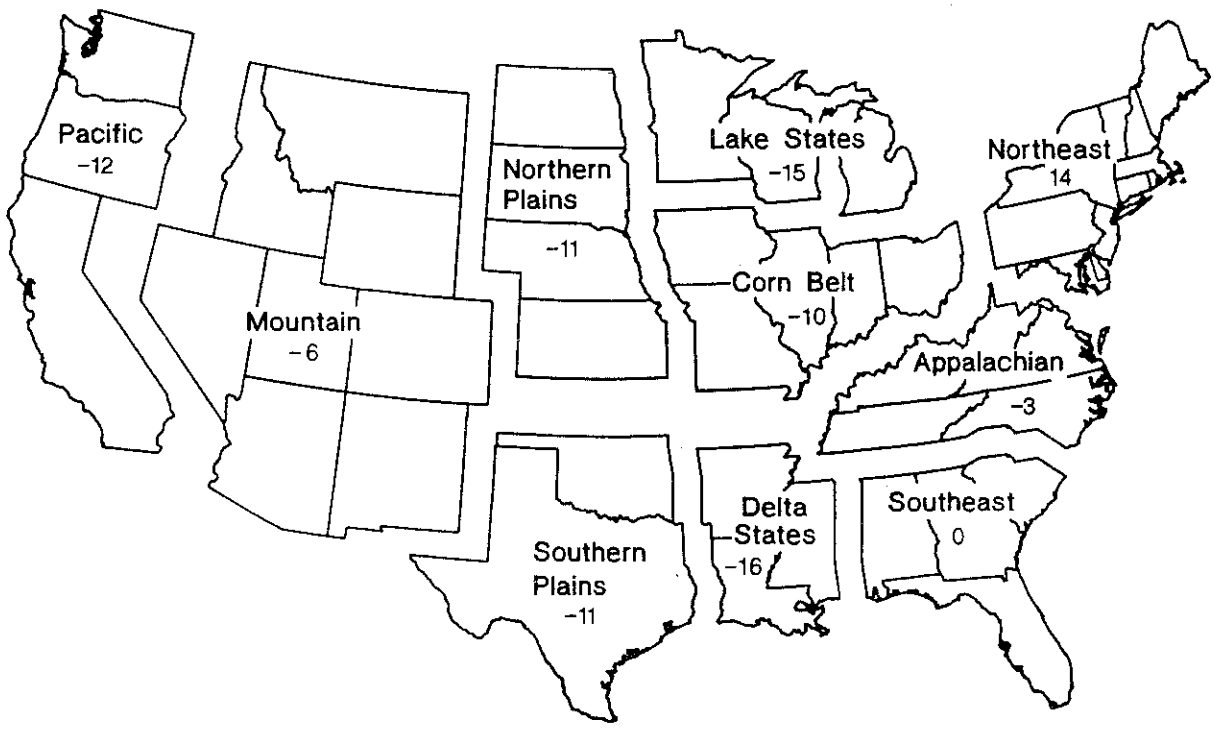
The decline in value of the dollar, which many expect to continue for a while, will likely reduce foreign investment in the U.S. and provide upward pressure on interest rates. Investment could return, however, when the dollar levels off or starts to increase. Whether the Federal Reserve will renew its efforts to keep inflation in check and encourage rates to rise, or take a more politically accomodative stance by supporting lower rates, is unknown. Unless the FED reacts strongly in one direction or the other, interest rates are likely to increase by one-half to one percent early in 1988. After mid-year rates should either remain at the higher level or decline modestly.

CHANGE IN FARM REAL ESTATE VALUES, UNITED STATES

## Percent Change in Land Value Per Acre February 1986-1987 and February 1982-1987




## Percent Change in Land Value Per Acre February 1986-1987, By Farm Production Regions



# AVERAGE VALUE PER ACRE OF UNITED STATES FARM REAL ESTATE

**Table 1—Average value per acre of land and buildings, by State, grouped by farm production region, Feb. 1, 1980-81; April 1, 1982-85; and Feb. 1, 1986-87**

| State | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | Percent change 1986-87 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Dollars | | | | |
| Northeast | | | | | | | | | |
| Maine | 594 | 642 | 680 | 708 | 750 | 856 | 993 | 1,082 | 9 |
| New Hamphire | 1,004 | 1,078 | 1,136 | 1,174 | 1,244 | 1,419 | 1,646 | 1,794 | 9 |
| Vermont | 721 | 774 | 815 | 842 | 893 | 1,017 | 1,180 | 1,286 | 9 |
| Massachusetts | 1,608 | 1,752 | 1,874 | 1,963 | 2,081 | 2,372 | 2,752 | 2,999 | 9 |
| Rhode Island | 2,523 | 2,646 | 2,729 | 2,760 | 2,926 | 3,335 | 3,869 | 4,217 | 9 |
| Connecticut | 2,387 | 2,517 | 2,610 | 2,655 | 2,814 | 3,208 | 3,721 | 4,056 | 9 |
| New York | 720 | 773 | 821 | 817 | 842 | 808 | 824 | 931 | 13 |
| New Jersey | 2,947 | 3,040 | 3,181 | 3,140 | 3,234 | 3,525 | 3,913 | 5,321 | 36 |
| Pennsylvania | 1,464 | 1,568 | 1,513 | 1,520 | 1,642 | 1,510 | 1,450 | 1,725 | 19 |
| Delaware | 1,798 | 1,928 | 1,787 | 1,829 | 1,866 | 1,642 | 1,757 | 1,775 | 1 |
| Maryland | 2,238 | 2,530 | 2,376 | 2,121 | 2,185 | 2,097 | 1,887 | 1,831 | -3 |
| Lake States | | | | | | | | | |
| Michigan | 1,111 | 1,289 | 1,278 | 1,223 | 1,223 | 1,052 | 936 | 833 | -11 |
| Wisconsin | 1,004 | 1,152 | 1,144 | 1,113 | 1,046 | 847 | 711 | 626 | -12 |
| Minnesota | 1,086 | 1,281 | 1,272 | 1,165 | 1,083 | 823 | 609 | 493 | -19 |
| Corn Belt | | | | | | | | | |
| Ohio | 1,730 | 1,831 | 1,629 | 1,504 | 1,444 | 1,126 | 1,013 | 942 | -7 |
| Indiana | 1,863 | 2,031 | 1,804 | 1,610 | 1,594 | 1,259 | 1,058 | 931 | -12 |
| Illinois | 2,041 | 2,188 | 2,023 | 1,837 | 1,800 | 1,314 | 1,143 | 1,040 | -9 |
| Iowa | 1,840 | 1,999 | 1,889 | 1,684 | 1,499 | 1,064 | 841 | 748 | -11 |
| Missouri | 902 | 990 | 945 | 856 | 856 | 659 | 606 | 552 | -9 |
| Northern Plains | | | | | | | | | |
| North Dakota | 405 | 436 | 455 | 439 | 439 | 360 | 317 | 282 | -11 |
| South Dakota | 292 | 329 | 349 | 348 | 338 | 250 | 215 | 178 | -17 |
| Nebraska | 635 | 729 | 730 | 701 | 617 | 444 | 364 | 335 | -8 |
| Kansas | 587 | 619 | 628 | 601 | 583 | 466 | 387 | 340 | -12 |
| Appalachian | | | | | | | | | |
| Virginia | 1,028 | 1,118 | 1,096 | 1,125 | 1,114 | 1,091 | 1,146 | 1,111 | -3 |
| West Virginia | 669 | 681 | 723 | 688 | 667 | 554 | 537 | 527 | -2 |
| North Carolina | 1,219 | 1,340 | 1,297 | 1,314 | 1,380 | 1,242 | 1,130 | 1,096 | -3 |
| Kentucky | 976 | 1,033 | 1,058 | 1,049 | 1,007 | 906 | 870 | 791 | -9 |
| Tennessee | 976 | 1,070 | 1,040 | 1,014 | 1,044 | 982 | 992 | 1,012 | 2 |
| Southeast | | | | | | | | | |
| South Carolina | 900 | 972 | 980 | 946 | 927 | 899 | 872 | 794 | -9 |
| Georgia | 896 | 971 | 926 | 929 | 910 | 865 | 822 | 846 | 3 |
| Florida | 1,381 | 1,565 | 1,518 | 1,576 | 1,608 | 1,527 | 1,435 | 1,464 | 2 |
| Alabama | 780 | 910 | 885 | 826 | 809 | 769 | 761 | 731 | -4 |
| Delta States | | | | | | | | | |
| Mississippi | 819 | 1,034 | 981 | 894 | 939 | 835 | 752 | 654 | -13 |
| Arkansas | 918 | 1,056 | 1,096 | 972 | 933 | 849 | 705 | 634 | -10 |
| Louisiana | 1,256 | 1,454 | 1,414 | 1,351 | 1,351 | 1,256 | 1,005 | 734 | -27 |
| Southern Plains | | | | | | | | | |
| Oklahoma | 614 | 681 | 725 | 699 | 699 | 566 | 481 | 428 | -11 |
| Texas | 436 | 468 | 539 | 544 | 593 | 652 | 541 | 482 | -11 |
| Mountain States | | | | | | | | | |
| Montana | 235 | 251 | 271 | 259 | 264 | 222 | 204 | 167 | -18 |
| Idaho | 698 | 774 | 839 | 814 | 814 | 749 | 644 | 567 | -12 |
| Wyoming | 161 | 180 | 193 | 193 | 197 | 177 | 154 | 151 | -2 |
| Colorado | 387 | 434 | 451 | 454 | 468 | 435 | 357 | 364 | 2 |
| New Mexico | 185 | 192 | 195 | 178 | 182 | 163 | 134 | 122 | -9 |
| Arizona | 267 | 287 | 302 | 289 | 295 | 265 | 231 | 242 | 5 |
| Utah | 530 | 567 | 589 | 560 | 571 | 514 | 478 | 454 | -5 |
| Nevada | 248 | 262 | 268 | 249 | 254 | 229 | 199 | 211 | 6 |
| Pacific States | | | | | | | | | |
| Washington | 736 | 877 | 922 | 933 | 961 | 923 | 812 | 723 | -11 |
| Oregon | 587 | 668 | 705 | 705 | 698 | 579 | 521 | 479 | -8 |
| California | 1,424 | 1,732 | 1,900 | 1,918 | 1,918 | 1,726 | 1,571 | 1,366 | -13 |
| 48 States | 737 | 819 | 823 | 788 | 782 | 679 | 595 | 548 | -8 |
| Alaska | | | | | | | 1,902 | 1,437 | -24 |

# TOTAL VALUE OF LAND AND BUILDINGS

Table 2--Total value of land and buildings, by State, grouped by farm production region, 1981-1987

| State | Feb. 1 1981 | Apr. 1 1982 | Apr. 1 1983 | Apr. 1 1984 | Apr. 1 1985 | Feb. 1 1986 | Feb. 1 1987 |
|---|---|---|---|---|---|---|---|
| | | | Million dollars | | | | |
| **Northeast** | | | | | | | |
| Maine | 1,027 | 1,074 | 1,104 | 1,170 | 1,301 | 1,509 | 1,645 |
| New Hamphire | 588 | 613 | 634 | 678 | 766 | 856 | 933 |
| Vermont | 1,393 | 1,385 | 1,431 | 1,517 | 1,627 | 1,888 | 2,057 |
| Massachusetts | 1,226 | 1,293 | 1,315 | 1,415 | 1,613 | 1,871 | 2,039 |
| Rhode Island | 212 | 205 | 207 | 214 | 243 | 282 | 308 |
| Connecticut | 1,258 | 1,279 | 1,328 | 1,351 | 1,540 | 1,675 | 1,825 |
| New York | 7,498 | 7,800 | 7,762 | 7,910 | 7,353 | 7,170 | 8,102 |
| New Jersey | 3,131 | 3,245 | 3,140 | 3,137 | 3,314 | 3,600 | 4,896 |
| Pennsylvania | 13,955 | 13,314 | 13,224 | 14,282 | 13,137 | 12,322 | 14,663 |
| Delaware | 1,253 | 1,179 | 1,89 | 1,231 | 1,067 | 1,124 | 1,136 |
| Maryland | 7,084 | 6,534 | 5,727 | 5,899 | 5,452 | 4,718 | 4,577 |
| **Lake States** | | | | | | | |
| Michigan | 14,695 | 14,569 | 13,942 | 13,942 | 11,993 | 10,580 | 9,416 |
| Wisconsin | 21,427 | 21,164 | 20,257 | 18,832 | 14,992 | 12,522 | 11,019 |
| Minnesota | 38,942 | 38,669 | 35,416 | 32,937 | 25,019 | 18,271 | 14,799 |
| **Corn Belt** | | | | | | | |
| Ohio | 29,479 | 26,064 | 23,914 | 22,813 | 17,791 | 16,012 | 14,891 |
| Indiana | 34,121 | 30,307 | 26,726 | 26,140 | 20,648 | 17,132 | 15,077 |
| Illinois | 63,014 | 58,060 | 52,722 | 51,667 | 37,712 | 32,809 | 29,856 |
| Iowa | 67,366 | 63,659 | 56,751 | 50,358 | 35,750 | 28,243 | 25,136 |
| Missouri | 30,987 | 29,484 | 26,707 | 26,536 | 20,297 | 18,613 | 16,938 |
| **Northern Plains** | | | | | | | |
| North Dakota | 18,007 | 18,655 | 17,999 | 17,999 | 14,724 | 12,894 | 11,475 |
| South Dakota | 14,706 | 15,530 | 15,486 | 15,021 | 11,125 | 9,568 | 7,941 |
| Nebraska | 34,773 | 34,675 | 33,227 | 29,117 | 20,957 | 17,185 | 15,810 |
| Kansas | 29,898 | 30,332 | 29,028 | 27,983 | 22,368 | 18,527 | 16,304 |
| **Appalachian** | | | | | | | |
| Virginia | 10,956 | 10,740 | 11,025 | 10,803 | 10,474 | 10,997 | 10,667 |
| West Virginia | 3,064 | 3,108 | 2,752 | 2,536 | 1,994 | 1,935 | 1,896 |
| North Carolina | 15,276 | 14,397 | 14,454 | 15,177 | 13,414 | 12,206 | 11,840 |
| Kentucky | 15,082 | 15,341 | 15,211 | 14,602 | 13,137 | 12,612 | 11,476 |
| Tennessee | 14,445 | 15,936 | 13,588 | 13,995 | 13,159 | 12,894 | 13,152 |
| **Southeast** | | | | | | | |
| South Carolina | 6,123 | 5,880 | 5,487 | 5,192 | 4,945 | 4,796 | 4,365 |
| Georgia | 14,080 | 12,964 | 12,727 | 12,291 | 11,678 | 10,683 | 11,003 |
| Florida | 20,658 | 19,886 | 20,488 | 20,898 | 19,851 | 18,660 | 19,033 |
| Alabama | 10,829 | 10,443 | 9,582 | 9,309 | 8,844 | 8,374 | 8,039 |
| **Delta States** | | | | | | | |
| Mississippi | 15,096 | 14,224 | 12,784 | 13,330 | 11,774 | 10,521 | 9,153 |
| Arkansas | 17,213 | 17,755 | 15,746 | 15,023 | 13,584 | 11,063 | 9,957 |
| Louisiana | 14,685 | 14,423 | 13,645 | 13,645 | 12,686 | 10,048 | 7,335 |
| **Southern Plains** | | | | | | | |
| Oklahoma | 23,154 | 24,288 | 23,417 | 23,067 | 18,678 | 15,876 | 14,130 |
| Texas | 64,397 | 73,951 | 74,528 | 81,117 | 88,346 | 72,515 | 64,539 |
| **Mountain States** | | | | | | | |
| Montana | 15,487 | 16,666 | 15,877 | 16,141 | 13,542 | 12,459 | 10,216 |
| Idaho | 11,610 | 12,501 | 12,129 | 11,966 | 10,861 | 9,018 | 7,936 |
| Wyoming | 6,300 | 6,755 | 6,755 | 6,851 | 6,160 | 5,359 | 5,252 |
| Colorado | 15,407 | 15,875 | 15,799 | 16,180 | 14,964 | 12,199 | 12,443 |
| New Mexico | 8,986 | 8,970 | 8,188 | 8,315 | 7,335 | 5,961 | 5,425 |
| Arizona | 10,849 | 11,325 | 10,838 | 11,054 | 9,938 | 8,646 | 9,078 |
| Utah | 6,917 | 7,127 | 6,720 | 6,740 | 5,962 | 5,449 | 5,177 |
| Nevada | 2,332 | 2,385 | 2,216 | 2,235 | 2,015 | 1,753 | 1,858 |
| **Pacific States** | | | | | | | |
| Washington | 14,382 | 15,121 | 15,208 | 15,472 | 14,860 | 12,996 | 11,566 |
| Oregon | 12,091 | 12,690 | 12,690 | 12,563 | 10,422 | 9,328 | 8,581 |
| California | 58,195 | 63,460 | 63,678 | 63,294 | 56,785 | 51,518 | 44,820 |
| **48 States** | 843,657 | 843,304 | 804,765 | 793,946 | 686,194 | 597,235 | 549,781 |

## CASH RENT PER ACRE AND RATIO OF RENT TO VALUE

Table 4--Cropland rented for cash: Gross cash rent per acre and ratio of rent to value, selected States, 1984-87

| State | Rent per acre | | | | Ratio of rent to value | | | |
|---|---|---|---|---|---|---|---|---|
| | 1984 | 1985 | 1986 | 1987 | 1984 | 1985 | 1986 | 1987 |
| | Dollars | | | | Percent | | | |
| **Northeast** | | | | | | | | |
| Vermont | 31.32 | 28.25 | 26.01 | 31.30 | 3.8 | 4.1 | 3.0 | 3.2 |
| New York | 35.79 | 34.78 | 30.81 | 31.98 | 5.4 | 5.0 | 5.1 | 4.2 |
| New Jersey | 48.43 | 43.18 | 45.96 | 48.00 | 1.2 | 1.1 | 0.9 | 0.5 |
| Pennsylvania | 38.01 | 42.98 | 37.18 | 40.01 | 2.1 | 2.5 | 2.7 | 2.5 |
| Delaware | 66.90 | 66.77 | 64.48 | 61.42 | 3.8 | 3.8 | 3.7 | 3.0 |
| Maryland | 58.33 | 63.62 | 54.46 | 50.81 | 2.8 | 2.7 | 3.3 | 2.7 |
| **Lake States** | | | | | | | | |
| Michigan | 54.14 | 51.09 | 47.73 | 41.87 | 3.7 | 5.5 | 5.8 | 5.9 |
| Wisconsin | 58.26 | 53.08 | 48.83 | 44.83 | 5.8 | 6.3 | 7.0 | 7.3 |
| Minnesota | 68.43 | 62.19 | 53.85 | 47.78 | 6.5 | 7.8 | 8.7 | 9.0 |
| **Corn Belt** | | | | | | | | |
| Ohio | 79.96 | 72.64 | 70.32 | 63.22 | 5.2 | 5.4 | 6.5 | 5.6 |
| Indiana | 103.13 | 95.70 | 85.55 | 77.00 | 6.0 | 7.3 | 7.5 | 7.5 |
| Illinois | 119.30 | 110.07 | 99.92 | 85.69 | 5.8 | 7.2 | 7.7 | 7.6 |
| Iowa | 117.30 | 102.65 | 87.61 | 80.29 | 6.8 | 8.4 | 9.3 | 9.8 |
| Missouri | 67.05 | 56.54 | 54.42 | 48.31 | 7.3 | 8.5 | 9.0 | 9.1 |
| **Northern Plains** | | | | | | | | |
| North Dakota | 32.42 | 31.74 | 29.69 | 28.24 | 6.7 | 7.6 | 8.1 | 8.4 |
| South Dakota | 30.77 | 29.35 | 26.44 | 25.48 | 7.0 | 8.3 | 9.2 | 10.0 |
| Nebraska (Nonirrigated) | 56.87 | 47.10 | 46.72 | 42.26 | 8.0 | 8.6 | 10.4 | 10.3 |
| (Irrigated) | 113.80 | 92.53 | 86.29 | 81.21 | 8.4 | 9.6 | 10.6 | 11.6 |
| Kansas (Nonirrigated) | 34.10 | 32.38 | 30.34 | 28.60 | 5.9 | 7.2 | 8.0 | 7.8 |
| (Irrigated) | 63.52 | 61.50 | 58.40 | 59.67 | 7.2 | 8.7 | 9.8 | 10.4 |
| **Appalachian** | | | | | | | | |
| Virginia | 36.75 | 37.63 | -- | 37.66 | 3.5 | 3.0 | -- | 3.2 |
| North Carolina | 43.56 | 41.44 | 39.50 | 33.66 | 3.1 | 2.0 | 3.5 | 2.8 |
| Kentucky | 55.80 | 50.67 | 53.63 | 53.31 | 4.8 | 5.2 | 6.0 | 6.8 |
| Tennessee | 50.66 | 45.76 | 47.35 | 39.90 | 5.1 | 4.8 | 5.8 | 4.8 |
| **Southeast** | | | | | | | | |
| South Carolina | 27.93 | 27.00 | 25.46 | 22.40 | 3.0 | 3.5 | 2.9 | 3.2 |
| Georgia | 32.68 | 30.32 | 27.84 | 26.17 | 3.9 | 4.3 | 3.2 | 3.9 |
| Alabama | 30.45 | 29.49 | 29.66 | 28.52 | 4.4 | 4.7 | 4.3 | 4.4 |
| **Delta States** | | | | | | | | |
| Mississippi | 43.75 | 40.96 | 34.95 | 31.19 | 4.9 | 5.2 | 5.1 | 5.0 |
| Arkansas | 49.50 | 50.97 | 48.21 | 44.43 | 5.5 | 6.4 | 6.5 | 6.5 |
| **Southern Plains** | | | | | | | | |
| Oklahoma (Nonirrigated) | 27.76 | 28.52 | 26.52 | 22.96 | 3.5 | 4.2 | 4.7 | 4.8 |
| (Irrigated) | 51.42 | 39.60 | -- | 37.17 | 4.7 | 5.0 | -- | 8.3 |
| Texas (Nonirrigated | 22.62 | 21.32 | 20.22 | 19.90 | 2.5 | 1.9 | 2.2 | 2.3 |
| (Irrigated) | 50.73 | 43.61 | 39.64 | 40.63 | 5.0 | 4.6 | 5.1 | 5.4 |

CROP PRODUCTION
United States and New York
1985-87 a/

| Crop | Acres Harvested 1985 | 1986 | 1987 | Yield Per Acre 1985 | 1986 | 1987 | Production 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|
| United States | (million) | | | (bu.) | | | (million bu.) | | |
| Corn grain | 75.2 | 69.2 | 59.6 | 118.0 | 119.3 | 120.3 | 8,877 | 8,253 | 7,166 |
| Sorghum | 16.7 | 13.9 | 10.5 | 66.7 | 66.7 | 70.5 | 1,120 | 942 | 741 |
| Oats | 8.2 | 6.9 | 6.9 | 63.7 | 56.3 | 53.4 | 521 | 386 | 370 |
| Barley | 11.6 | 12.0 | 10.0 | 51.0 | 50.8 | 51.7 | 591 | 611 | 518 |
| Wheat | 64.7 | 60.7 | 55.9 | 37.5 | 34.4 | 27.6 | 2,425 | 2,092 | 2,105 |
| Soybeans | 61.6 | 58.3 | 57.6 | 34.1 | 33.3 | 34.1 | 2,099 | 1,940 | 1,960 |
| New York | (thousand) | | | (bu.) | | | (thousand bu.) | | |
| Corn grain | 720 | 650 | 500 | 95 | 99 | 105 | 68,400 | 64,350 | 52,500 |
| Oats | 230 | 190 | 200 | 77 | 68 | 60 | 17,710 | 12,920 | 12,000 |
| Wheat | 145 | 155 | 80 | 58 | 49 | 47 | 8,410 | 7,595 | 3,760 |
| | | | | (tons) | | | (thousand tons) | | |
| Corn silage | 640 | 540 | NA | 14.0 | 14.0 | NA | 8,960 | 7,830 | NA |
| All hay | 2,230 | 2,200 | 2,230 | 2.36 | 2.40 | 2.39 | 5,269 | 5,280 | 5,334 |
| Alfalfa b/ | 930 | 880 | 930 | 2.80 | 2.85 | 2.80 | 2,604 | 2,508 | 2,604 |

Source: USDA Crop Production and New York Crop Reporting Service.

a/ All 1987 data are preliminary and subject to revision. Estimates for the United States are as of November 1, 1987. New York estimates are as of October 1987 except for corn which is November 1987.
b/ Includes alfalfa mixtures.

Grain production in the United States in 1987 is below year earlier levels largely due to government acreage reduction programs. Corn for grain production of 7.2 billion bushels is 13 percent below the 1986 crop and 19 percent below the record 1985 level but still the fifth largest crop ever produced. Sorghum production is 21 percent below the 1986 crop.

Oat production is down 4 percent from 1986 levels. Barley production is down 15 percent from last year. Total feed grain production is down 14 percent from 1986.

The soybean crop is up 1 percent from 1986. Wheat production of 2.1 billion bushels is up 1 percent from 1986 but below the crops of the early 1980's.

The New York corn for grain crop is forecast at 52 million bushels, down 18 percent from 1986. New York corn yield per acre is expected to exceed 100 bushels per acre for the first time. Wheat production is down 50 percent. Oat production is estimated to be down 7 percent from 1986. Hay production is up slightly from the 1986 level.

CORN AND FEED GRAIN BALANCE SHEETS

| Item | 1984/85 | 1985/86 | 1986/87 (Prelim.) | 1987/88 (Proj.) |
|---|---|---|---|---|
| Supply | ---------- CORN (million bushels) ---------- | | | |
| Beginning Stocks (Sept. 1) | 1,006 | 1,648 | 4,040 | 4,882 |
| Production | 7,674 | 8,877 | 8,253 | 7,166 |
| Imports | 4 | 11 | 2 | 2 |
| Total | 8,684 | 10,536 | 12,294 | 12,050 |
| Disappearance | | | | |
| Feed and residual | 4,116 | 4,095 | 4,717 | 4,800 |
| Food, Ind. and Seed | 1,055 | 1,160 | 1,191 | 1,225 |
| Total domestic | 5,170 | 5,255 | 5,908 | 6,025 |
| Exports | 1,865 | 1,241 | 1,504 | 1,700 |
| Total | 7,036 | 6,496 | 7,412 | 7,725 |
| Ending Stocks (Aug. 30) | 1,648 | 4,040 | 4,882 | 4,325 |
| Season average farm price | $2.62 | $2.23 | $1.50 | $1.60-1.90 |
| Supply | -------- FEED GRAINS a/, (million metric tons) ------- | | | |
| Beginning Stocks | 39.6 | 57.5 | 126.3 | 152.3 |
| Production | 236.9 | 274.4 | 252.4 | 217.5 |
| Imports | .8 | 0.9 | 0.7 | 0.7 |
| Total | 277.3 | 332.7 | 379.5 | 370.4 |
| Disappearance | | | | |
| Feed and residual | 131.1 | 134.8 | 145.5 | 147.0 |
| Food, Ind. and Seed | 32.0 | 35.0 | 35.5 | 36.4 |
| Total domestic | 163.2 | 169.8 | 181.0 | 183.4 |
| Exports | 56.6 | 36.6 | 46.3 | 51.6 |
| Total | 219.8 | 205.4 | 227.2 | 235.0 |
| Ending Stocks | 57.5 | 126.3 | 152.3 | 135.4 |

Source: Agricultural Supply and Demand Estimates, USDA.

a/ Marketing year beginning September 1 for corn and sorghum, June 1 for barley and oats.

The fall 1987 corn supply of 12 billion bushels is down 2 percent from 1986 and is the second largest on record. Feed use is projected to rise 2 percent. Exports are projected to increase 13 percent from 1986 levels. Total utilization is expected to be 4 percent above the 1986/87 level. Projected carryover in the fall of 1988 of 4.3 billion bushels is 11 percent below the 1987 level but, if achieved, would be the second largest carryover ever. Feed use and exports in the 1986/87 marketing year each were above projections made in the fall of 1986, leading to a carryover in the fall of 1987 of 4.9 billion bushels compared to the fall 1986 projection of 5.6 billion bushels.

Feedgrain supplies are dominated by corn, so changes in supply and demand are similar. The total supply of feedgrains is 2 percent below last year. Domestic feed use in the 1987-88 marketing year is projected to increase slightly. Exports are projected to increase 11 percent. Carryover stocks at the end of the 1987-88 marketing year are projected to be 135 million metric tons, 11 percent below the 1986 level, but the second largest on record.

WHEAT AND SOYBEAN BALANCE SHEETS

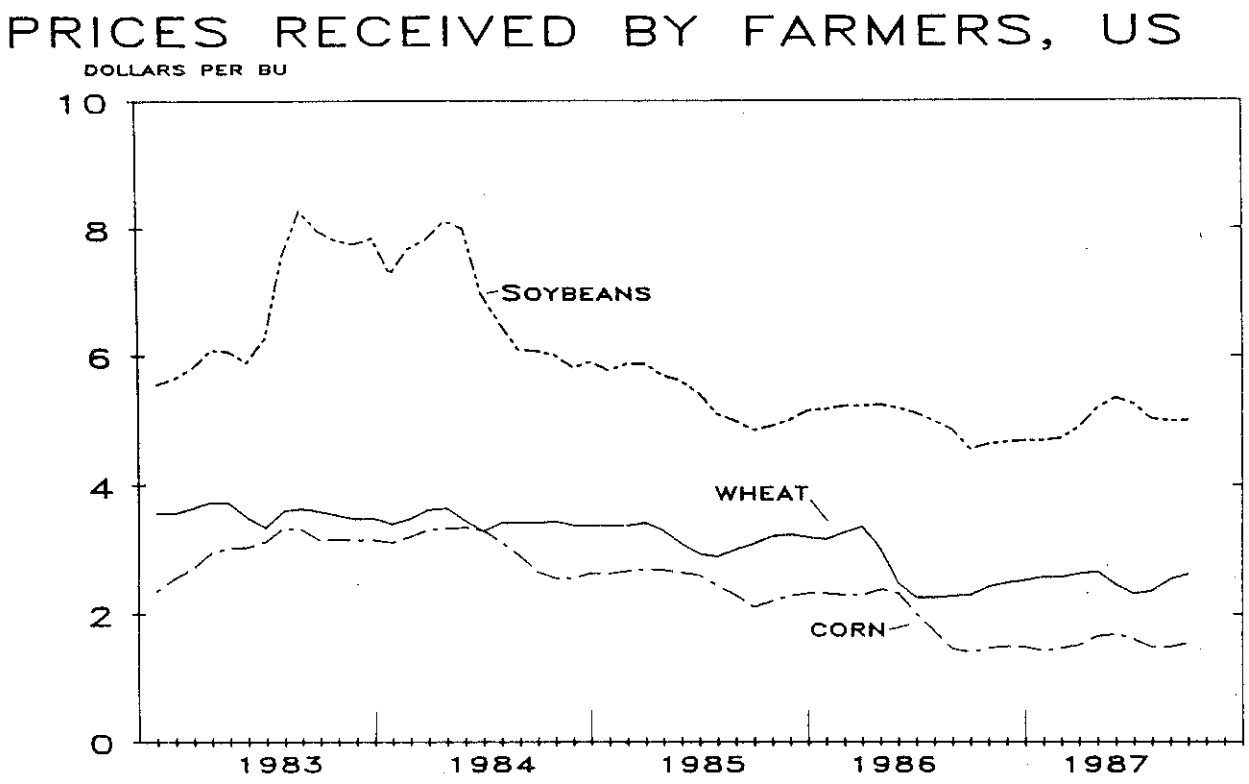
| Item | 1984/85 | 1985/86 | 1986/87 (Prelim.) | 1987/88 (Proj.) |
|---|---|---|---|---|
| Supply | --------- WHEAT (million bushels) ---------- | | | |
| Beginning Stocks (June 1) | 1,399 | 1,425 | 1,905 | 1,821 |
| Production | 2,595 | 2,425 | 2,092 | 2,105 |
| Imports | 9 | 16 | 21 | 15 |
| Total | 4,003 | 3,866 | 4,018 | 3,941 |
| Disappearance | | | | |
| Food | 651 | 683 | 724 | 750 |
| Seed | 98 | 93 | 84 | 80 |
| Feed | 405 | 270 | 385 | 375 |
| Total domestic | 1,154 | 1,046 | 1,193 | 1,205 |
| Exports | 1,424 | 915 | 1,004 | 1,350 |
| Total | 2,578 | 1,961 | 2,197 | 2,555 |
| Ending Stocks (May 31) | 1,425 | 1,905 | 1,821 | 1,386 |
| Season average farm price | $3.38 | $3.08 | $2.42 | $2.40-2.60 |
| Supply | --------- SOYBEANS (million bushels) --------- | | | |
| Beginning Stocks (Sept. 1) | 176 | 316 | 536 | 436 |
| Production | 1,861 | 2,099 | 1,940 | 1,960 |
| Total | 2,037 | 2,415 | 2,476 | 2,396 |
| Disappearance | | | | |
| Crushings | 1,030 | 1,053 | 1,179 | 1,200 |
| Exports | 598 | 741 | 757 | 725 |
| Seed, Feed | 61 | 60 | 57 | 57 |
| Residual | 32 | 25 | 47 | 39 |
| Total | 1,721 | 1,879 | 2,040 | 2,021 |
| Ending Stocks (Aug. 30) | 316 | 536 | 436 | 375 |
| Season average farm price | $5.78 | $5.05 | $4.80 | $4.85-5.35 |

Source: Agricultural Supply and Demand Estimates, USDA.

The 1987 United States wheat supply of nearly four billion bushels is two percent below the 1986 level but not greatly different from the levels of the early and mid 1980's. Domestic food use is projected to increase slightly and feed use to decrease slightly. Exports are projected to increase 34 percent. Carryover on May 31, 1988 is projected to be 1.4 billion bushels, down 24 percent from the 1987 level.

Total soybean supply is 2.4 billion bushels, down 3 percent from 1986 but the 4th largest supply on record. Crushings are projected to be up 2 percent and exports to decrease 4 percent from year earlier levels. Carryover in the fall of 1988 is projected to be about 375 million bushels, 14 percent below 1987 carryover and 30 percent below the record level set in 1986.

PRICES RECEIVED FOR CORN, WHEAT AND SOYBEANS




Source: USDA Agricultural Prices

Soybean prices increased from late 1986 until mid-1987 and then declined. The October 1987 average price received by U.S. farmers was $5.00, $.45 per bushel above the level of October 1986.

Wheat prices declined sharply in the second quarter of 1987, but strengthened in the third quarter. The October 1987 price received by U.S. farmers was $2.62 or $.32 above the year earlier price. The N.Y. price of $2.71 was $.45 above the October 1986 level.

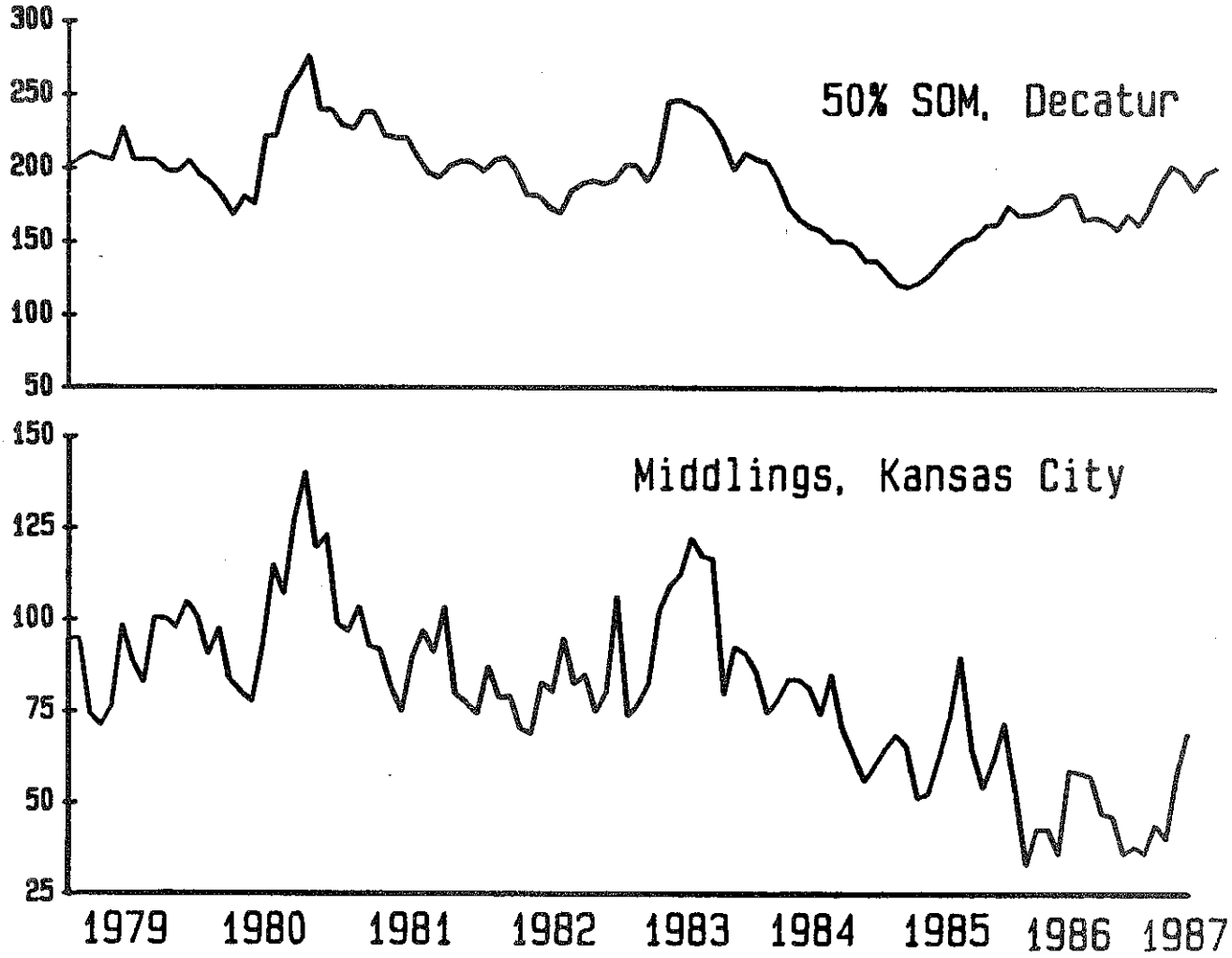
Corn prices increased during the early months of 1987 but then declined. The U.S. average price received by farmers in October 1987 was $1.55, $.15 above the year earlier level. The N.Y. price in October was $1.90 per bushel, $.15 above the level of a year earlier.

The mid-November USDA projection of the season average price received by U.S. farmers for the 1987 corn crop was $1.60 to $1.90 per bushel. The mid-point is $.25 above the season average price for the 1986 crop.

USDA's projection for the season average price of 1987 crop soybeans is $4.85 to $5.35, with a mid-point $.30 above the average price for the 1986 crop.

The projected season average 1987 crop price for U.S. wheat is $2.40 to $2.60. The mid-point is $.08 above the average price received by farmers for the 1986 crop.

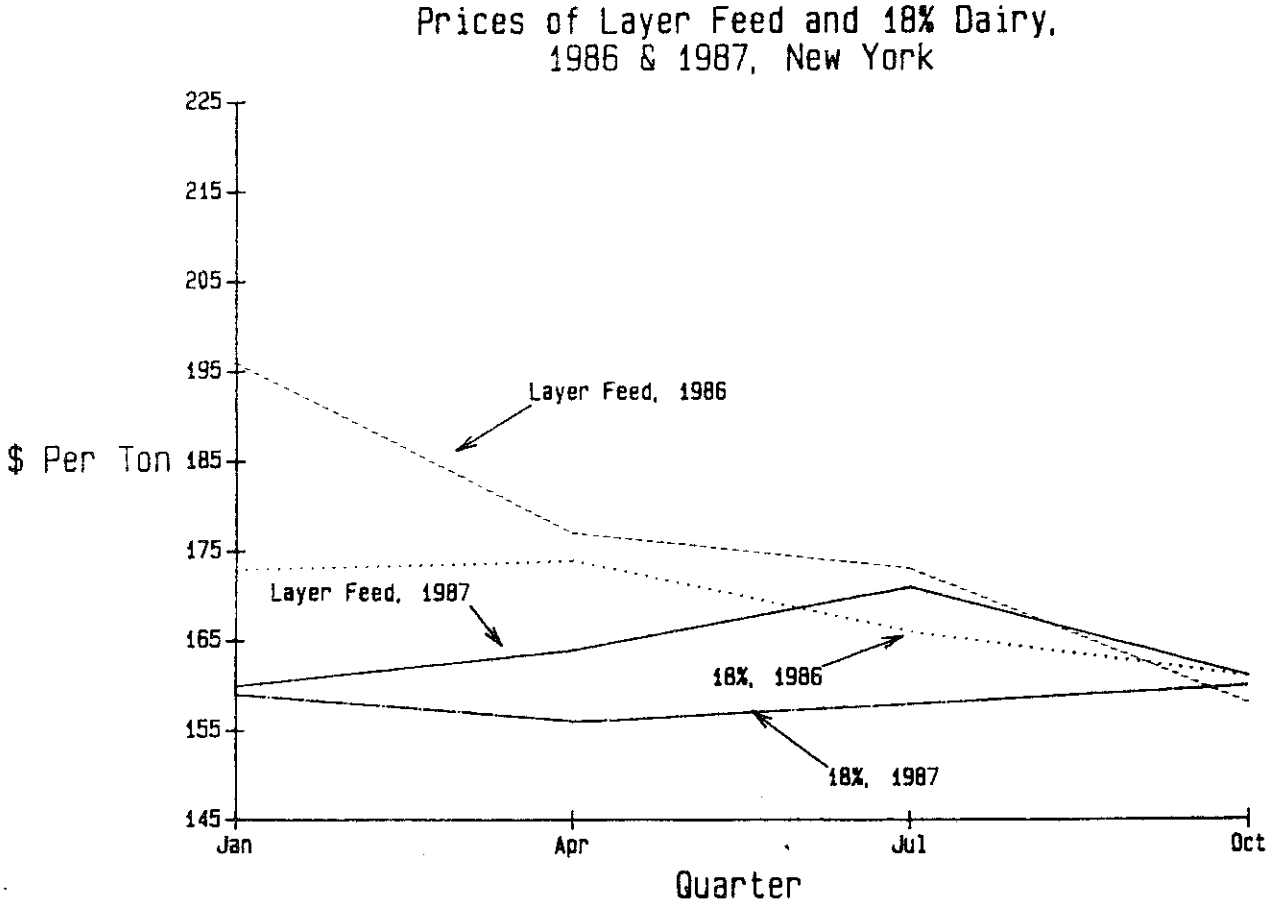
## MONTHLY PRICES OF SOYBEAN MEAL AND MIDDLINGS 1979 TO DATE




Source: USDA Feed Situation and Feedstuffs

Prices of soybean oil meal (50%, Decatur), increased rather steadily from $158 in January 1987 to $202 in June 1987 and then declined to $185 in August. Fall 1987 prices were $35 above year earlier levels. Large supplies of soybeans in the fall of 1987 make large seasonal increases in soybean oil meal prices unlikely. However, average prices paid by farmers in the first half of 1988 are likely to be higher than in the first half of 1987.

Prices of byproducts such as middlings generally declined from late 1986 to mid 1987, but increased substantially in the fall of 1987. Byproduct prices continue to fluctuate widely and are not closely related to the prices of the grains from which they are derived.




Source: USDA Agricultural Prices and New York Crop Reporting Service

Prices for 18% dairy feed increased from $156 in April to $160 in October 1987. Layer feed prices increased from January to July and then declined to $161 in October. In October 1987, 18% dairy was nearly the same price as a year earlier. Layer feed was $3 per ton above the level of a year earlier.

With large supplies of grains and soybeans, large seasonal increases in feed prices are not likely. Prices in the first half of 1988 are likely to average slightly above the levels of the first half of 1987.

| | 1987 | | | 1988 | | |
|---|---|---|---|---|---|---|
| Month | 18% Dairy | 44% SOM | Layer feed | 18% Dairy | 44% SOM | Layer feed |
| Jan | 159 | 234 | 160 | ____ | ____ | ____ |
| Apr | 156 | 230 | 164 | ____ | ____ | ____ |
| July | 158 | 250 | 171 | ____ | ____ | ____ |
| Oct | 160 | 246 | 161 | ____ | ____ | ____ |

Only quarterly data are available after February 1986, and those data are for New York and New England combined.

# 1988 OUTLOOK FOR BEEF CATTLE AND HOGS

## Total Meat Production

This past year (1987) has been a very profitable year for most segments of the meat production industry. This has occurred in spite of record large meat supplies, primarily to large reductions in feed costs; roughage and feed grain costs reached historic lows. Average per capita supplies of red meat and poultry will exceed 216 lb. retail weight, and is expected to increase to 220 lb. in 1988. In 1987, poultry supplies averaged 8% higher than in 1986, and are expected to increase 5% in 1988 even though profits have dropped. The 1987 increase in poultry production of 1.8 billion pounds more than offset a drop in red meat production. Cold storage supplies for turkey have become burdensome, which could influence red meat and poultry prices during December and January.

Beef and pork traditionally compete for the dollars spent for red meat. Fueled by record hog/corn ratios pork production is expected to be up 9 to 10% for the first half of the coming year, which will offset the projected 3% decrease in beef output. The net will be a 2% increase in total red meat production for 1988.

It appears that prices for any of the sectors of the red meat and poultry industries are becoming interrelated. A wider range of products targeted at different consumers (low to high priced products designed for different income groups, including convenience, pre-cooked and portion controlled) are becoming available in all sectors (poultry, pork, beef). If prices get out of line in any of the categories, shoppers simply move down the meat case in search of better buys in other meats for the type of product they are looking for. Each can no longer look just at consumption patterns; that only reflects the supply because we consume all that is produced. Each must look at the price at which a particular volume will be purchased, and at the combination of price and volume that will be profitable. As a result, it appears that competition between beef, pork and poultry industries will become increasingly intense.

The implications for New York red meat producers are that they must be cost competitive while developing marketing systems that will result in obtaining national prices. It would appear that we should have some locational marketing advantages. However, meat can easily be transported from one region to another, especially with the trend toward further processing to case ready products at the packing plant. Thus transportation differences are only 5 to 10 cents per pound of retail product, or about 5% of the retail value. Further, regional packers have more difficulty competing because of smaller, more widely scattered and less predictable numbers of livestock being available making buying and plant operation costs higher. Thus our best opportunities are to utilize available resources to be low cost producers.

## Beef Cattle

Total cattle numbers on January 1, 1988 are expected to be approximately 100 million head - the smallest in 25 years and 32 million less than their peak in 1975. In 12 years, we have reduced our feeder cattle supply 30%, which leaves the industry in the largest liquidation phase in our history. Feeder cattle supplies will be down about 3 million head on January 1, 1988 from one year ago. The result will be excess feedlot capacity, excess slaughter capacity and excess grass capacity; when combined with low corn prices, the effect has been intense competition for feeder cattle. Feeder cattle prices have increased much more rapidly than fed cattle prices, moving to a position of negative margins between feeder and finished prices because of lower cost of gain and efforts to maintain numbers on feed to cover fixed costs. An additional factor has been more profits to reinvest in feeder cattle. Cattle feeders have been bidding steer calves into the 80's and yearling steers into the 70's which gives a breakeven to cover feed costs in the low 60's and to cover all costs in the high 60's. As a result, profits are narrowing for all margin operators (cattle feeders and packers) and are improving for residual operations (cow-calf producers).

All of this has not, however reduced beef supplies and increased beef prices as much as anticipated. Over the past 10 years, dramatic changes in production efficiencies and genetic advances have impacted beef production. Over the past 10 years, average feedlot placement weight has increased 75 pounds per head and carcass weight has increased 70 pounds with 25 fewer days on feed. This has resulted in 1.7 billion more pounds for the same number of head, or 3 million head of the 15 million head decline in feeder cattle numbers. As a result of these effects plus increased cow slaughter, beef supplies have remained large. However, as supplies tighten, more calves are going on feed, resulting in more days on feed and two million fewer marketed in 1988.

Lower costs, larger feed supplies, declining beef supplies, stabilizing demand and higher prices are expected to result eventually in modest expansion. Calf prices this year went above average production costs for the first time since 1980. Positive cash flow will help stabilize the cow-calf industry and will provide an incentive for growth, but is not likely to start until after 1988.

## Implications for New York Producers

1. Cow-calf producers will have the opportunity to sell feeder calves in the 80's and 90's if properly marketed. Our 1987 New York tel-e-market sale of 956 graded, health managed, feeder cattle equaled or exceeded nearly every major U.S. feeder cattle market price. However, those sold in regular auctions averaged 10 to 20 cents per pound under other major feeder cattle sales. We must assemble enough quality cattle to attract commercial cattle feeders and order buyers, and must have an organized approach to marketing to insure a "floor" price at national levels.

2. Finished cattle prices will rise from the mid-$60's/cwt. to $68-72 during the second and third quarters and remain in that range the fourth quarter. Commercial cattle feeders typically will require over $65/cwt. to cover all costs, including yardage and feed markup. Expected cost of gain is in the low 40's, including $20/ton feed markup for the first quarter of 1988. With prices in the $68-72 range, profits of $3-6/cwt. are expected. Cattle feeders must concentrate on being below average in cost of gain, and must be able to determine breakeven production sale prices for various cattle types to identify the best buys. Our budgeting work at Cornell indicates that in the long run our best opportunity to compete is the development of a Holstein steer feeding industry. Regional packers have indicated that they intend to develop that niche, and will make available price risk management programs (forward contracting, guaranteed basis pricing, custom feeding) to cattle feeders to encourage the development of a larger supply of Holstein steers, which they need to offset expected declines in dairy cow numbers.

Hogs

Record high hog/corn ratios enticed producers to expand throughout 1987. However, very low frozen pork stocks and lower beef production helped stabilize pork prices. In 1988, pork production will be at 15.5 billion pounds, up 10% from 1987. However, reduced beef supplies will keep this higher supply from being a negative price factor. Hogs are expected to range between $42-46 for the first and second quarters, decline to the upper $30's/cwt. in the third quarter, then recover to around $40/cwt. in the last quarter of 1988.

# 1988 DAIRY OUTLOOK

## Overview

POSITIVE FACTORS

- Increase in U.S. commercial demand for milk and dairy products
- CCC purchases near 1987 levels
- Government stocks very low
- Continued strong demand for milk in northeast
- Potential for RCMA and other over-order premiums

NEGATIVE FACTORS

- Lower milk prices
- Higher input prices
- Much less favorable milk-feed price ratio
- Tight cash flows during spring 1988

UNCERTAINTIES

- Strength of the economy in 1988
- Changes in federal budget legislation
- Dairy policy debate

NEW YORK DAIRY SITUATION AND OUTLOOK
1985, 1986, Preliminary 1987, and Projected 1988

| Item | Year | | | | Percent Change | |
|---|---|---|---|---|---|---|
| | 1985 | 1986 | 1987 | 1988 | 86-87 | 87-88 |
| Number of milk cows (thousand head | 948 | 947 | 892 | 895 | -5.8 | +0.3 |
| Milk per cow (lbs.) | 12,390 | 12,401 | 12,767 | 12,950 | +3.0 | +1.4 |
| Total milk production (million lbs.) | 11,746 | 11,744 | 11,388 | 11,590 | -3.0 | +1.8 |
| Blended milk price ($/cwt.)[a] | 12.32 | 12.09 | 12.18 | 11.35 | +0.7 | -6.8 |
| Index of prices paid by dairy farmers | 150 | 149 | 149 | 153 | -0- | +2.7 |

[a]New York-New Jersey blend price, 201-210 mile zone, 3.5 percent fat. Effective farm price after milk price assessments for 1985 is $12.19, $11.73 for 1986, $11.99 for 1987, and projected 1988 is $11.33.

Table 1

U.S. Milk Supply and Utilization
1980-1988

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985[a] | 1986[b] | 1987[c] | 1988[d] |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (billion pounds) | | | | |
| Supply | | | | | | | | | |
| Production | 128.5 | 133.0 | 135.5 | 139.7 | 135.4 | 143.1 | 144.1 | 143.2 | 147.0 |
| Farm Use | 2.3 | 2.3 | 2.4 | 2.4 | 2.9 | 2.4 | 2.6 | 2.5 | 2.4 |
| Marketings | 126.2 | 130.7 | 133.1 | 137.3 | 132.5 | 140.7 | 141.5 | 140.7 | 144.6 |
| Beginning Commercial Stocks | 5.4 | 5.8 | 5.4 | 4.6 | 5.2 | 4.9 | 4.6 | 4.2 | 4.1 |
| Imports | 2.1 | 2.3 | 2.5 | 2.6 | 2.7 | 2.8 | 2.7 | 2.8 | 2.8 |
| TOTAL SUPPLY | 133.7 | 138.8 | 141.0 | 144.5 | 140.5 | 148.4 | 148.8 | 147.7 | 151.5 |
| Utilization | | | | | | | | | |
| Commercial Disappearance | 119.2 | 120.5 | 122.1 | 122.5 | 126.9 | 130.6 | 134.0 | 137.8 | 141.2 |
| Ending Commercial Stocks | 5.8 | 5.4 | 4.6 | 5.2 | 4.9 | 4.6 | 4.2 | 4.1 | 4.0 |
| Net Government Removals | 8.8 | 12.9 | 14.3 | 16.8 | 8.6 | 13.2 | 10.6 | 5.8 | 6.3 |
| TOTAL USE | 133.7 | 138.8 | 141.0 | 144.5 | 140.5 | 148.4 | 148.8 | 147.7 | 151.5 |

Source: Dairy Situation and Outlook, Milk Production, and Dairy Market News, U.S. Department of Agriculture.

[a] Revised.
[b] Preliminary.
[c] Based on preliminary USDA data and Cornell estimates.
[d] Estimated assuming support price is $10.60 and there is a 2¢/cwt assessment.

## The U.S. Dairy Situation and Outlook

### Milk Supplies

In part due to the Dairy Termination Program (DTP) and in part due to other economic factors, U.S. milk production declined less than 1% or about 1 billion pounds in 1987 (Table 1). As the DTP continued to phase in during the early part of year, milk production was below 1986 levels. During the last half of the year, the non-DTP period of 1987 showed gains over the DTP period of 1986. Nationally, milk production per cow in 1987 is about 3% or 400 pounds/cow higher than 1986. Cow numbers are down about 3.5% or 400,000 cows. On a state by state basis, many states show lower production in 1987 over 1986 even during the fall. Virtually all states show increases in production per cow, but only four states have significantly more cows; these are California, Texas, Washington, and Wisconsin. On a percentage basis, these states showed increases in October as follows: 1.3%, 2.5%, 6%, and .5%, respectively. The actual increase in cow numbers in each of these states is about the same, around 10,000 in October, for example.

### Milk Utilization

Commercial disappearance (or sales) of dairy products are estimated to be almost 3% above year earlier levels (Table 1). This is the fourth year of record increases in commercial sales. In 1983 commercial disappearance of all milk products stood at 122.5 billion pounds. Since then it has increased about 15 billion pounds, an annual rate of 3.8 billion pounds or about 2.8%. Per capita consumption of almost all dairy products is up, but the major growth category is cheese, particularly Italian cheeses. A generally strong economy, favorable prices, strong markets for cheese in away from home and pre-prepared food markets, and dairy product promotion programs have all contributed to this unprecedented growth record.

### Price Support Program

With production down and consumption up, net removals under the price support program decreased almost by one-half, ending the year at under 6 billion pounds (m.e.), (Table 1). This represents about 4% of the milk produced in the U.S. Because of the timing of the DTP, sales to the CCC were heavier in the fall, compared to last year. Earlier in the year, many analysts projected 1987 net removals would be closer to 5 billion pounds. Although a bit higher than had been hoped for, the final figure is still good. Nevertheless, concern is now focused on what net removals will be next year. Under the Food Security Act of 1985 (the farm bill), the support price for milk must be reduced 50 ¢/cwt if the Secretary of Agriculture estimates that holding the support price at $11.10 will result in net removals (the same variable as shown in Table 1) in excess of 5 billion pounds. Most forecasters are now projecting that net removals will exceed 5 billion pounds even with a 50¢ cut.

### Milk Prices

As shown in Table 2, farm milk prices in 1987 are estimated to be only slightly below last year. If assessments are included, the effective prices in

1987 are actually about 10 ¢/cwt higher. Wholesale prices for cheddar cheese, butter, and nonfat dry milk followed CCC purchase prices, dropping 2 to 4 ¢/lb in 1987. Whereas tight milk supplies held wholesale prices above purchase levels during the last four months of 1986, the nearly reverse situation in 1987 actually has pushed some manufactured product prices below purchase prices this fall. After holding steady last year, retail prices of dairy products are estimated to have increased over 2% in 1987; however all food prices increased 4%, which is more than the increase in the general CPI of 3.6%.

The 1988 Outlook - Policy

As has been so often true in the 1980s, the outlook for next year is muddled by prospects for changing federal policy. Although there are some discussions about changing dairy policy now contained in the Food Security Act, the immediate factor is change caused by new budget legislation aimed at meeting the goals of the so-called Gramm-Rudman-Hollings or budget deficit reduction act (GRH).

Across-the-board GRH expenditure cuts took effect November 21. It is generally expected that these GRH cuts will soon be replaced by a new budget plan. The target date for new budget legislation is December 16, the expiration date of the current "continuing resolution" under which the government has been paying its bills since the fiscal year began on October 1. At the time this is being written, Congress still needs to hammer out some specifics and then pass legislation for the President to sign. Until then, an across-the-board cut of 8.5% is in effect for many federal expenditures. If Congress doesn't pass new budget legislation, this GRH cut would stay in effect until October 1, 1988.

GRH cuts are taken through the unusual procedure of sequestration, which means that federal payments are in part held back. Buyout payments are not affected by GRH, but sales of a dairy product to the CCC are. USDA did not officially change the prices at which it purchases cheese, butter, and nonfat dry milk, but anyone who sells one of these products to the CCC will receive the announced purchase price less 8.5%. For example, the official purchase price for block cheddar is $1.20 per pound. As of November 21, anyone selling block cheddar to the CCC will receive $1.10 per lb. ($1.20 less 8.5%). This means that sales to the CCC will give manufacturers less money to pay dairy farmers. Even though the official support price is still $11.10, the effective level of support is more like $10.10.

It is reported that dairy supports are slated for a 2% cut under the proposed budget plan. This could imply something like a 20-25¢ cut in the support price or a 2¢ assessment; the latter being the most likely. A new assessment would take effect as soon as the President signs the bill. The GRH cut does not change the requirements of the Food Security Act. A new budget bill probably will not either. Thus, it is highly probable that dairy farmers will face 1988 with a 50¢ farm bill price support cut and a 2¢ budget bill assessment.

Other price support policy discussions can be expected in 1988. Senator Leahy, chair of the Senate agriculture committee has introduced legislation called the Dairy Farm Protection Act. The central feature of this plan is to keep the basic price support and purchase operation of the traditional price support program but put it on a regional basis. Six to ten regions would get a share of CCC sales. If a region exceeded its sales quota, farmers in that region

would be required to pay an assessment to cover the cost of the over-quota sales. Another impetus to further policy discussion is likely to be the report to Congress that will be released by the National Dairy Commission in April. Set up under the Food Security Act, the 18 dairy farmers from across the U.S. who comprise the Commission have been holding hearings and examining options throughout 1987. It is not known what the Commission will propose; whatever it is, it will provide further fuel for discussion.

The 1988 Outlook - The Market

The outlook for milk supplies and utilization is made assuming a support price of $10.60 and an assessment of 2 ¢/cwt. The support price would hold for all of 1988. The assessment, it is assumed, would be replaced with a similar assessment when the new fiscal year begins on October 1, 1988.

If production continues to run strong, consumption tapers off, and/or expectations for market improvements are poor, market prices will fall as much as the support price. If production increases are moderate, consumption increases at least one to two percent, and the market outlook is fairly optimistic, then market prices could firm up somewhat above support levels. Our projection is that the price of all milk nationally will average about 80¢ below the 1987 average of about $12.45, putting the 1988 price at around $11.65. Taking into account the assessment in 1987 and the projected 2¢ assessment in 1988, the net effect would be an average net price in 1988 about 60¢ lower than the net price in 1987.

As shown in Table 1, milk production is projected to be about 147 billion pounds (next year being a leap year adds .3% to the projection). This assumes an increase in production per cow of 2.5% to 3% and milk cow numbers holding steady to declining .5%. Higher feed prices, especially protein concentrates, may hold down production per cow increases somewhat, but a milk/feed price ratio of around 1.45 and general good management would still point to improvements in production per cow comparable to the recent trend. Changes in total cow numbers will hinge on the number of dairy farmers going out of business relative to new entrants. With prices expected to decline substantially next year, 1988 may be the year when more farmers decide to quit dairy farming.

The factors that have contributed to exceptional sales growth during the 1980s should continue to push commercial disappearance up in 1988. We are projecting an increase of over 2% (again, next year being a leap year adds .3% to the projection). If there is a dark cloud on the horizon it would be concern about the strength of the general economy, i.e. fears that a recession is possible for 1988 and that it could be fairly severe.

With these projected changes in production and commercial disappearance, net removals of dairy products under the price support program would be over 6 billion pounds, up somewhat from 1987. Depending on factors such as dairy farmer attrition and general economic growth, one could reasonably construct a forecast ranging from 5 to 8 billion pounds.

Table 2

Farm Prices for Milk; CCC Purchase, Wholesale, and Retail Prices for Cheese, Butter, and Nonfat Dry Milk; and Selected Retail Price Indices 1980-1987

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986[a] | 1987[b] |
|---|---|---|---|---|---|---|---|---|
| Farm Milk ($/cwt., ave. fat): | | | | | | | | |
| All Milk | 13.05 | 13.77 | 13.61 | 13.58[c] | 13.46[d] | 12.75[e] | 12.51[f] | 12.45[g] |
| Grade A | 13.23 | 13.95 | 13.80 | 13.75[c] | 13.61[d] | 12.90[e] | 12.62[f] | 12.55[g] |
| Grade B | 12.01 | 12.72 | 12.60 | 12.61[c] | 12.49[d] | 11.72[e] | 11.46[f] | 11.39[g] |
| Milk/16% Feed Ratio | 1.47 | 1.43 | 1.54 | 1.45[c] | 1.41[d] | 1.52[e] | 1.57[f] | 1.58[g] |
| Cheese ($/lb.): | | | | | | | | |
| CCC Purchase, Natural Cheddar, Grade A or higher, blocks[h] | 1.320 | 1.400 | 1.400 | 1.391 | 1.348 | 1.279 | 1.250 | 1.213 |
| Wholesale, Cheddar (40 pound blocks), National Cheese Exchange | 1.293 | 1.358 | 1.358 | 1.352 | 1.341 | 1.248 | 1.260 | 1.213 |
| Retail, Cheddar Cheese | N.A. | N.A. | N.A. | N.A. | 3.065 | 3.093 | 3.049 | 3.059 |
| Butter ($/lb.): | | | | | | | | |
| CCC Purchase, Grade A or higher, Chicago[h] | 1.402 | 1.490 | 1.490 | 1.485 | 1.433 | 1.415 | 1.398 | 1.366 |
| Wholesale, Grade A, Chicago (1 lb.) | 1.393 | 1.480 | 1.477 | 1.473 | 1.488 | 1.411 | 1.445 | 1.422 |
| Retail, Grade AA, sticks (1 lb.) | 1.878 | 1.993 | 2.046 | 2.066 | 2.107 | 2.121 | 2.151 | 2.190 |
| Nonfat Dry Milk ($/lb.): | | | | | | | | |
| CCC Purchase, Spray Process, Extra Grade, Unfortified[h] | .891 | .940 | .940 | .937 | .910 | .843 | .808 | .779 |
| Wholesale (1 lb.) | .887 | .940 | .940 | .932 | .909 | .841 | .806 | .794 |
| Retail Price Indices (1967=100.0): | | | | | | | | |
| Fluid Whole Milk | 208.4 | 220.2 | 221.4 | 222.9 | 224.6 | 228.1 | 226.8 | 231.0 |
| All Dairy Products | 227.4 | 243.6 | 247.0 | 249.9 | 253.2 | 258.0 | 258.4 | 264.7 |
| All Food | 254.6 | 274.6 | 285.7 | 291.7 | 302.9 | 309.8 | 319.7 | 332.9 |
| All Consumer Prices | 246.8 | 272.4 | 289.1 | 298.4 | 311.1 | 322.2 | 328.4 | 340.1 |

Source: Dairy Situation and Outlook, Dairy Market News, and Federal Milk Order Market Summaries, U.S. Department of Agriculture.

[a] Revised.
[b] Estimated.
[c] Excludes assessments averaging 48¢/cwt. for the year.
[d] Excludes 50¢/cwt. assessment.
[e] Excludes assessment averaging 12.5¢/cwt. for the year.
[f] Excludes assessment averaging 36.5¢/cwt. for the year.
[g] Excludes assessment averaging 18.8¢/cwt. for the year.
[h] Simple annual average of announced support price.

Number of Producers Delivering Milk, Simple Average of Months per Year
Northeast Federal and State Marketing Orders
1981-1987

| Markets | 1981 | 1982 | 1983 | 1984 | 1985 | 1986[a] | 1987[b] |
|---|---|---|---|---|---|---|---|
| New York-New Jersey | 17656 | 17485 | 17434 | 17120 | 16521 | 15876 | 14715 |
| New England | 7042 | 6923 | 6812 | 6669 | 6350 | 5891 | 5403 |
| Middle Atlantic | 7327 | 7168 | 7033 | 6891 | 6712 | 6586 | 6380 |
| E. Ohio-W. Pennsylvania | 6199 | 6219 | 6322 | 6235 | 6103 | 5885 | 5600 |
| Western N.Y. Order (Buffalo & Rochester) | 1337 | 1311 | 1286 | 1258 | 1211 | 1161 | 1087 |
| Regional Total | 39561 | 39106 | 38887 | 37922 | 36902 | 35353 | 33185 |

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

[a]Revised.

[b]Estimated.

The number of producers in Northeast Federal and State Order markets declined by 2168, or 6 percent in 1987 following a 4.2 percent decline in 1986.

The Dairy Termination Program was again a major factor in the relatively high attrition rate. However, nonparticipating producers made up an equally large segment of those choosing to discontinue dairying in 1987.

During the two-year period encompassing the Dairy Termination Program, Northeast order producer numbers declined by 3717 or 10 percent. By comparison, during the five-year period from 1980-85 producer numbers declined by only 8 percent or 3036.

The New England and New York-New Jersey orders had the highest dropout rate with 8 and 7 percent respectively, while E. Ohio-W. Pennsylvania and the Middle Atlantic Order had declines of 5 and 3 percent.

There was considerable shifting of producers from the New York-New Jersey to the New England Order as a result of over-order premiums offered by New England handlers.

Northeast producer numbers are expected to decline by an additional 4 to 5 percent in 1988.

Receipts of Milk from Producers by Regulated Handlers, Million Pounds
Northeast Federal and State Marketing Orders
1981-1987

| Markets | 1981 | 1982 | 1983 | 1984 | 1985 | 1986[a] | 1987[b] |
|---|---|---|---|---|---|---|---|
| | | | | (million pounds) | | | |
| New York-New Jersey | 10925 | 11094 | 11643 | 11358 | 11689 | 11729 | 11350 |
| New England | 5093 | 5253 | 5483 | 5252 | 5399 | 5341 | 5165 |
| Middle Atlantic | 5940 | 6043 | 6140 | 5850 | 6239 | 6412 | 6285 |
| E. Ohio-W. Pennsylvania | 3356 | 3486 | 3750 | 3669 | 3866 | 3884 | 3832 |
| Western N.Y. Order (Buffalo & Rochester) | 1081 | 1090 | 1172 | 1158 | 1212 | 1237 | 1200 |
| Regional Total | 26395 | 26966 | 28188 | 27287 | 28406 | 28603 | 27832 |

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

[a]Revised.

[b]Estimated.

Producer receipts of milk in Northeast Order markets declined by 2.7% or 771 million pounds.

The New York-New Jersey, New England and Western New York orders all had declines exceeding 3 percent. The Middle Atlantic Order was down 2 percent and E. Ohio-W. Pennsylvania had slightly more than a 1 percent drop.

Producer receipts were sharply lower during the first half of the year, but moderated during the second half as DTP cattle sales ended.

In 1988, producer receipts are expected to increase by 2 percent in all Northeast markets.

Producer Milk Used in Class I by Regulated Handlers, Million Pounds
Northeast Federal and State Marketing Orders
1981-1987

| Markets | 1981 | 1982 | 1983 | 1984 | 1985 | 1986[a] | 1987[b] |
|---|---|---|---|---|---|---|---|
| | (million pounds) | | | | | | |
| New York-New Jersey | 4561 | 4523 | 4457 | 4534 | 4662 | 4665 | 4608 |
| New England | 2821 | 2762 | 2788 | 2786 | 2793 | 2814 | 2813 |
| Middle Atlantic | 2866 | 2792 | 2884 | 2895 | 2869 | 2986 | 3149 |
| E. Ohio-W. Pennsylvania | 1933 | 1942 | 1954 | 2019 | 2033 | 1985 | 2037 |
| Western N.Y. Order (Buffalo & Rochester) | 459 | 447 | 441 | 437 | 443 | 437 | 441 |
| Regional Total | 12640 | 12466 | 12524 | 12672 | 12800 | 12887 | 13048 |

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

[a]Revised.

[b]Estimated.

Class I fluid milk sales in the Northeast Order markets increased 1.2 percent in 1987. This is the fifth consecutive year that fluid sales have increased following a seven-year decline. Fluid sales in the Middle Atlantic Order were sharply higher, with an increase of 5.5 percent, resulting partially from increased diversions of Class I milk to southern markets. The E. Ohio-W. Pennsylvania and Western New York Orders had more moderate increases of 2.6 and 1 percent, respectively. Fluid sales in New England were unchanged, while the New York-New Jersey Order had the only decline of 1.2 percent.

In 1988 fluid sales for the Northeast markets are expected to increase between 0.5 and 1 percent.

Producer Milk Used in Class I as Percentage of All Producer Milk Received by Regulated Handlers
Northeast Federal and State Marketing Orders
1981-1987

| Markets | 1981 | 1982 | 1983 | 1984 | 1985 | 1986[a] | 1987[b] |
|---|---|---|---|---|---|---|---|
| | | | | (percent) | | | |
| New York-New Jersey | 42 | 41 | 38 | 40 | 40 | 40 | 41 |
| New England | 55 | 53 | 51 | 53 | 52 | 53 | 55 |
| Middle Atlantic | 48 | 46 | 47 | 50 | 46 | 47 | 50 |
| E. Ohio-W. Pennsylvania | 58 | 56 | 52 | 55 | 53 | 51 | 53 |
| Western N.Y. Order (Buffalo & Rochester) | 42 | 41 | 38 | 38 | 37 | 35 | 37 |

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

[a]Revised.

[b]Estimated.

The Class I fluid utilization is affected by the volume of fluid sales and total receipts of milk in a market.

Lower producer receipts caused the percent fluid utilization to increase in all five Northeast Order markets. Fluid utilization was further enhanced by Class I sales increases in all but the New York-New Jersey order.

Higher milk receipts in 1988 are expected to result in a 1 percent decline in the Class I utilization.

Minimum Class I Prices for 3.5% Milk
Northeast Federal and State Marketing Orders
1981-1987

| Markets | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987[a] |
|---|---|---|---|---|---|---|---|
| | | | | ($/cwt) | | | |
| New York-New Jersey[1] | 14.83 | 14.73 | 14.78 | 14.49 | 13.97 | 13.63 | 13.89 |
| New England[2] | 15.00 | 14.76 | 14.82 | 14.52 | 14.00 | 13.62 | 13.86 |
| Middle Atlantic[3] | 15.36 | 15.26 | 15.32 | 15.02 | 14.50 | 14.13 | 14.37 |
| E. Ohio-W. Pennsylvania[3] | 14.53 | 14.43 | 14.49 | 14.19 | 13.67 | 13.20 | 13.34 |
| Western N.Y. Order[3] (Buffalo & Rochester) | 15.29 | 15.19 | 15.25 | 14.95 | 14.43 | 14.09 | 14.35 |

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

[a]Estimated.

[1]201-210 mile zone.

[2]21st zone.

[3]Priced at major city in the marketing area.

Fluid milk prices in the Northeast Orders were up between 1 and 2 percent in 1987 following a 4 percent decline in 1986.

The 1987 Class I prices increased between 24 and 26 cents in four of the five Northeast markets after declining by 36 cents the previous year. The E. Ohio-W. Pennsylvania Order had an increase of 14 cents over the previous year.

Class I prices are expected to decrease from 4 to 6 percent in 1988.

Minimum Class II Prices for 3.5% Milk
Northeast Federal and State Marketing Orders
1981-1987

| Markets | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987[a] |
|---|---|---|---|---|---|---|---|
| | | | | ($/cwt) | | | |
| New York-New Jersey[1] | 12.58 | 12.49 | 12.50 | 12.29 | 11.48 | 11.30 | 11.23 |
| New England[2] | 12.58 | 12.49 | 12.50 | 12.29 | 11.48 | 11.30 | 11.23 |
| Middle Atlantic[3] | 12.60 | 12.51 | 12.52 | 12.31 | 11.50 | 11.32 | 11.26 |
| E. Ohio-W. Pennsylvania[4] | 12.58 | 12.49 | 12.49 | 12.29 | 11.48 | 11.30 | 11.24 |
| Western N.Y. Order[3] (Buffalo & Rochester) | 12.53 | 12.44 | 12.45 | 12.24 | 11.43 | 11.25 | 11.18 |

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

[a]Estimated.

[1]201-210 mile zone.

[2]21st zone.

[3]Priced at major city in the marketing area.

[4]Class III.

Northeast Order Class II manufacturing milk prices declined by less than 1 percent in 1987 following a 2 percent decline the previous year.

Class II prices were from 6 to 7 cents below last year in all markets.

In 1988 Class II prices are expected to decline from 5 to 7 percent in the Northeast Order.

Minimum Blend Prices for 3.5% Milk
Northeast Federal and State Marketing Orders
1981-1987

| Markets | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987[a] |
|---|---|---|---|---|---|---|---|
| | | | | ($/cwt) | | | |
| New York-New Jersey[1] | 13.39 | 13.26 | 13.23 | 13.03 | 12.32 | 12.09 | 12.18 |
| New England[2] | 13.90 | 13.61 | 13.59 | 13.38 | 12.67 | 12.43 | 12.51 |
| Middle Atlantic[3] | 13.95 | 13.80 | 13.85 | 13.67 | 12.90 | 12.66 | 12.82 |
| E. Ohio-W. Pennsylvania[3] | 13.67 | 13.53 | 13.46 | 13.35 | 12.69 | 12.32 | 12.38 |
| N.Y. State Orders[3] (Buffalo & Rochester) | 13.57 | 13.43 | 13.36 | 13.18 | 12.47 | 12.25 | 12.33 |

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

[a]Estimated.

[1]201-210 mile zone.

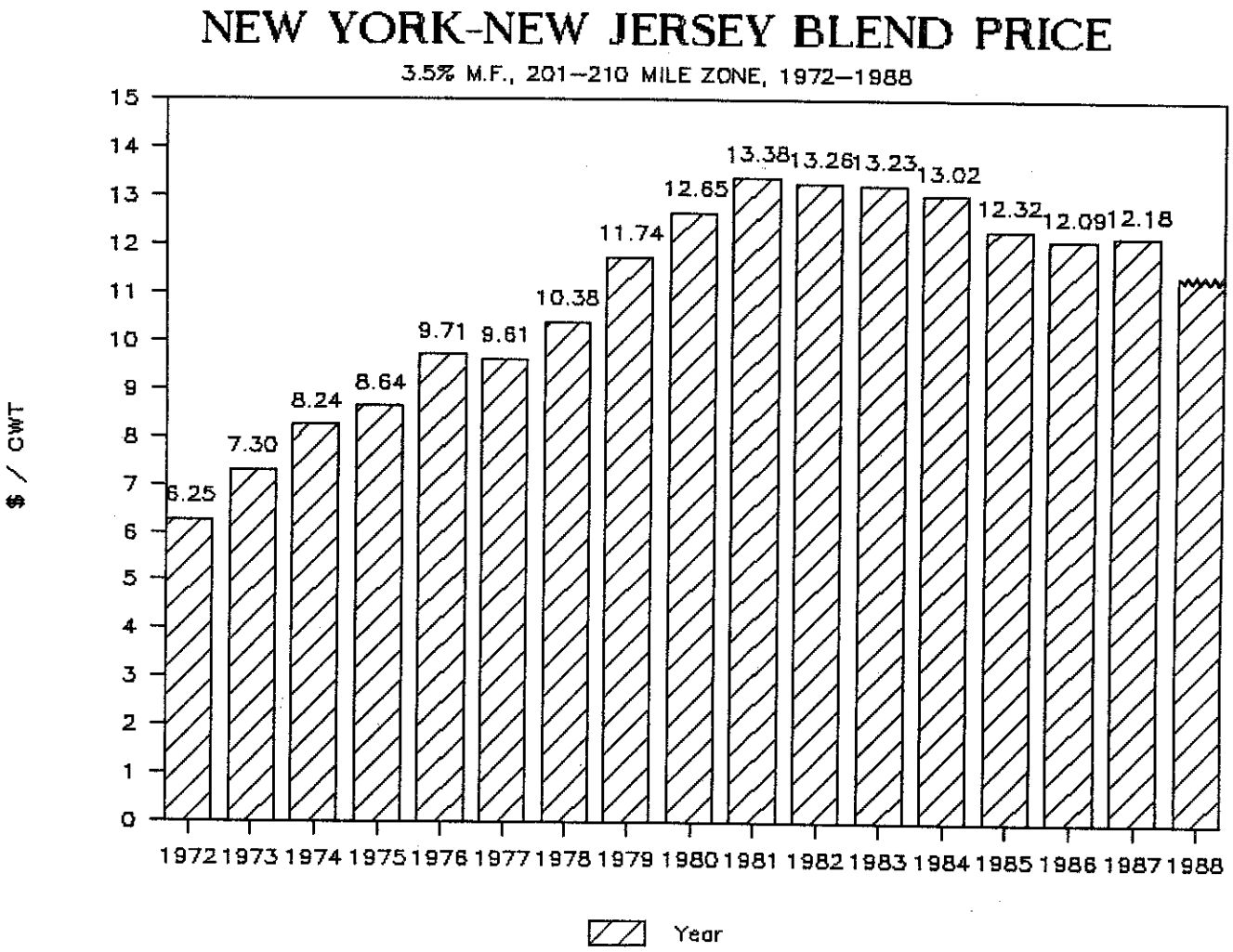
[2]21st zone.

[3]Priced at major city in the marketing area.

The blend price of milk in Northeast orders increased from 0.5 to 1.3 percent in 1987. In four of the five orders blend prices increased by an average of 7 cents or 0.6 percent over 1986.

The Middle Atlantic Order blend price increased 16 cents or 1.3 percent due to their exceptionally strong Class I sales increase for the year.

Assuming a 50-cent cut in the support price on January 1, 1988, blend prices in the Northeast order are expected to decline by 5 to 7 percent or 60 to 80 cents from 1987 levels. During the first half of 1988 blend prices are expected to average 90 cents below year earlier levels in the New York-New Jersey and Western New York orders. A 2-cent assessment is possible in 1988 as a result of proposed budget reduction legislation; this would result in an effective farm price approximately 66 cents below last year's level in the New York-New Jersey Order. RCMA and other over-order premiums could be helpful in partially offsetting the lower blend prices, particularly in the New England and Middle Atlantic markets, during the first and third quarters of 1988.




N.Y.-N.J. Blend Price, 3.5% M.F., 201-210 Mile Zone, 1981-1987

| Month | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|
| January | $13.46 | $13.35 | $13.35 | $12.99 | $13.34 | $11.92 | $12.76 |
| February | 13.46 | 13.30 | 13.35 | 12.79 | 13.13 | 11.84 | 12.42 |
| March | 13.20 | 13.02 | 13.01 | 12.55 | 12.64 | 11.50 | 11.92 |
| April | 13.00 | 12.82 | 12.85 | 12.36 | 12.19 | 11.31 | 11.55 |
| May | 12.83 | 12.61 | 12.64 | 12.26 | 11.78 | 11.25 | 11.30 |
| June | 12.83 | 12.63 | 12.61 | 12.29 | 11.47 | 11.27 | 11.35 |
| July | 13.33 | 13.16 | 13.12 | 12.84 | 11.93 | 11.86 | 11.96 |
| August | 13.68 | 13.59 | 13.59 | 13.39 | 12.27 | 12.46 | 12.44 |
| September | 13.83 | 13.74 | 13.75 | 13.74 | 12.37 | 12.79 | 12.75 |
| October | 13.87 | 13.81 | 13.74 | 13.83 | 12.40 | 13.05 | 12.80 |
| November | 13.74 | 13.71 | 13.63 | 13.91 | 12.30 | 13.05 | 12.69* |
| December | 13.41 | 13.41 | 13.07 | 13.38 | 12.01 | 12.78 | 12.22* |
| Average | 13.38 | 13.26 | 13.23 | 13.03 | 12.32 | 12.09 | 12.18* |

*Estimates

Source: Price Announcements, Office of the Administrator, New York-New Jersey Milk Marketing Area.

MILK PRICE PROJECTIONS
New York-New Jersey Blend Price, 3.5 Percent, 201-210 Mile Zone
Last Quarter 1987 - First Half 1988

| Month | 1986 | 1987 | Difference |
|---|---|---|---|
| | (dollars per hundredweight) | | |
| October | 13.05 | 12.80a | -0.25 |
| November | 13.05 | 12.69p | -0.36 |
| December | 12.78 | 12.22p | -0.56 |
| Annual Average | 12.09 | 12.18p | -0.09 |
| | 1987 | 1988e | |
| January | 12.76 | 11.75 | -1.01 |
| February | 12.42 | 11.52 | -0.90 |
| March | 11.92 | 10.99 | -0.93 |
| April | 11.55 | 10.66 | -0.89 |
| May | 11.30 | 10.45 | -0.85 |
| June | 11.35 | 10.45 | -0.90 |
| Six Month Average | 11.88 | 10.97 | -0.91 |
| Annual Average Blend Price | 12.18 | 11.35 | -0.79 |
| Annual Effective Price | 11.99 | 11.33 | -0.66 |

a=actual; p=projected; e=estimated.

Assumptions Associated With These Projections

Support price drops to $10.60 on January 1, 1988.

National milk production up 2 to 2.5 percent.

Commercial sales up 1 to 2 percent.

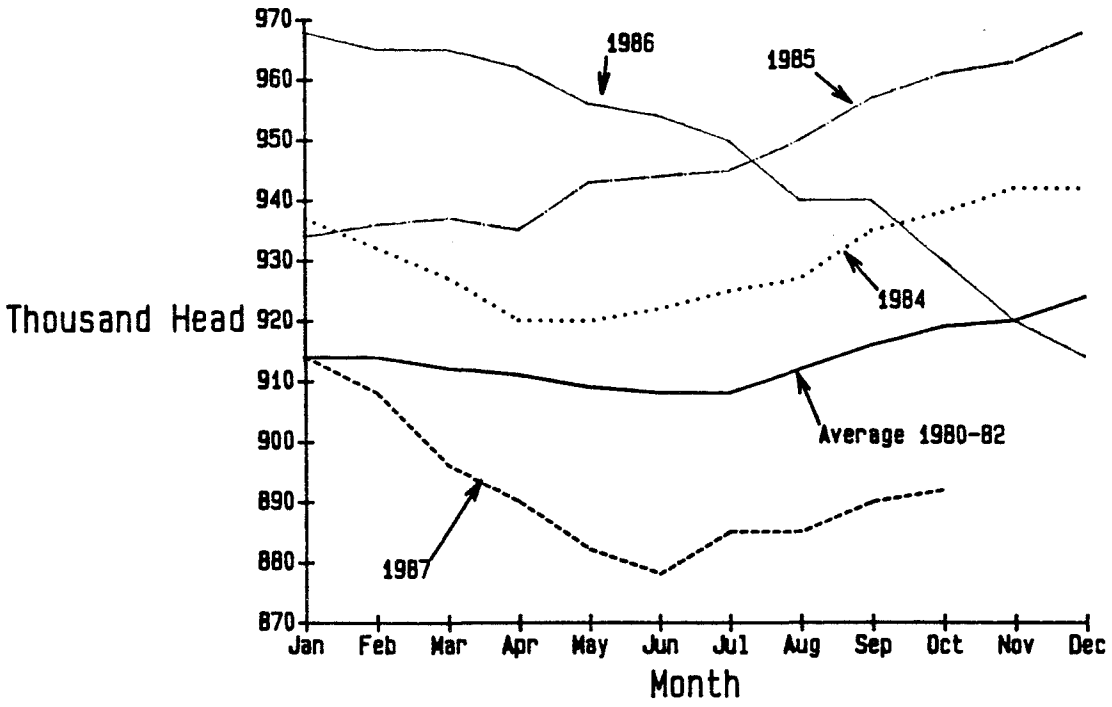
CCC purchases near 6 billion pounds M.E.

Government stocks will remain at relatively low levels.

An additional 20-25¢ reduction in the support price or a 2-cent assessment is likely in 1988 as a result of the proposed budget bill now being considered.

12/7/87 WCW

MILK COWS ON FARMS, NEW YORK, MONTHLY, 1980-82 AVERAGE AND 1984-1987



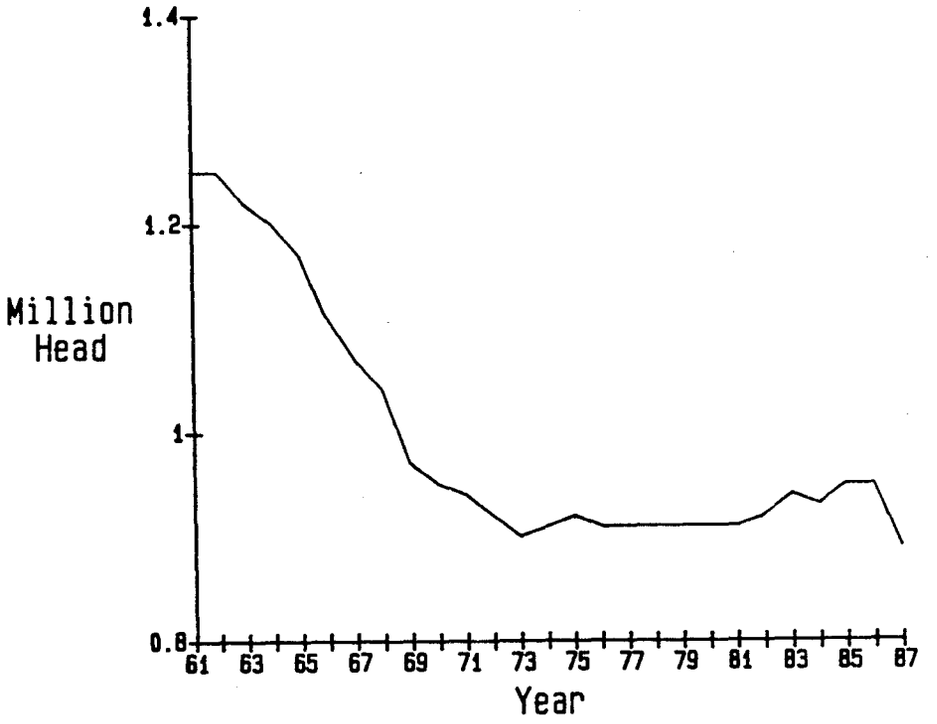

SOURCE: New York Agricultural Statistics.

As seen in the above chart, 1987 monthly cow numbers have been well below 1985 and 1986 levels. The steady decline in monthly cow numbers in New York, which took place beginning in January 1986, continued through June 1987. In June, the number of cows totaled 878,000, which was the lowest number for any month in New York since the state began keeping records. However, beginning in July 1987, cow numbers started to increase. Between July and October, the number of cows in New York increased consistently from 885,000 to 892,000, up 1.6 percent from June. The number of cows in the state are projected to close the year at 899,000.

Most of the decline in cow numbers in 1986 was due to the Dairy Termination Program (DTP). Participants in this program were required to slaughter or export their dairy cattle in one of three assigned six month disposal periods beginning on April 1, 1986 and extending to August 31, 1987. This program was responsible for the liquidation of approximately 34,697 cows, 12,563 heifers, and 10,544 calves in New York. Since the program expired in August, monthly cow numbers have steadily increased from 885,000 in August to 899,000 projected for December. Monthly cow numbers in New York are projected to continue to increase slightly in 1988 compared with 1987 because the DTP has expired.

Heifers as a percent of cow numbers on January 1, 1987 decreased 1.7 percentage points from 1986 to 42.7 percent. This is 2.3 percentage points higher than the average number of heifers as a percent of cow numbers for 1974-1985.

## NUMBER OF MILK COWS, NEW YORK, 1961-87

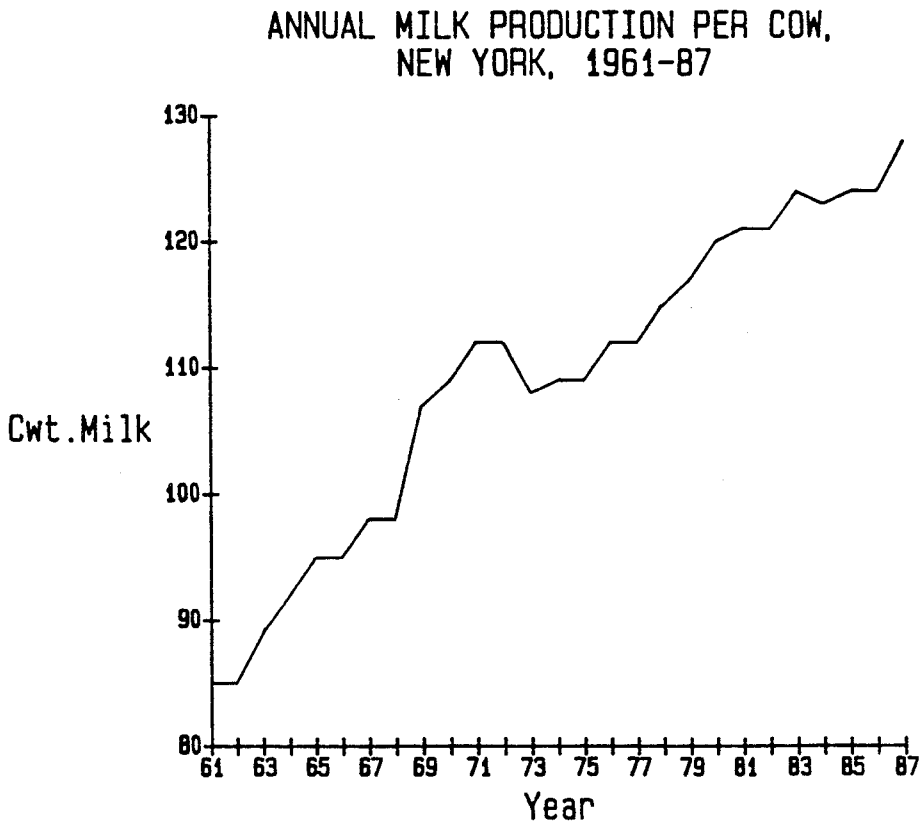



SOURCE: New York Agricultural Statistics.

The average number of milk cows on New York farms for 1987 is estimated at 892,000 head, which is 5.8 percent lower than in 1986. The reduction in the state's herd of 54,000 cows is not solely due to the Dairy Termination Program. The DTP accounted for about 12 percent of the total reduction. The remainder of the decrease is due to herd reductions or liquidation of the herd by dairy farmers not participating in this program. The projected average number of cows for 1988 is 895,000, or up 0.3 percent over 1987. This marginal increase is based on the recent modest expansion in cow numbers beginning in July of 1987.

| Year | Milk Cows 1,000 head | Year | Milk Cows 1,000 head |
|---|---|---|---|
| 1961 | 1,253 | 1975 | 919 |
| 1962 | 1,253 | 1976 | 912 |
| 1963 | 1,217 | 1977 | 914 |
| 1964 | 1,196 | 1978 | 906 |
| 1965 | 1,165 | 1979 | 905 |
| 1966 | 1,109 | 1980 | 911 |
| 1967 | 1,069 | 1981 | 912 |
| 1968 | 1,039 | 1982 | 919 |
| 1969 | 969 | 1983 | 940 |
| 1970 | 950 | 1984 | 931 |
| 1971 | 935 | 1985 | 948 |
| 1972 | 920 | 1986 | 947* |
| 1973 | 903 | 1987 | 892** |
| 1974 | 905 | 1988 | 895*** |

*Revised **Preliminary ***Projected



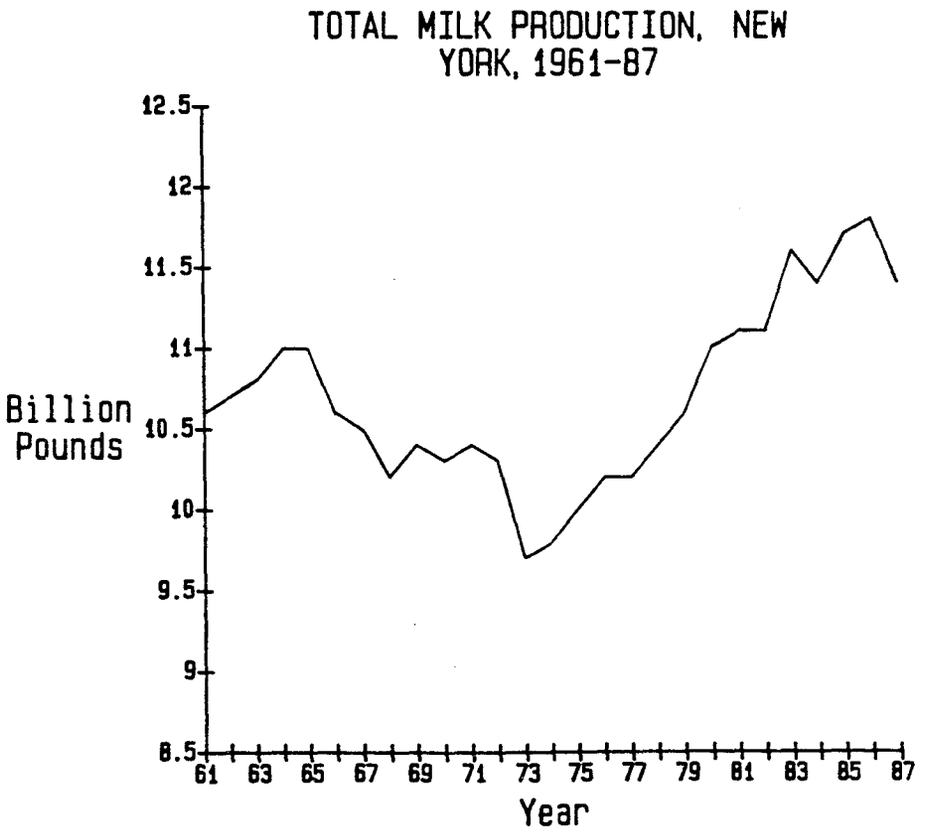

SOURCE: New York Agricultural Statistics.

Pounds of milk produced per cow in 1986 was up by 0.2 percent from 1985. Production per cow in New York will show a larger increase in 1987, primarily due to the favorable milk-feed price ratio. Milk per cow is expected to average 12,767 pounds in 1987, an increase of 3 percent over 1986. Milk production per cow has increased steadily since 1960 with the exception of 1973 and 1974 and small declines in 1982 and 1984.

Milk production per cow is projected to increase in 1988 by 1.4 percent. Based on continued genetic improvements, milk per cow is projected to reach 12,950 pounds in 1988.

| Year | Lbs. of Milk Prod. per Cow | Year | Lbs. of Milk Prod. per Cow | Year | Lbs. of Milk Prod. per Cow |
|---|---|---|---|---|---|
| 1962 | 8,530 | 1971 | 11,156 | 1980 | 12,046 |
| 1963 | 8,880 | 1972 | 11,202 | 1981 | 12,137 |
| 1964 | 9,160 | 1973 | 10,773 | 1982 | 12,075 |
| 1965 | 9,470 | 1974 | 10,853 | 1983 | 12,393 |
| 1966 | 9,540 | 1975 | 10,866 | 1984 | 12,290 |
| 1967 | 9,780 | 1976 | 11,182 | 1985 | 12,374* |
| 1968 | 9,835 | 1977 | 11,186 | 1986 | 12,401* |
| 1969 | 10,682 | 1978 | 11,488 | 1987 | 12,767** |
| 1970 | 10,885 | 1979 | 11,746 | 1988 | 12,950*** |

*Revised **Preliminary ***Projected



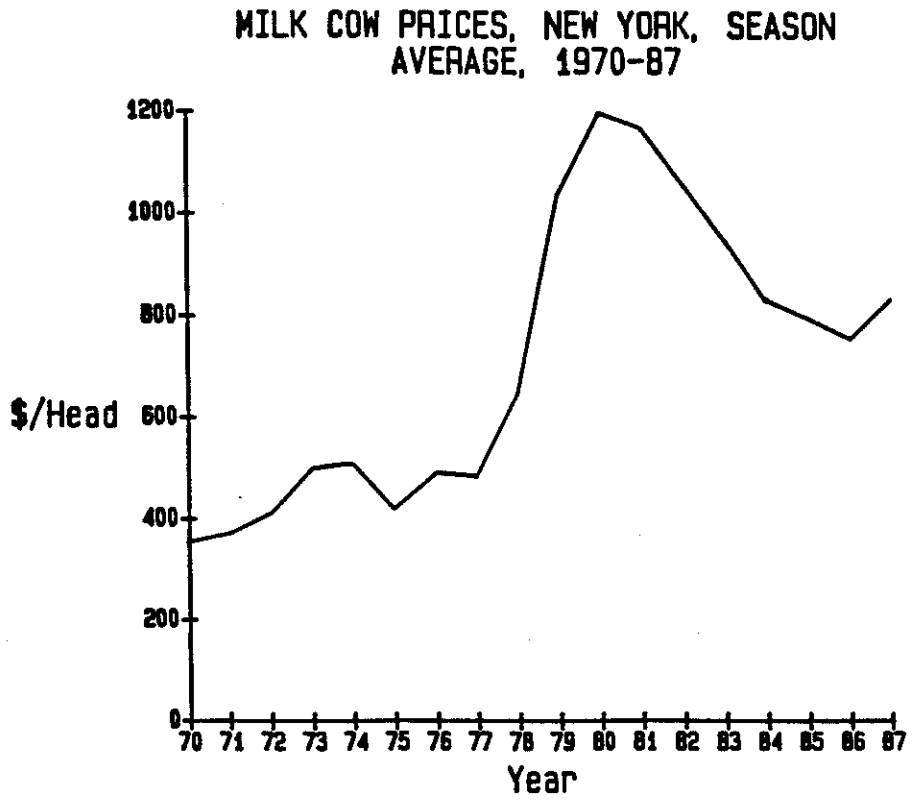

SOURCE: New York Agricultural Statistics.

Total milk production in 1987 is estimated at 11,388 million pounds, down 3 percent over 1986. This decrease is entirely due to the 5.8 percent decrease in cow numbers, since production per cow is up by 3 percent.

Total milk production is projected to increase 1.8 percent in 1988 to 11,590 million pounds. This is a result of the factors discussed on the previous two pages in regard to cow numbers and production per cow.

| Year | Tot. Milk Prod. mil. lbs. | Year | Tot. Milk Prod. mil. lbs. | Year | Tot. Milk Prod. mil. lbs. |
|---|---|---|---|---|---|
| 1962 | 10,688 | 1971 | 10,431 | 1980 | 10,974 |
| 1963 | 10,807 | 1972 | 10,306 | 1981 | 11,069 |
| 1964 | 10,955 | 1973 | 9,728 | 1982 | 11,097 |
| 1965 | 11,033 | 1974 | 9,822 | 1983 | 11,649 |
| 1966 | 10,580 | 1975 | 9,964 | 1984 | 11,442 |
| 1967 | 10,455 | 1976 | 10,198 | 1985 | 11,731 |
| 1968 | 10,219 | 1977 | 10,224 | 1986 | 11,744* |
| 1969 | 10,351 | 1978 | 10,408 | 1987 | 11,388** |
| 1970 | 10,341 | 1979 | 10,630 | 1988 | 11,590*** |

*Revised **Preliminary ***Projected




SOURCE: New York Agricultural Statistics.

Milk cow prices increased in 1987, the first time since 1980. Monthly prices for milk cows have averaged $80 a head higher than a year earlier. Slaughter cow prices are stronger than a year earlier and calf prices were up more than $20 per hundredweight in summer and early fall.

Milk cow prices are likely to be steady to lower in 1988 in response to weakening milk prices. Slaughter cow prices will be stable to lower as larger supplies of competing meats, particularly pork, put pressure on beef prices.

| | Milk Cows, $/Head | | Slaughter Cows, $/Cwt | | Calves, $/Cwt | |
|---|---|---|---|---|---|---|
| Month | 1986 | 1987 | 1986 | 1987 | 1986 | 1987 |
| January | $740 | $790 | $33.30 | $35.40 | $54.80 | $59.10 |
| February | 750 | 790 | 34.20 | 37.80 | 60.10 | 64.80 |
| March | 740 | 810 | 33.60 | 39.60 | 53.70 | 63.10 |
| April | 740 | 830 | 31.90 | 41.10 | 50.50 | 71.30 |
| May | 750 | 840 | 34.70 | 43.60 | 67.80 | 86.00 |
| June | 770 | 850 | 35.50 | 42.40 | 66.90 | 86.50 |
| July | 770 | 860 | 33.70 | 41.60 | 52.80 | 78.40 |
| August | 760 | 860 | 33.10 | 40.90 | 50.50 | 80.50 |
| September | 750 | 860 | 34.10 | 41.00 | 58.70 | 85.90 |
| October | 760 | 870 | 33.40 | 41.40 | 63.60 | 88.00 |
| November | 770 | | 32.70 | | 59.00 | |
| December | 770 | | 33.50 | | 57.70 | |

INDEX OF PRICES PAID BY NEW YORK DAIRY FARMERS
(1977=100)

| Item | Weight | 1982 | 1983 | 1984 | 1985 | 1986 | 1987* | 1988** |
|---|---|---|---|---|---|---|---|---|
| Feed | .31 | 129 | 141 | 141 | 119 | 118 | 112 | 116 |
| Purchased animals | .03 | 217 | 195 | 170 | 163 | 156 | 173 | 170 |
| Fuel & energy | .05 | 209 | 205 | 206 | 204 | 178 | 176 | 185 |
| Fertilizer | .05 | 149 | 139 | 142 | 134 | 127 | 128 | 138 |
| Seed | .02 | 157 | 160 | 169 | 169 | 167 | 166 | 171 |
| Machinery | .18 | 161 | 172 | 181 | 185 | 185 | 189 | 193 |
| Building & fencing supplies | .08 | 135 | 138 | 138 | 136 | 136 | 137 | 138 |
| Farm services & rent | .08 | 143 | 147 | 149 | 152 | 150 | 148 | 151 |
| Agricultural chemicals | .01 | 119 | 125 | 128 | 128 | 127 | 124 | 124 |
| Interest rates | .07 | 161 | 145 | 151 | 146 | 141 | 134 | 136 |
| Farm wage rates | .09 | 141 | 151 | 158 | 169 | 185 | 195 | 203 |
| Property taxes | .03 | 142 | 152 | 161 | 176 | 181 | 190 | 195 |
| Prices Paid, Not Including Assessment | | 148 | 153 | 156 | 150 | 149 | 149 | 153 |
| Prices Paid, Including Assessment | | -- | 159 | 162 | 152 | 154 | 152 | -- |

Source: New York Agricultural Statistics Service
*Preliminary
**Projected

The 1987 index of prices paid by New York dairy farmers not including the assessment remained at the 1986 level of 149. Including the milk price assessment and promotion deduction, the index decreased one percent in 1987. Purchased animals showed the largest increase at 11 percent. Interest rates showed the largest decrease at five percent.

For 1988, the index of prices paid is projected to increase about three percent. Fertilizer, fuel and energy, and farm wage rates are likely to show the largest increase. None of the cost categories are expected to decrease, but agricultural chemicals are likely to be stable in 1988. With no assessment or a very small assessment projected for 1988, the index including the assessment was discontinued.

COST AND RETURN ESTIMATES PER HUNDREDWEIGHT OF MILK
Specialized Dairy Farms by Region, United States, 1986

| Region | Returns/Cwt. Milk | Returns/Cwt. Total | Costs/Cwt. Variable | Costs/Cwt. Total* | Return to Operator's Mgmt. | Return to Labor, Mgmt. & Ownersh.** |
|---|---|---|---|---|---|---|
| 1. Southern Plains (TEXAS) | $13.65 | $14.46 | $8.32 | $11.25 | $3.21 | $4.42 |
| 2. Upper Midwest (MN,WI,MI,SD) | 12.15 | 13.28 | 6.32 | 11.74 | 1.54 | 4.23 |
| 3. Northeast (NY,PA,OH,NEW ENGLAND) | 12.72 | 13.61 | 7.38 | 12.14 | 1.47 | 3.85 |
| 4. Pacific (CA,WA) | 11.83 | 12.53 | 7.61 | 9.43 | 3.10 | 3.81 |
| 5. Appalachia (KY,TN,VA,NC,GA) | 13.21 | 14.01 | 8.57 | 12.74 | 1.27 | 3.51 |
| 6. Corn Belt (IN,IL,IA,MO) | 12.27 | 13.18 | 7.21 | 12.69 | 0.49 | 3.38 |
| National Average | 12.42 | 13.36 | 7.14 | 11.70 | 1.66 | 3.96 |

SOURCE: USDA, ERS, Economic Indicators of the Farm Sector, Costs of Production, 1986.
*Total costs include allocated charges for unpaid labor and equity capital.
**Return to labor, management, and ownership excludes charges for unpaid labor and equity capital from total costs.

The Agriculture and Consumer Protection Act of 1973 directed the Secretary of Agriculture to make annual estimates of the costs of producing a number of major agricultural commodities. One of these is milk. The most recent set of estimates is for 1986 and was issued in 1987 as part of the Economic Indicators of the Farm Sector series by the ERS. Cost estimates were developed by the USDA for six major producing regions in the United States.

Over the past 10 years the differences in prices received for milk at the farm between regions have narrowed substantially. In 1986, the highest prices received nationally were in the South and the lowest in the Pacific region. The spread between regions is now about $1.80 per hundredweight. There are important differences in average production costs between regions. The USDA estimates are based on a consistent methodology and appear reasonable in relation to other data and information from the six designated regions. In 1986, the Southern Plains region showed the highest return to labor, management, and ownership. The Northeast is in third place and ahead of the Pacific region on this measure.

In the Dairy Farm Business Summary Project at Cornell University, the "whole farm data" method is used to compute the cost of producing milk. This method is based on the costs and returns reported by 414 dairy farmers which is quite different from the USDA's use of budget estimates. One could compare cost of production data from these two sources keeping in mind the different methodologies.

AVERAGE COST PER HUNDREDWEIGHT OF PRODUCING MILK*
New York Dairy Farms, 1979 to 1986

| Item | 1979 | 1981 | 1983 | 1984 | 1985** | 1986** |
|---|---|---|---|---|---|---|
| Cash Operating Expenses | | | | | | |
| Hired labor | $ .99 | $ 1.20 | $ 1.25 | $ 1.39 | $ 1.38 | $ 1.38 |
| Purchased feed | 3.37 | 3.62 | 3.59 | 3.46 | 3.10 | 3.21 |
| Replacement livestock | .50 | .23 | .16 | .10 | .10 | .13 |
| Vet & medicine | .22 | .28 | .28 | .29 | .27 | .28 |
| Breeding fees | .15 | .18 | .19 | .20 | .20 | .19 |
| Other dairy expenses | .74 | .89 | 1.47 | 1.58 | 1.33 | 1.37 |
| Machinery repairs & rent | .69 | .81 | .77 | .80 | .79 | .75 |
| Auto expenses (farm share) | .04 | .04 | .04 | .03 | .03 | .04 |
| Fuel, oil & grease | .43 | .62 | .49 | .50 | .48 | .34 |
| Lime & fertilizer | .62 | .72 | .63 | .66 | .62 | .48 |
| Seeds & plants | .20 | .23 | .21 | .22 | .24 | .22 |
| Spray & other crop expense | .16 | .21 | .19 | .20 | .23 | .19 |
| Land, building, fence repair | .21 | .22 | .18 | .18 | .17 | .16 |
| Taxes | .28 | .35 | .34 | .33 | .34 | .33 |
| Insurance | .20 | .23 | .21 | .20 | .22 | .22 |
| Electricity (farm share) | .21 | .27 | .31 | .32 | .32 | .34 |
| Telephone (farm share) | .04 | .05 | .05 | .04 | .05 | .05 |
| Interest paid | 1.00 | 1.43 | 1.40 | 1.40 | 1.25 | 1.18 |
| Miscellaneous | .31 | .41 | .44 | .44 | .40 | .41 |
| Total | $10.36 | $11.99 | $12.20 | $12.34 | $11.52 | $11.27 |
| Operating Expenses | | | | | | |
| Depreciation: mach. & bldgs. | $ 1.06 | $ 1.56 | $ 1.56 | $ 1.65 | $ 1.64 | $ 1.54 |
| Unpaid labor | .13 | .14 | .12 | .12 | .12 | .13 |
| Operator(s) labor | .91 | .99 | .89 | .87 | .97 | .86 |
| Operator(s) management | .68 | .76 | .76 | .76 | .72 | .71 |
| Interest on farm equity cap. | 1.22 | 1.32 | 1.20 | 1.22 | 1.16 | 1.10 |
| Total | $ 4.00 | $ 4.77 | $ 4.53 | $ 4.62 | $ 4.61 | $ 4.34 |
| Gross Farm Operating Cost | $14.36 | $16.76 | $16.73 | $16.96 | $16.13 | $15.61 |
| Less: Non-milk cash receipts | 1.78 | 1.58 | 1.49 | 1.74 | 1.58 | 1.52 |
| Inc. in feed & supplies | .40 | .11 | .26 | .18 | .06 | .07 |
| Inc. in livestock | .38 | .25 | .24 | .16 | .18 | .12 |
| TOTAL COST OF MILK PRODUCTION | $11.80 | $14.82 | $14.74 | $14.88 | $14.31 | $13.90 |
| OPERATING COST OF MILK PROD. | $7.80 | $10.05 | $10.21 | $10.26 | $9.70 | $9.56 |
| AVERAGE FARM PRICE OF MILK | $11.90 | $13.66 | $13.64 | $13.49 | $12.90 | $12.65 |
| Return per cwt. to oper. labor, capital, & management | $2.91 | $1.91 | $1.75 | $1.46 | $1.44 | $1.42 |
| Rate of return on farm eq. cap. | 5.4% | 0.6% | 0.4% | -0.7% | -1.1% | -0.7% |

*Using farm unit (whole farm) method. **Calculated on an accrual basis. Includes cash expenses plus changes in accounts payable and cash receipts plus changes in accounts receivable.
Source: New York Dairy Farm Business Summary data.

These data indicate that total production costs decreased $0.41 per hundredweight in 1986 compared with 1985 while milk receipts decreased $0.25 per hundredweight. The result was a decrease of $0.02 per hundredweight in the return to operator's labor, management, and equity capital. The reduction in milk production costs is due to decreases in crop expenses of $0.20 per hundredweight; fuel, oil, and grease of $0.14 per hundredweight; and an interest paid decrease of $0.07 per hundredweight.

In addition to the cash operating expenses, values are placed on unpaid family labor, the operator's labor, a charge is made for management, and interest on equity capital is computed at a rate of five percent to calculate the total cost of milk production. Together with depreciation these charges amounted to $4.34 per hundredweight in 1986. Adjustments to costs were made to reflect income and expenses for crop and livestock sales and inventory adjustments so that the resulting cost of milk production reflects only fluid milk production costs.

COMPARISON OF FARM BUSINESS SUMMARIES FOR 1984, 1985, AND 1986
Same 229 New York Dairy Farms

| Item | 1984 | 1985 | 1986 |
|---|---|---|---|
| Size of Business | | | |
| Number of cows | 96 | 102 | 106 |
| Number of heifers | 83 | 84 | 86 |
| Number of crop acres | 288 | 299 | 305 |
| Number of workers | 3.20 | 3.29 | 3.32 |
| Number of operators | 1.33 | 1.32 | 1.31 |
| Milk sold (pounds) | 1,526,978 | 1,637,695 | 1,740,826 |
| Rates of Production | | | |
| Milk sold per cow (pounds) | 15,860 | 16,011 | 16,392 |
| Hay DM per acre (tons) | 2.9 | 2.9 | 2.8 |
| Corn silage per acre (tons) | 14.3 | 15.0 | 14.8 |
| Labor Efficiency | | | |
| Cows per worker | 30 | 31 | 32 |
| Milk sold per worker (pounds) | 477,181 | 497,779 | 524,345 |
| Income Analysis & Cost Control | | | |
| Milk sales per cow | $2,140 | $2,075 | $2,082 |
| Dairy cattle sales per cow | $200 | $189 | $159 |
| Government receipts per cow | $28 | $23 | $38 |
| Average gross price per cwt. milk sold | $13.49 | $12.96 | $12.70 |
| Average effective price* | $12.99 | $12.84 | $12.34 |
| Purchased grain & conc. % of milk receipts | 24% | 22% | 24% |
| Feed & crop expenses per cwt. milk | $4.51 | $4.11 | $4.05 |
| Labor & machinery costs per cow | $833 | $801 | $776 |
| Profitability | | | |
| Net farm income (without appreciation) | $23,989 | $29,866 | $27,199 |
| Labor & management income per farm | $-262 | $9,884 | $6,213 |
| Labor & management income per operator | $-197 | $7,488 | $4,743 |
| Rate of return on equity (with appreciation) | 3.1% | 1.1% | 5.0% |
| Financial Situation (end year) | | | |
| Farm assets | $578,485 | $587,957 | $616,743 |
| Farm liabilities | $214,677 | $221,970 | $226,205 |
| Farm net worth | $363,808 | $365,987 | $390,538 |
| Percent equity | 63% | 62% | 63% |
| Debt per cow | $2,168 | $2,094 | $2,056 |
| Debt/asset ratio | 0.37 | 0.38 | 0.37 |

*Average gross price per hundredweight of milk sold minus assessments of $0.50 in 1984, $0.125 in 1985, and $0.36 in 1986.
Source: New York Dairy Farm Business Summary data.

Farms that participated in the Dairy Farm Business Summary Project in each of the last three years have experienced a steady increase in herd size. In 1986, the average number of cows was 106, 10 greater than 1984. Milk per cow has also steadily increased to 16,392 pounds sold per year, an increase of 532 pounds since 1984. In spite of these increases, profits were less in 1986 than 1985, but greater than 1984 for these farms.

Lower milk prices and non-milk receipts more than offset the reduced cost of milk production. Farm liabilities have steadily increased during this period, but not as rapidly as farm assets. Farm net worth for 1986 is up almost $27,000 over 1984, debt per cow is down $100, and the debt/asset ratio is stable.

COMMERCIAL NON-CITRUS FRUIT PRODUCTION, NEW YORK AND UNITED STATES

| Fruit | New York | | | | United States | | | |
|---|---|---|---|---|---|---|---|---|
| | 1984 | 1985 | 1986 | 1987 | 1984 | 1985 | 1986 | 1987 |
| | thousand tons | | | | | | | |
| Apples | 510 | 545 | 450 | 495 | 4,167 | 3,961 | 3,946 | 4,807 |
| Grapes | 198 | 144 | 164 | 174 | 5,194 | 5,607 | 5,226 | 5,096 |
| Tart Cherries | 13 | 11 | 7 | 18 | 136 | 143 | 112 | 177 |
| Pears | 20 | 16 | 19 | 16 | 710 | 747 | 766 | 842 |
| Peaches | 6 | 7 | 7 | 7 | 1,330 | 1,074 | 1,163 | 1,305 |
| Sweet Cherries | 2 | 2 | 2 | 1 | 182 | 133 | 138 | 183 |
| Total New York's Major Fruit Crops | 749 | 725 | 649 | 711 | 11,719 | 11,665 | 11,351 | 12,410 |

AVERAGE FARM PRICES OF NON-CITRUS FRUITS, NEW YORK AND UNITED STATES

| Fruit | New York | | | | United States | | | |
|---|---|---|---|---|---|---|---|---|
| | 1984 | 1985 | 1986 | 1987 | 1984 | 1985 | 1986 | 1987 |
| | dollars per ton | | | | | | | |
| Apples | | | | | | | | |
| Fresh | 402 | 230 | 330 | n.a. | 310 | 346 | 384 | n.a. |
| Processed | 107 | 89 | 118 | n.a. | 111 | 103 | 117 | n.a. |
| All sales | 224 | 140 | 202 | n.a. | 224 | 234 | 272 | n.a. |
| Grapes | 180 | 147 | 198 | n.a. | 190 | 171 | 215 | n.a. |
| Tart Cherries | 444 | 512 | 460 | n.a. | 500 | 448 | 458 | n.a. |
| Pears | 228 | 242 | 210 | n.a. | 229 | 269 | 280 | n.a. |
| Peaches | 548 | 464 | 472 | n.a. | 260 | 300 | 292 | n.a. |
| Sweet Cherries | 567 | 670 | 849 | n.a. | 609 | 799 | 825 | n.a. |

VALUE OF UTILIZED PRODUCTION NON-CITRUS FRUITS, NEW YORK AND UNITED STATES

| Fruit | New York | | | | United States | | | |
|---|---|---|---|---|---|---|---|---|
| | 1984 | 1985 | 1986 | 1987 | 1984 | 1985 | 1986 | 1987 |
| | million dollars | | | | | | | |
| Apples | | | | | | | | |
| Fresh | 80.6 | 43.6 | 59.4 | n.a. | 723 | 731 | 876 | n.a. |
| Processed | 33.4 | 31.1 | 31.9 | n.a. | 203 | 186 | 193 | n.a. |
| All Sales* | 114.0 | 75.1 | 91.3 | n.a. | 928 | 916 | 1,028 | n.a. |
| Grapes | 33.8 | 21.2 | 32.4 | n.a. | 981 | 969 | 1,108 | n.a. |
| Tart Cherries | 5.6 | 5.8 | 2.8 | n.a. | 64 | 63 | 50 | n.a. |
| Pears | 4.6 | 3.9 | 3.8 | n.a. | 160 | 201 | 211 | n.a. |
| Peaches | 3.0 | 3.3 | 3.3 | n.a. | 321 | 307 | 327 | n.a. |
| Sweet Cherries | 1.2 | 1.0 | 1.2 | n.a. | 100 | 101 | 113 | n.a. |
| Total New York's Major Fruit Crops | 162.2 | 110.3 | 134.8 | n.a. | 2,554 | 2,557 | 2,837 | n.a. |

*May not add from total of fresh and processed due to rounding errors.

APPLE PRODUCTION, UNITED STATES, 1982-1986, FIVE-YEAR AVERAGE PRODUCTION, AND 1987 FORECAST, 1,000 42-POUND BUSHELS

| States/Regions | 5-Year Average 1982-86* | 1986* | USDA Estimate** | 1987 Compared to (Percent Change) 5-Year Average |
|---|---|---|---|---|
| Maine | 2,000 | 2,095 | 1,976 | -1.2 |
| New Hampshire | 1,243 | 1,190 | 1,214 | -2.3 |
| Vermont | 1,138 | 1,167 | 1,143 | +0.4 |
| Massachusetts | 2,277 | 2,262 | 2,238 | -1.7 |
| Rhode Island | 122 | 131 | 131 | +7.4 |
| Connecticut | 1,076 | 1,119 | 1,047 | -2.7 |
| New York | 24,953 | 21,429 | 25,000 | +0.2 |
| New Jersey | 2,643 | 2,381 | 2,381 | -9.9 |
| Pennsylvania | 13,357 | 14,762 | 13,691 | +2.5 |
| Delaware | 467 | 643 | 714 | +52.9 |
| Maryland | 1,882 | 2,072 | 1,952 | +3.8 |
| Virginia | 10,834 | 10,952 | 11,667 | +7.7 |
| West Virginia | 5,452 | 5,476 | 5,476 | +0.4 |
| North Carolina | 6,381 | 2,857 | 9,524 | +49.3 |
| South Carolina | 553 | 714 | 1,072 | +93.9 |
| Georgia | 643 | 714 | 1,190 | +85.2 |
| **Total East** | 75,021 | 69,964 | 80,416 | +7.2 |
| Ohio | 2,952 | 2,143 | 3,691 | +25.0 |
| Indiana | 1,472 | 881 | 1,952 | +32.6 |
| Illinois | 2,210 | 2,143 | 2,500 | +13.1 |
| Michigan | 20,476 | 16,667 | 27,381 | +33.7 |
| Wisconsin | 1,367 | 1,333 | 1,357 | -0.7 |
| Minnesota | 495 | 452 | 619 | +25.1 |
| Iowa | 229 | 131 | 238 | +4.0 |
| Missouri | 1,090 | 881 | 1,262 | +15.8 |
| Kansas | 233 | 71 | 286 | +22.8 |
| Kentucky | 310 | 95 | 476 | +53.6 |
| Tennessee | 219 | 214 | 310 | +41.8 |
| Arkansas | 271 | 238 | 286 | +5.5 |
| **Total Central** | 31,324 | 25,249 | 40,358 | +28.9 |
| **Total East & Central** | 106,345 | 95,213 | 120,774 | +13.6 |
| Colorado | 1,515 | 429 | 2,619 | +72.9 |
| New Mexico | 200 | 143 | 238 | +19.4 |
| Utah | 1,181 | 810 | 1,476 | +25.0 |
| Idaho | 2,924 | 2,238 | 3,143 | +7.5 |
| Washington | 65,574 | 73,810 | 80,952 | +23.5 |
| Oregon | 3,334 | 2,500 | 3,810 | +14.3 |
| California | 12,453 | 12,738 | 15,476 | -24.3 |
| **Total West** | 87,181 | 92,668 | 107,714 | +23.6 |
| **TOTAL U.S.** | 193,526 | 187,881 | 228,488 | +18.1 |

*1986 and 5-year average are USDA data revised as of July 8, 1987.
**USDA based on July 1, 1987 crop conditions.

FRESH APPLES: EXPORTS AND IMPORTS, U.S., 1980/81- 1986/87 SEASONS
42 POUND UNITS

| Area of Distribution | 1980/81 | 1981/82 | 1982/83 | 1983/84 | 1984/85 | 1985/86 | 1986/87 |
|---|---|---|---|---|---|---|---|
| | 1,000 42-pound units | | | | | | |
| Canada | 2,072 | 3,463 | 2,240 | 2,040 | 1,620 | 1,323 | 2,208 |
| Europe | 2,036 | 1,888 | 1,291 | 1,377 | 950 | 1,110 | 1,316 |
| Mexico & Central America | 827 | 545 | 235 | 252 | 360 | 331 | 386 |
| Caribbean | 404 | 337 | 370 | 289 | 238 | 175 | 184 |
| South America | 1,552 | 1,687 | 1,727 | 401 | 228 | 238 | 246 |
| Middle East | 2,491 | 1,926 | 2,127 | 2,520 | 2,506 | 716 | 759 |
| Africa | 89 | 48 | 30 | 7 | 3 | 13 | 2 |
| Far East | 6,386 | 4,040 | 6,105 | 4,530 | 4,947 | 3,983 | 3,632 |
| Pacific Area | 174 | 421 | 197 | 255 | 163 | 127 | 100 |
| Other | 2 | 12 | 24 | 389 | 0 | 4 | 0 |
| Total Exports | 16,032 | 14,368 | 14,346 | 11,672 | 11,014 | 8,020 | 8,833 |
| Total Imports | 4,142 | 3,508 | 4,627 | 5,480 | 5,484 | 7,684 | 7,310 |

SOURCE: Foreign Agricultural Service, Horticultural and Tropical Products Division.

Fresh apple exports from the U.S. experienced a dramatic decline during the period 1981-1985. Exports increased from 6.3 million bushels in 1976/77 to 16.0 million bushels in 1980/81. Since then, exports have decreased each year and amounted to only eight million bushels in 1985/86. As the value of the dollar declined, exports increased to 8.8 million bushels last season.

A substantial increase is expected in exports of the 1987 crop. With a very large national crop and a record Washington state crop, supplies will be plentiful and prices lower than in other recent years. Prospects are improved for importing to the Middle East as petroleum exports from that area increase (barring some major political disruption). Prospects are also favorable for increasing exports to the Far East.

Fresh apple imports continue to increase in the U.S. market, and for the 1985 season were almost equal to exports. For the 1986 season, imports were reduced due to a reduction of about one-half million bushels from South Africa (which was prohibited to ship into the U.S. for part of last year); a change in the status of importing French apples which no longer benefitted from a preclearance program (down 450 thousand bushels); and the lower-valued dollar. Fresh apple imports from Southern Hemisphere countries (Chile, Argentina, South Africa, Australia, and New Zealand) account for well over half of U.S. imports. Canada usually accounts for more than one-quarter of imported fresh apples.

APPLE JUICE: IMPORTS INTO THE UNITED STATES, 1977/78 - 1986/87 SEASONS[1]

| Season | Million Gallons[2] | Million 42-Pound Bushel Equivalents[3] | Percent of U.S. Domestic Production of Apple Juice |
|---|---|---|---|
| 1977/78 | 41.6 | 11.6 | 27.8 |
| 1978/79 | 62.8 | 17.5 | 33.0 |
| 1979/80 | 45.9 | 12.8 | 21.6 |
| 1980/81 | 70.3 | 19.7 | 27.9 |
| 1981/82 | 76.4 | 21.3 | 33.2 |
| 1982/83 | 139.8 | 38.9 | 47.5 |
| 1983/84 | 145.2 | 40.4 | 46.1 |
| 1984/85 | 209.2 | 58.3 | 57.4 |
| 1985/86 | 221.8 | 61.8 | 58.4 |
| 1986/87 | 233.3 | 65.0 | 64.0 |

SOURCE: Foreign Agricultural Service, Horticultural and Tropical Products Division and Non-Citrus Fruits and Nuts Annual Summaries, various issues.

[1]Includes pear juice, but volume is believed to be negligible.

[2]Expressed in single-strength (natural juice) equivalents.

[3]Computed on the basis of one gallon single-strength juice = 0.2785 bushels.

Imports of concentrated apple juice have increased each year since 1977/78, and set a new high of 233 million gallons (single-strength) in 1986/87. This amounts to 65 million bushels in fresh apple equivalent, and accounts for nearly two-thirds of U.S. apple juice.

West Germany continues to be a leading supplier with Austria in the second position and Argentina ranking third. West Germany and Austria are also major importers of apple juice from Poland, Yugoslavia, and other Eastern bloc countries. The U.S. is the largest importer of apples and apple products in the world, even though we are among the top three apple producers in the world.

APPLES IN COLD STORAGE BY VARIETY FOR EASTERN AND WESTERN NEW YORK
AS OF OCTOBER 31, 1983, 1984, 1985, 1986, AND 1987

| Variety and Area | Apples in Cold Storage* | | | | |
|---|---|---|---|---|---|
| | 10/31/83 | 10/31/84 | 10/31/85 | 10/31/86 | 10/31/87 |
| | thousand bushels | | | | |
| McIntosh: | | | | | |
| Eastern New York | 2,251 | 2,028 | 2,005 | 1,610 | 1,416 |
| Western New York | 575 | 659 | 717 | 443 | 587 |
| Total | 2,826 | 2,687 | 2,722 | 2,053 | 2,003 |
| Rome: | | | | | |
| Eastern New York | 497 | 491 | 616 | 497 | 480 |
| Western New York | 176 | 271 | 498 | 679 | 517 |
| Total | 673 | 762 | 1,114 | 1,176 | 997 |
| Red Delicious: | | | | | |
| Eastern New York | 1,318 | 1,123 | 1,195 | 827 | 779 |
| Western New York | 637 | 484 | 618 | 400 | 431 |
| Total | 1,955 | 1,607 | 1,813 | 1,227 | 1,210 |
| Golden Delicious: | | | | | |
| Eastern New York | 474 | 224 | 260 | 339 | 316 |
| Western New York | 184 | 180 | 253 | 239 | 247 |
| Total | 658 | 404 | 513 | 578 | 563 |
| R.I. Greening: | | | | | |
| Eastern New York | ** | 20 | 15 | 11 | 3 |
| Western New York | ** | 653 | 681 | 670 | 415 |
| Total | 718 | 673 | 696 | 681 | 418 |
| Cortland: | | | | | |
| Eastern New York | 313 | 273 | 225 | 200 | 160 |
| Western New York | 246 | 250 | 270 | 166 | 303 |
| Total | 559 | 523 | 495 | 366 | 463 |
| Northern Spy: | 270 | 299 | 303 | 219 | 241 |
| Idared: | 537 | 640 | 647 | 916 | 667 |
| All Other Varieties: | 874 | 927 | 1,058 | 1,025 | 1,136 |
| Total All Varieties: | | | | | |
| Eastern New York | 5,299 | 4,653 | 4,699 | 4,019 | 3,774 |
| Western New York | 3,771 | 3,859 | 4,662 | 4,222 | 3,924 |
| Total New York State | 9,070 | 8,522 | 9,361 | 8,241 | 7,698 |

SOURCE: State of New York Department of Agriculture and Markets, Apples in Cold Storage, October reports.

*Includes apples in controlled atmosphere storage.
**Not listed to avoid disclosure of individual operations.

APPLES IN CONTROLLED ATMOSPHERE STORAGE
NEW YORK STATE AS OF OCTOBER 31, 1983, 1984, 1985, 1986, AND 1987

| Variety and Area | 10/31/83 | 10/31/84 | 10/31/85 | 10/31/86 | 10/31/87 |
|---|---|---|---|---|---|
| | thousand bushels | | | | |
| McIntosh: | | | | | |
| Eastern New York | 1,710 | 1,489 | 1,393 | 1,181 | 1,079 |
| Western New York | 184 | 251 | 261 | 194 | 238 |
| Total | 1,894 | 1,740 | 1,654 | 1,375 | 1,317 |
| Rome: | | | | | |
| Eastern New York | 416 | 380 | 449 | 336 | 335 |
| Western New York | 43 | 97 | 84 | 169 | 222 |
| Total | 459 | 477 | 533 | 505 | 557 |
| Red Delicious: | | | | | |
| Eastern New York | 950 | 810 | 864 | 619 | 605 |
| Western New York | 299 | 230 | 342 | 228 | 271 |
| Total | 1,249 | 1,040 | 1,206 | 847 | 876 |
| Golden Delicious: | 161 | 171 | 162 | 107 | 215 |
| Cortland: | 209 | 146 | 137 | 137 | 182 |
| Other Varieties: | 752 | 900 | 828 | 969 | 1,186 |
| Total All Varieties: | | | | | |
| Eastern New York | 3,661 | 3,261 | 3,168 | 2,632 | 2,573 |
| Western New York | 1,063 | 1,213 | 1,352 | 1,308 | 1,760 |
| Total New York State | 4,724 | 4,474 | 4,520 | 3,940 | 4,333 |

(These apples are included in the stocks of apples in cold storage; thus, by deducting the figures in this table from their counterpart in the previous table, the volume of apples in regular storage can be ascertained.)

SOURCE: State of New York Department of Agriculture and Markets, Apples in Cold Storage, October reports.

Apples in cold storage in New York as of the end of October amounted to 7.7 million bushels, seven percent less than a year ago and 15 percent below the five-year average holdings. Controlled atmosphere holdings were 4.3 million, an increase of about 10 percent.

There are smaller than normal supplies of most major varieties in total holdings. The category "other varieties" continues to increase, however, probably due to increased supplies of Empires. This variety accounted for 648,000 bushels in total holdings at the end of October, of which 468,000 bushels were in CA storage. Total CA holdings were three percent below the average of the past five years.

PRICES RECEIVED BY NEW YORK GROWERS FOR FRESH APPLES,
MONTHLY AVERAGE PRICE PER 42-POUND BUSHEL, 1971-1987 CROP YEARS

| Crop Year | Sept | Oct | Nov | Dec | Jan | Feb | March | April | May | June | Season Average |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1971/72 | 2.94 | 2.31 | 2.10 | 2.56 | 2.69 | 2.77 | 2.60 | 2.73 | 2.94 | 2.94 | |
| 1972/73 | 3.65 | 3.15 | 3.82 | 4.12 | 4.20 | 4.41 | 4.62 | 5.04 | 5.67 | 5.46 | |
| 1973/74 | 4.91 | 4.75 | 5.80 | 5.88 | 6.09 | 6.30 | 6.30 | 6.51 | 6.51 | 6.30 | 5.88 |
| 1974/75 | 4.70 | 4.20 | 4.07 | 3.99 | 4.79 | 5.12 | 5.75 | 6.09 | 6.30 | 6.30 | 5.04 |
| 1975/76 | 5.04 | 3.82 | 3.91 | 4.82 | 4.87 | 4.41 | 6.09 | 6.01 | 5.54 | 5.54 | 4.96 |
| 1976/77 | 4.66 | 4.41 | 5.04 | 5.21 | 5.29 | 5.38 | 6.13 | 6.09 | 6.26 | 6.51 | 5.38 |
| 1977/78 | 5.04 | 5.25 | 5.46 | 5.46 | 5.46 | 5.67 | 6.09 | 6.51 | 6.72 | 6.93 | 5.75 |
| 1978/79 | 6.30 | 5.46 | 5.46 | 5.04 | 5.25 | 5.25 | 5.67 | 6.09 | 6.09 | 6.30 | 5.67 |
| 1979/80 | 5.04 | 5.25 | 5.67 | 7.14 | 7.35 | 7.56 | 8.61 | 9.24 | 9.45 | 9.87 | 7.35 |
| 1980/81 | 7.18 | 7.48 | 6.51 | 7.39 | 7.22 | 7.43 | 7.73 | 7.77 | 8.06 | 8.40 | 7.56 |
| 1981/82 | 8.61 | 8.19 | 8.82 | 8.40 | 8.82 | 9.03 | 8.82 | 9.66 | 10.08 | 10.08 | 8.82 |
| 1982/83 | 6.09 | 5.67 | 5.67 | 6.13 | 6.05 | 6.13 | 6.30 | 6.09 | 6.30 | 6.30 | 6.09 |
| 1983/84 | 7.56 | 6.64 | 6.43 | 7.14 | 7.14 | 7.56 | 7.35 | 7.56 | 7.56 | 7.56 | 7.10 |
| 1984/85 | 8.06 | 8.86 | 7.98 | 8.40 | 8.61 | 8.19 | 8.19 | 8.40 | 8.82 | 8.82 | 8.44 |
| 1985/86 | 5.25* | 4.70* | 4.70* | 4.91* | 5.21* | 5.04* | 4.62* | 4.58* | 4.96* | 4.96* | 4.83* |
| 1986/87 | 7.64* | 6.72* | 6.76* | 6.59* | 6.80* | 7.22* | 6.67* | n.a. | n.a. | n.a. | 7.14* |

*Beginning in July of 1985, price is equivalent packing house door rather than price at point of first sale.

SOURCE: New York Crop Reporting Service, New York Agricultural Statistics, 1986.

The season average price for last year's crop of apples sold for fresh market utilization was $7.14 per 42-pound bushel. This price was about 48 percent above the 1985/86 price, as the 1986/87 crop was somewhat short both nationally and in New York.

This year, prices in September and October opened one to two dollars lower.

UTILIZATION OF APPLES, UNITED STATES, 1970-86

| Year | Fresh | Canned | Juice | Frozen | Other* | Total Utilized |
|---|---|---|---|---|---|---|
| | million 42-pound units | | | | | |
| 1970 | 84.1 | 27.6 | 24.6 | 4.8 | 7.9 | 149.0 |
| 1971 | 83.0 | 26.0 | 25.9 | 4.5 | 5.4 | 144.8 |
| 1972 | 79.6 | 23.3 | 24.5 | 5.6 | 6.8 | 139.7 |
| 1973 | 84.3 | 29.9 | 19.6 | 6.2 | 8.9 | 148.8 |
| 1974 | 87.9 | 29.2 | 24.5 | 4.3 | 9.6 | 155.5 |
| 1975 | 103.7 | 24.4 | 28.4 | 4.9 | 7.6 | 169.1 |
| 1976 | 93.2 | 21.9 | 26.4 | 5.2 | 7.2 | 153.9 |
| 1977 | 91.9 | 25.6 | 30.2 | 3.8 | 8.2 | 159.8 |
| 1978 | 100.2 | 29.1 | 35.6 | 4.9 | 9.7 | 179.6 |
| 1979 | 102.5 | 31.8 | 46.5 | 3.3 | 9.2 | 193.3 |
| 1980 | 117.7 | 28.6 | 50.9 | 4.0 | 8.6 | 209.8 |
| 1981 | 106.0 | 23.9 | 42.9 | 4.1 | 6.6 | 183.5 |
| 1982 | 108.0 | 29.7 | 43.0 | 4.5 | 7.8 | 193.1 |
| 1983 | 110.0 | 28.7 | 47.3 | 4.0 | 9.0 | 199.0 |
| 1984 | 111.0 | 28.0 | 44.9 | 4.7 | 9.3 | 198.1 |
| 1985 | 100.6 | 30.4 | 43.8 | 4.2 | 7.8 | 186.5 |
| 1986 | 108.6 | 28.4 | 36.5 | 6.1 | 7.6 | 187.3 |

*Includes dried apples, vinegar, wine, jam, slices for pies, etc.
SOURCE: Noncitrus Fruits and Nuts Annual Summary, various years.

AVERAGE ANNUAL PRICES RECEIVED BY NEW YORK GROWERS FOR APPLES, 1970-86

| Year | Fresh | Canned | Juice | All Uses |
|---|---|---|---|---|
| | $ per bushel | | | |
| 1970 | 2.86 | .98 | .49 | 1.60 |
| 1971 | 2.65 | .97 | .52 | 1.52 |
| 1972 | 4.37 | 1.27 | 1.12 | 2.42 |
| 1973 | 5.88 | 3.13 | 2.02 | 4.07 |
| 1974 | 5.04 | 2.52 | 1.39 | 3.07 |
| 1975 | 4.96 | 1.11 | .76 | 2.86 |
| 1976 | 5.38 | 2.52 | 1.62 | 3.32 |
| 1977 | 5.75 | 2.48 | 1.64 | 3.61 |
| 1978 | 5.67 | 2.33 | 1.82 | 3.57 |
| 1979 | 7.35 | 2.48 | 1.72 | 4.20 |
| 1980 | 7.56 | 1.97 | 1.60 | 3.95 |
| 1981 | 8.82 | 2.90 | 2.31 | 5.38 |
| 1982 | 6.09 | 2.60 | 2.00 | 3.74 |
| 1983 | 7.10 | 2.44 | 1.76 | 4.12 |
| 1984 | 8.44 | 2.77 | 1.76 | 4.70 |
| 1985 | 4.83* | 2.31 | 1.39 | 2.94* |
| 1986 | 6.93 | 2.73 | 2.14 | 4.24 |

*Beginning in 1985, fresh apple price is equivalent to packing house door price rather than price at point of first sale.

SOURCE: New York Agricultural Statistics, various years.

RECEIPTS AND UTILIZATION OF APPLES AT PROCESSING PLANTS, NEW YORK, CROPS OF 1970-1986

| Crop Year | Net Receipts[1] | Receipts from Other States & Canada (included in Preceding Column) | Used for Cider & Apple Juice[2] | Used for Canning or Applesauce | Used for Freezing | Used for Other Products[3] |
|---|---|---|---|---|---|---|
| | thousand pounds | | | | | |
| 1970 | 559,286 | 11,369 | 186,892 | 293,074 | 62,270 | 17,050 |
| 1971 | 520,403 | 13,550 | 170,213 | 278,841 | 57,835 | 13,514 |
| 1972 | 476,826 | 27,973 | 152,279 | 241,404 | 70,995 | 12,148 |
| 1973 | 410,794 | 28,777 | 140,325 | 194,666 | 56,912 | 18,891 |
| 1974 | 555,945 | 13,063 | 161,106 | 292,647 | 40,870 | 61,322 |
| 1975 | 419,453 | 8,619 | 148,866 | 208,630 | 42,013 | 19,944 |
| 1976 | 463,489 | 23,303 | 184,904 | 195,480 | 59,484 | 23,621 |
| 1977 | 492,020 | 26,168 | 190,791 | 218,919 | 34,306 | 48,004 |
| 1978 | 600,595 | 27,579 | 239,447 | 260,497 | 40,689 | 59,962 |
| 1979 | 632,201 | 35,122 | 308,069 | 226,642 | 41,473 | 56,017 |
| 1980 | 667,313 | 44,193 | 349,518 | 229,704 | 39,883 | 48,208 |
| 1981 | 455,408 | 42,929 | 238,100 | 164,700 | 22,557 | 27,819 |
| 1982 | 730,418 | 51,932 | 336,475 | 288,301 | 42,618 | 63,024 |
| 1983 | 618,616 | 38,347 | 342,809 | 212,154 | 26,179 | 37,474 |
| 1984 | 568,736 | 16,529 | 305,187 | 192,616 | 32,634 | 38,224 |
| 1985 | 678,894 | 17,073 | 350,967 | 268,263 | 25,899 | 33,765 |
| 1986 | 535,818[4] | 42,984 | 240,290 | 263,404 | 23,981 | 6,713 |

[1]Apples received at a plant and then transferred to another plant for processing are included only in plant where processed.
[2]Includes juice used to make concentrate.
[3]Among other products for which these apples were used are jelly, apple butter, drying, mincemeat, and fresh sliced apples for pies in upstate areas. Beginning in 1974 apples used in making vinegar are excluded from cider and juice category and included under "other products".
[4]Includes 1,429,810 pounds of cullage, waste, etc.

SOURCE: State of New York Department of Agriculture and Markets, Fruit Reports (most recently, No. 975-4-87).

Processing plants in New York utilized 536 million pounds of apples from the 1986 crop, a 21 percent decrease from 1985 utilization. Apples utilized for juice accounted for 240 million pounds or 45 percent of the total apples processed in 1986. The percentage utilized for juice was down because of the short crop in New York as supplies were diverted to higher-priced uses. Sixty percent of the New York crop in 1986 was utilized for processing.

GRAPES: NEW YORK GROWN, RECEIVED BY WINERIES AND PROCESSING PLANTS, 1981-86

| Variety | 1982 | 1983 | 1984 | 1985 | 1986 |
|---|---|---|---|---|---|
| | | | tons | | |
| Concord | 105,840 | 128,390 | 128,746 | 105,088 | 107,326 |
| Catawba | 13,786 | 14,286 | 10,901 | 7,745 | 12,262 |
| Niagara | 9,372 | 9,874 | 9,990 | 5,614 | 9,663 |
| Delaware | 4,031 | 7,412 | 7,170 | 2,655 | 5,562 |
| Aurore | 5,718 | 8,901 | 10,652 | 5,978 | 7,794 |
| de Chaunac | 3,198 | 3,611 | 2,478 | 2,839 | 2,911 |
| Baco Noir | 1,601 | 1,775 | 1,692 | 1,084 | 1,419 |
| Seyval Blanc | 746 | 1,086 | 1,031 | 1,226 | 1,514 |
| Rougeon | 424 | 795 | 810 | 559 | 692 |
| Marechal Foch | 395 | 445 | 315 | 216 | 279 |
| Vitis Vinifera (all) | 463 | 729 | 1,412 | 1,364 | 1,960 |
| Total of all varieties | 154,000 | 186,500 | 184,000 | 140,000 | 159,600 |

SOURCE: Fruit, New York Crop Reporting Service, 1-83, 2-84, 1-85, 1-86, and 975-1-87 and New York Agricultural Statistics, 1986.

GRAPES: PRICES PAID FOR NEW YORK GROWN GRAPES PROCESSED, 1981-85

| Variety | 1982 | 1983 | 1984 | 1985 | 1986 |
|---|---|---|---|---|---|
| American Varieties | | | | | |
| Catawba | 332 | 271 | 244 | 161* | 205* |
| Concord | 175 | 143 | 125 | 120* | 170* |
| Delaware | 429 | 316 | 311 | 152 | 225 |
| Dutchess | 493 | 409 | 445 | 138 | 259 |
| Elvira | 232 | 211 | 207 | 203 | 210 |
| Ives | 420 | 299 | 301 | 132 | 410 |
| Niagara | 313 | 216 | 182 | 173* | 187* |
| French Hybrids | | | | | |
| Aurore | 425 | 357 | 347 | 195 | 236 |
| Baco Noir | 410 | 362 | 377 | 217 | 289 |
| de Chaunac | 255 | 205 | 199 | 162 | 167 |
| Marechal Foch | 389 | 291 | 257 | 157 | 266 |
| Rougeon | 316 | 226 | 218 | 156 | 245 |
| Seyval Blanc | 547 | 423 | 381 | 251 | 283 |
| Vitis Vinifera | | | | | |
| All varieties | 1,1,235 | 821 | 871 | 856 | 925 |
| Average all varieties | 217 | 187 | 174 | 139* | 194 |

*Preliminary estimates of future payments by cooperatives have been included based upon historical data.

SOURCE: Fruit, New York Crop Reporting Service, No. 1-85, 1-86, and 975-1-87.

Concords are by far the predominant variety grown and processed in New York. There were 107,326 tons of Concords from New York processed in 1986. Over the past five years, Concords have comprised 70 percent of total tonnage utilized. The second leading variety is Catawba (11.3 thousand tons) and Niagara (8.6 thousand tons).

In general, the prices for red varieties (e.g., Concord, de Chaunac) trended downward during the late 1970's and early 1980's while white varieties (e.g., Niagara, Aurore, Seyval Blanc) trended upward. For 1983 and 1984, however, with large crops and large inventories held by wineries and processors, prices were down for most white as well as red varieties. Average prices in 1985 were lower for every variety. In 1986, prices improved for every variety except for some vinifera varieties, and the average price was $194 per ton, a 40 percent increase over the depressed 1985 prices.

In 1987, prices again were generally improved led by the Concord variety with cash prices of $200 per ton. Prices in the juice sector were particularly strong, making a remarkable recovery from 1984 and 1985 levels.

UNITED STATES GRAPE PRODUCTION, BY STATES, 1982-86 AND 1987 (ESTIMATED)

| State | 1982 | 1983 | 1984 | 1985 | 1986 | Average 1982-86 | 1987 (estimated) |
|---|---|---|---|---|---|---|---|
| | thousand tons | | | | | | |
| Arizona | 15.1 | 14.6 | 14.0 | 18.5 | 23.0 | 17.0 | 21.0 |
| Arkansas | 10.5 | 10.0 | 9.0 | 8.0 | 6.0 | 8.7 | 5.0 |
| California | 6076 | 4919 | 4670 | 5252 | 5140 | 5211.4 | 4530 |
| Georgia | 2.8 | 2.5 | 2.7 | 2.1 | 2.0 | 2.4 | N.A. |
| Michigan | 58.5 | 60.0 | 49.0 | 51.0 | 32.0 | 50.1 | 55.0 |
| Missouri | 3.4 | 3.6 | 3.1 | 0.9 | 2.9 | 2.8 | N.A. |
| New York | 157 | 191 | 198 | 144 | 164 | 170.8 | 169.0 |
| N. Carolina | 4.5 | 3.0 | 5.9 | 1.5 | 1.5 | 3.3 | N.A. |
| Ohio | 9.0 | 11.0 | 11.2 | 7.0 | 8.0 | 9.2 | 9.5 |
| Pennsylvania | 47.0 | 62.5 | 60.0 | 50.0 | 60.0 | 55.9 | 60.0 |
| S. Carolina | 2.4 | 1.5 | 2.5 | 0.6 | 0.5 | 1.5 | N.A. |
| Washington | 168.9 | 227 | 168.5 | 116.1 | 156.0 | 167.3 | 225.0 |
| U.S. Total | 6555.1 | 5505.7 | 5193.9 | 5651.7 | 5595.9 | 5700.5 | 5083.0 |

SOURCES: Noncitrus Fruits and Nuts Annual Summaries, 1984-86 and Fruit, New York Crop Reporting Service, 975-7-87.

IMPORTS OF GRAPE JUICE, GRAPE JUICE FROZEN CONCENTRATE, AND GRAPE JUICE CONCENTRATE, GALLONS OF SINGLE STRENGTH EQUIVALENT, 1982-1986

| Year | Grape Juice | Frozen Concentrate | Concentrate | Total |
|---|---|---|---|---|
| 1982 | 262,012 | 431,416 | 1,106,298 | 1,799,726 |
| 1983 | 181,666 | 233,550 | 2,297,352 | 2,712,568 |
| 1984 | 195,038 | 116,611 | 6,752,791 | 7,064,440 |
| 1985 | 281,067 | 55,697 | 7,477,670 | 7,814,434 |
| 1986 | 396,173 | 123,558 | 7,665,569 | 8,185,300 |

FIGURE 1. VALUE OF UTILIZED PRODUCTION, U.S. GRAPE CROP, 1970-1986

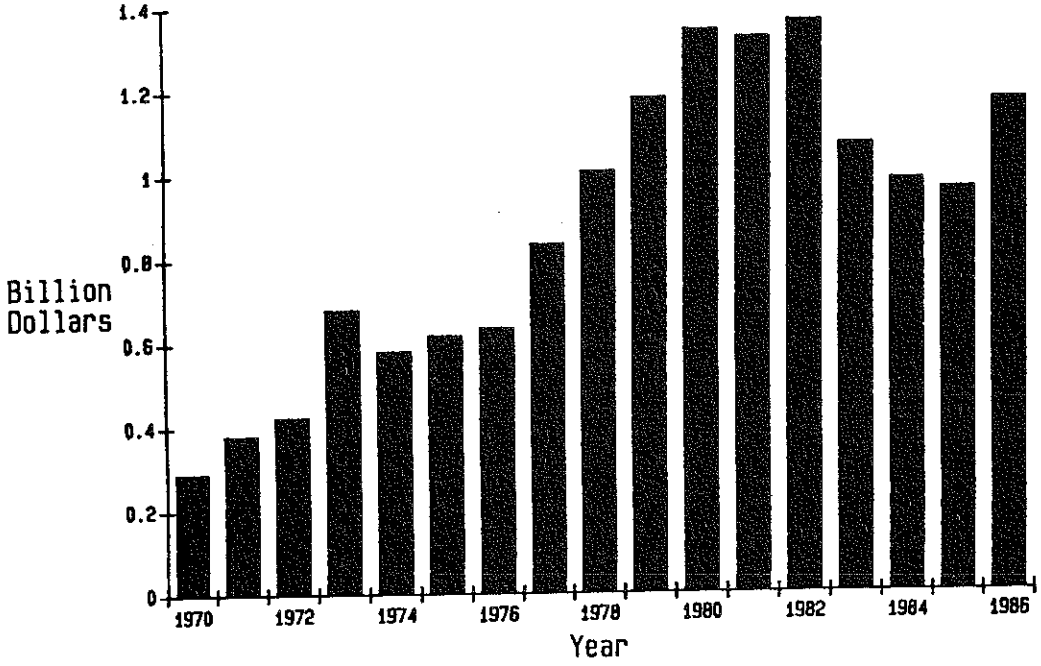



FIGURE 2. CONCORD GRAPE PRODUCTION, U.S., 1977-1986

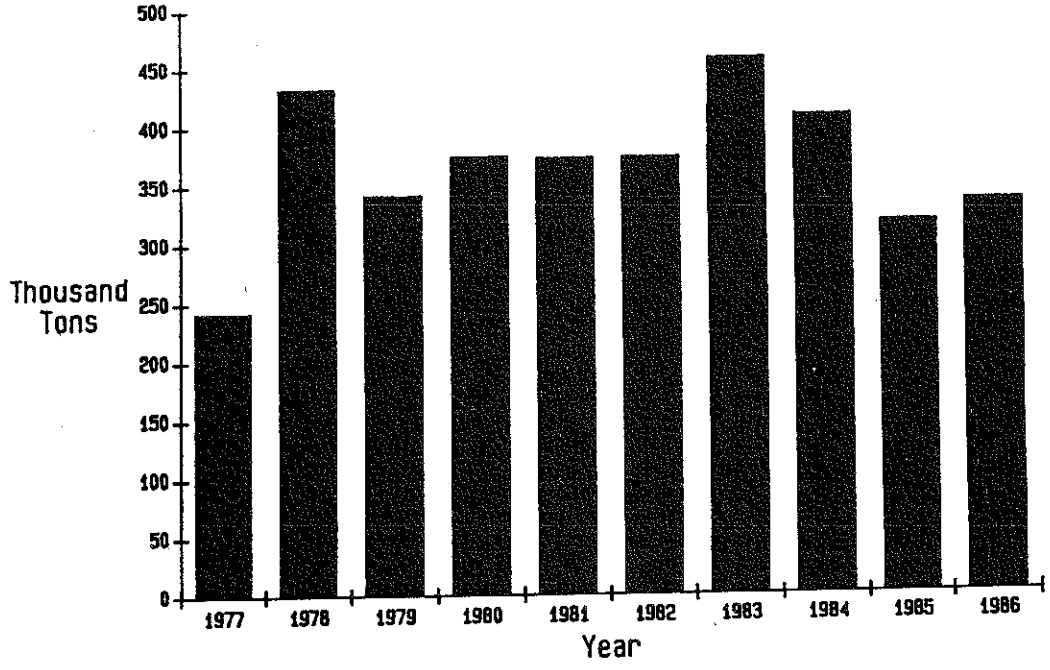


FIGURE 3. PRODUCTION, STANDARD WINE REMOVED FROM FERMENTERS, CROP YEARS 1982-1986

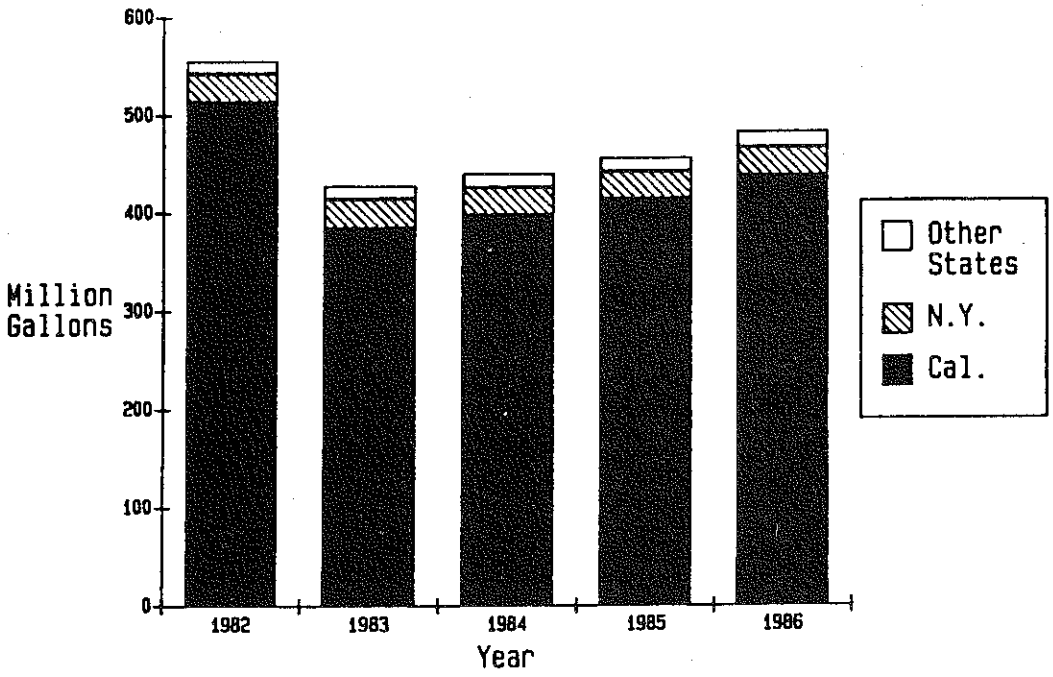



FIGURE 4. U.S. ADULT PER CAPITA CONSUMPTION OF WINE AND DISTILLED SPIRITS, 1979-1986

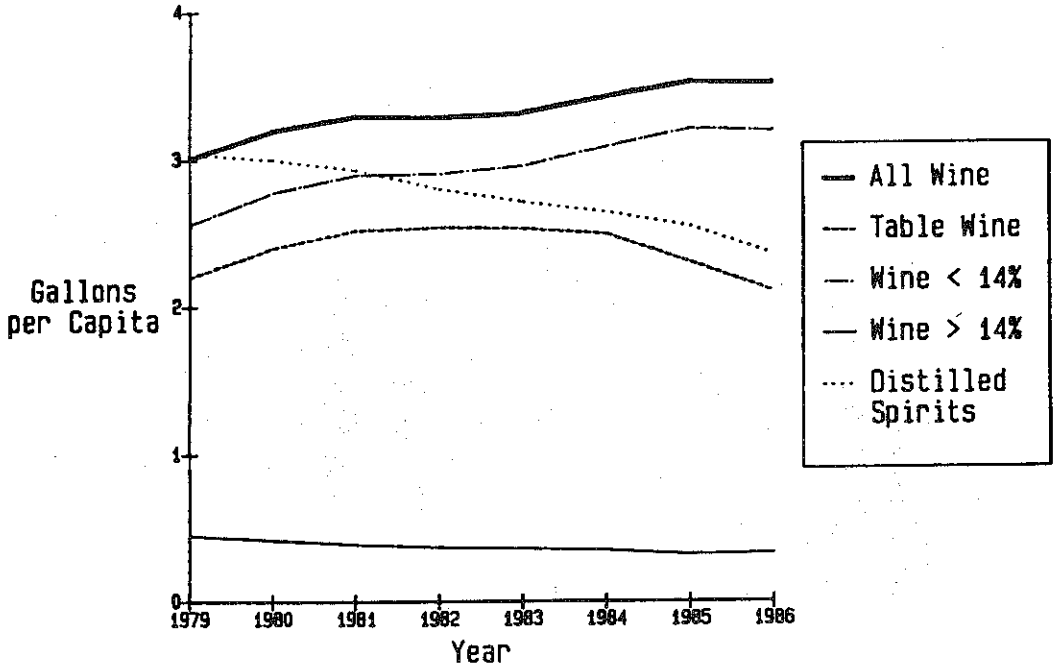


FIGURE 5. CONSUMER PRICE INDEX FOR WINE AND OTHER ITEMS, 1977-1986

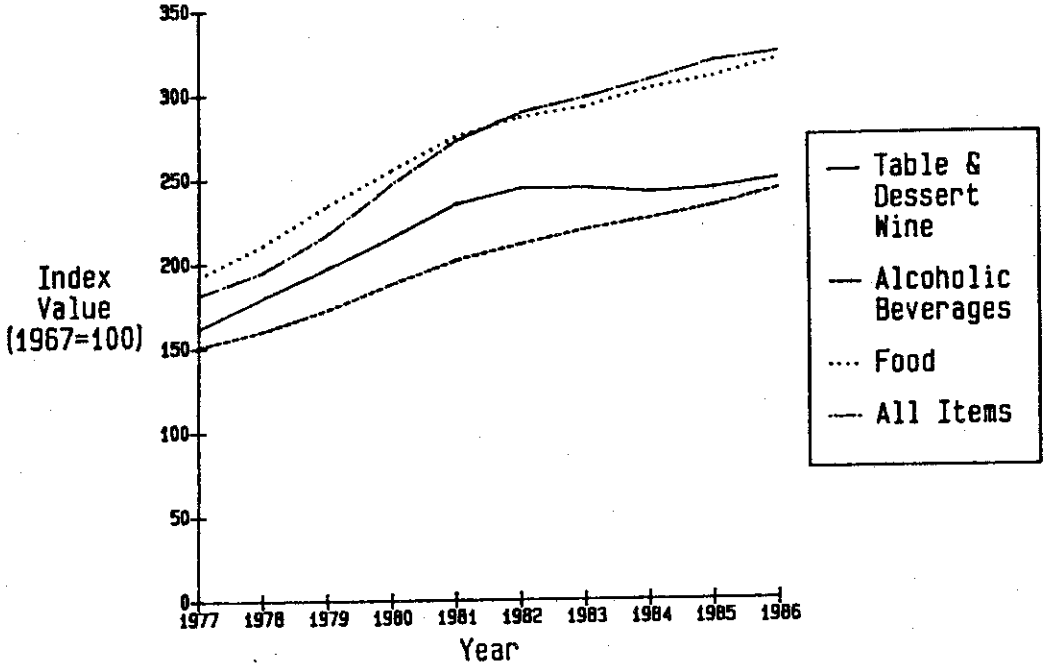



FIGURE 6. WINE ENTERING DISTRIBUTION CHANNELS IN THE U.S., 1977-1986

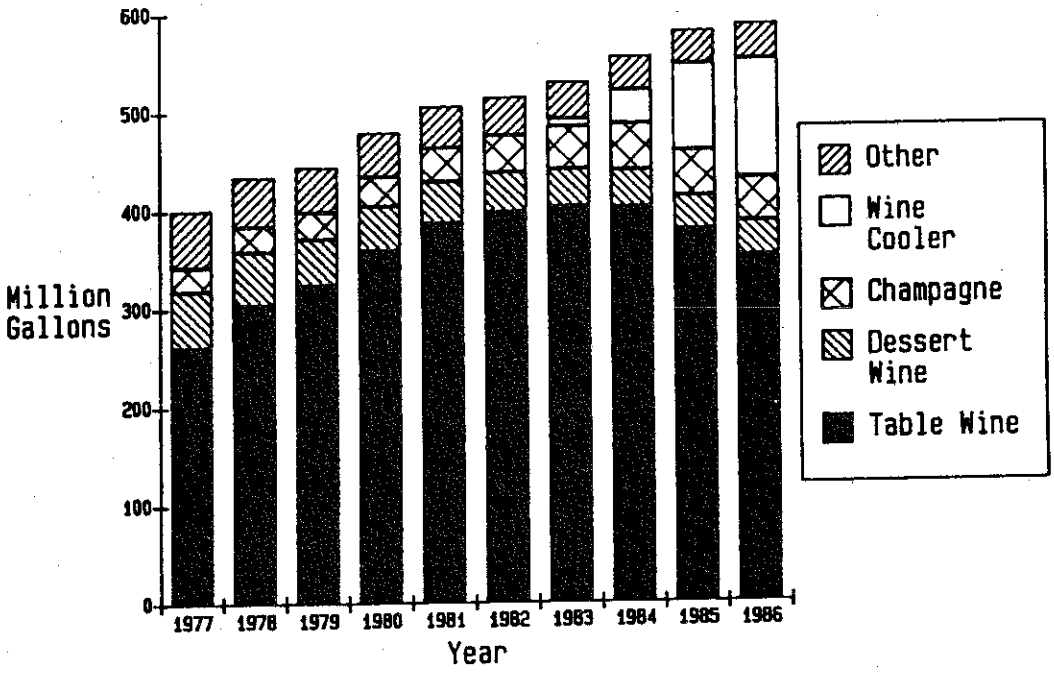


TABLE I.....POTATOES AND VEGETABLES: NEW YORK STATE FARM VALUE OF PRODUCTION, 1982-1987

| | 1982 | 1983 | 1984 | 1985 | 1986[1] | 1987[2] | Five-Year Average (1982-86) |
|---|---|---|---|---|---|---|---|
| | millions of dollars | | | | | | |
| Potatoes: | | | | | | | |
| Long Island | 21.5 | 32.6 | 19.3 | 11.4 | 18.0 | 16.9 | 20.56 |
| Upstate | 35.4 | 43.7 | 41.8 | 28.2 | 41.3 | 43.4 | 38.08 |
| Subtotal | 56.9 | 76.3 | 61.1 | 39.6 | 59.3 | 60.3 | 58.64 |
| Vegetables: | | | | | | | |
| Fresh Market | 131.5 | 173.6 | 139.7 | 135.7 | 162.3 | | 148.56 |
| Processing | 36.1 | 31.7 | 33.8 | 37.6 | 26.5 | | 33.14 |
| Subtotal | 167.6 | 205.3 | 173.5 | 173.3 | 188.8 | | 181.7 |
| TOTAL | 224.5 | 281.6 | 234.6 | 212.9 | 248.1 | | 240.34 |

[1]Preliminary.
[2]Estimated.
Sources: Potatoes - New York Agricultural Statistics 1986, New York State Agriculture and Markets, Division of Statistics, June 1987.

USDA, National Agricultural Statistics Service, Agricultural Statistics Board, September 25, 1987.

The value of New York's 1986 potato crop increased significantly over the 1985 crop - 50 percent - but compared to a five-year average, the crop value is very near the mean (see Table I). All of the increase in the value of production is attributable to a price increase - $3.85 per hundredweight in 1985 as compared to $7.65 per hundredweight in 1986.

Total U.S. potato production decreased by 11 percent in 1986 over 1985. The decrease was due to both an acreage decline and a reduction in yields. The lower supply accounted for the increase in price - a $1.11 increase per hundredweight over 1985 average price.

New York State's vegetable industry expanded over historical averages. However, the growth is in the fresh market. The value of processed vegetables continued to decline. The figures for the value of vegetable production for New York State during the 1987 season are very difficult to estimate, nonetheless, indications are that onion, sweet corn, and potato prices will be higher for the 1987 crop.

Snap bean production in New York State increased in 1987. Excellent yields were recorded in the state with some acreage left unharvested due to lack of processing capacity.

Generally, weather conditions in the state were favorable for both growing and harvesting. There were spots in the state that were "wet" for harvesting, but most harvesting was accomplished in better than normal conditions.

Table II....U.S. FALL POTATOES: PRODUCTION AND CROP VALUE

| | Production | | | | Crop Value | | | |
|---|---|---|---|---|---|---|---|---|
| | 1984 | 1985 | 1986 | 1987[1] | 1984 | 1985 | 1986 | 1987[2] |
| | -------- 1,000 cwt. --------- | | | | ------ million dollars ------- | | | |
| New York: | | | | | | | | |
| L.I. | 3,577 | 3,870 | 2,537 | 2,225 | 19.3 | 11.2 | 18.0 | 16.9 |
| Upstate | 6,630 | 6,375 | 5,288 | 6,110 | 41.8 | 28.4 | 41.2 | 43.4 |
| California | 7,280 | 8,385 | 6,887 | 7,600 | 56.1 | 51.1 | 44.1 | |
| Colorado | 17,225 | 17,920 | 18,810 | 19,500 | 80.1 | 40.3 | 79.0 | |
| Idaho | 86,600 | 102,515 | 90,220 | 99,710 | 420.0 | 338.3 | 38.9 | |
| Maine | 21,360 | 28,215 | 21,930 | 23,940 | 91.8 | 79.0 | 131.6 | |
| Michigan | 12,540 | 12,100 | 9,625 | 8,640 | 69.0 | 53.8 | 58.2 | |
| Minnesota | 13,775 | 14,145 | 13,650 | 17,040 | 64.7 | 41.7 | 58.0 | |
| North Dakota | 20,615 | 23,630 | 21,600 | 23,125 | 95.9 | 75.6 | 90.7 | |
| Oregon | 24,725 | 26,888 | 23,172 | 25,924 | 112.1 | 95.6 | 97.0 | |
| Pennsylvania | 5,160 | 5,720 | 5,160 | 4,730 | 32.8 | 26.0 | 35.1 | |
| Washington | 56,925 | 63,630 | 61,950 | 66,960 | 293.2 | 219.5 | 266.4 | |
| Wisconsin | 21,350 | 24,130 | 20,125 | 21,273 | 102.5 | 76.0 | 92.6 | |
| Other | 15,326 | 16,115 | 16,817 | 15,965 | 95.3 | 71.6 | 88.0 | |
| Total Fall | 313,088 | 353,638 | 317,771 | 342,742 | 1,574.5 | 1,208.3 | 1,487.8 | |

[1]November 1, 1987 estimates
[2]Based on Fall prices
Source: Potatoes, USDA, National Agricultural Statistics Service, Agricultural Statistics Board, September 25, 1987

Average national fall potato production over the previous four years (1983-1986) is 319,794 (1,000 hundredweight). The 1987 national production figure is 7.18 percent above the estimated previous four year average. Estimated 1987 Long Island production is 36.7 percent below the four-year production average of 3,515 while Upstate New York production is 2.14 percent above the four-year average of the 5,982 figure. In short, Long Island 1987 production is counter to national production and Upstate production did not increase at the same rate national production increased.

**Table III...U.S. STORAGE ONIONS: PRODUCTION AND CROP VALUE**

| | Production | | | | Crop Value | | | |
|---|---|---|---|---|---|---|---|---|
| | 1984 | 1985 | 1986[1] | 1987[1] | 1984 | 1985 | 1986[2] | 1987[3] |
| | 1,000 cwt. | | | | million dollars | | | |
| New York | 3,384 | 3,960 | 3,456 | 2,565 | 30.7 | 35.6 | 36.3 | 26.3 |
| Colorado | 4,636 | 5,355 | 4,590 | 4,500 | 47.5 | 31.1 | 25.2 | |
| Idaho & Molhaus | 7,828 | 9,020 | 8,215 | 9,352 | 70.4 | 40.3 | 39.0 | |
| Michigan | 2,933 | 2,535 | 1,653 | 1,975 | 16.9 | 14.2 | 9.3 | |
| Oregon & other | 1,280 | 1,505 | 1,440 | 1,395 | 9.3 | 6.9 | 6.5 | |
| Washington | 1,935 | 1,763 | 1,848 | 2,021 | 14.5 | 6.8 | 7.4 | |
| Other | 1,598 | 1,571 | 1,224 | 1,347 | 9.7 | 10.9 | 8.4 | |
| Subtotal | 23,594 | 25,709 | 22,426 | 23,155 | 19.9 | 145.8 | 132.1 | |
| California | 9,819 | 9,250 | 9,953 | 9,975 | 74.0 | 65.9 | 69.7 | |
| TOTAL | 33,413 | 34,959 | 32,379 | 33,130 | 273.0 | 211.7 | 201.8 | |

[1]October 1, 1987 estimate.
[2]Preliminary.
[3]Based on fall prices.
Source: USDA, Agricultural Marketing Service.

Storage onion production in New York State in 1987 declined from 1986 levels, but, for the 1987 crop, prices for yellow globe onions have been better than sweet Spanish onions. This can be attributed to both New York and Michigan production declines and increases in production in the western states. Total U.S. production increased 2.3 percent (estimated) over 1986 production levels, but declined 2.33 percent over the four-year (1983-1986) average or 32,377 figure. New York production declined 25.8 percent over 1986 levels and 24.3 percent compared to a four-year average or 3,388. The 1987 crop production drop is due to a 10.9 percent reduction in planted acreage and a 16.7 percent drop in yields over 1986 levels. These figures indicate that 1986 was a low year nationally and 1987 production is slightly below the four-year average. In New York State, the 1987 crop is significantly below previous years' levels, but growers are certainly getting better prices compared to 1986.

TABLE IV....NEW YORK ONION PRODUCTION BY AREA, 1983-1987

| County | 1983 | 1984 | 1985 | 1986 | 1987[1] | Five-Year Average 1983-1987 |
|---|---|---|---|---|---|---|
| | 1,000 hundredweight | | | | | |
| Orange | 1,486 | 1,650 | 2,331 | 1,988 | 1,080 | 1,707 |
| Orleans-Genesee | 613 | 696 | 644 | 650 | 660 | 653 |
| Oswego | 221 | 408 | 494 | 392 | 458 | 395 |
| Madison | 195 | 200 | 173 | 160 | 144 | 174 |
| Steuben-Yates-Ontario | 179 | 285 | 210 | 182 | 135 | 198 |
| Wayne and other | 99 | 145 | 108 | 84 | 88 | 105 |
| TOTAL | 2,793 | 3,384 | 3,960 | 3,456 | 2,565 | 3,232 |

[1]October 1, 1987 estimate.
Source: New York Agricultural Statistics Service.

Onion production within New York State is presented in Table IV. As can be seen, the drop in production in 1987 occurred primarily in Orange County - a 36.7 percent decline. The other production regions in the state produced at levels similar to the previous five-year average. On average (1983-1987), Orange County produces 52.8 percent or all New York production and has been rather stable over the five years. Oswego County is the only production region that has changed significantly over the five-year period. The 1987 crop is 15.95 percent above the five-year average but 107 percent above the 1983 crop.

The graph in this section describes the onion market (terminal) in New York City and Newark. The graph indicates the amount (10,000 pound units) of onions sold in the New York-Newark terminal market between February 1987 and November 1987 and the amount of New York State grown onions sold in the market. Three observations are apparent about the graph: 1) New York State supplies almost the entire market between February and the end of April; 2) Why do New Yorkers consume about 2,500,000 pounds in winter and spring but consume about twice as many during the summer?; 3) Why can't New York State producers supply more of the fall market? Answers to the latter two questions may prove profitable to New York State onion producers, particularly if they can extend their marketing season. It should be noted that the graph is for the 1987 season and may not be characteristic of historical patterns.

# 1987 Onion Flows–NY State Exports & NY City Imports

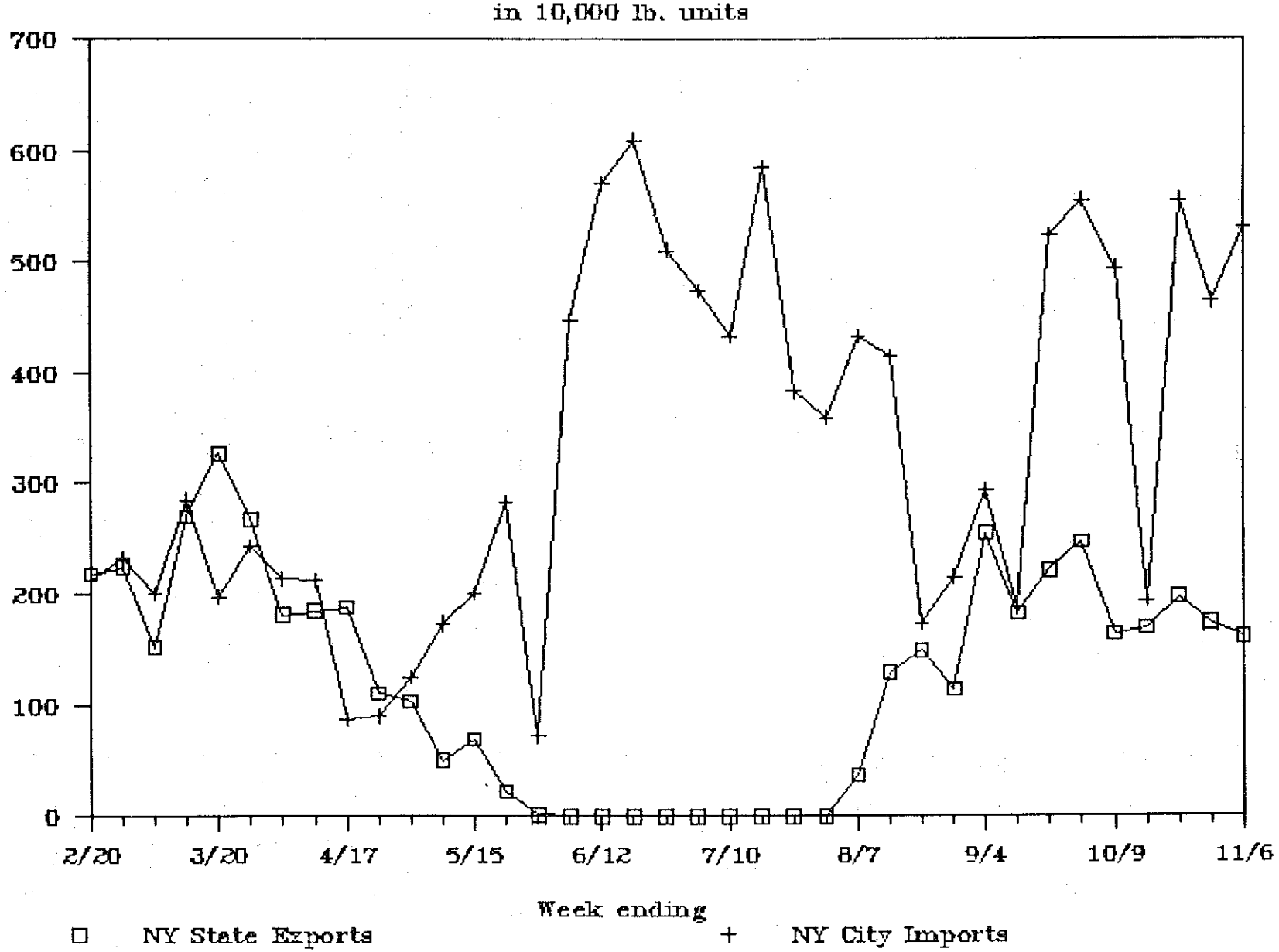


**TABLE V.....PER CAPITA UTILIZATION, IN POUNDS - 1970-1986**

| Year | Onions (Fresh & Processed) | Potatoes (Fresh) | Snap Beans | | Sweet Corn | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Canned | Frozen | Canned | Frozen | Fresh | Total |
| 1970 | 14.63 | 62.5 | 4.7 | 1.2 | 14.3 | 5.8 | 7.77 | 27.87 |
| 1971 | 14.43 | 59.8 | 4.6 | 1.3 | 14.8 | 5.5 | 7.45 | 27.75 |
| 1972 | 13.30 | 56.6 | 4.6 | 1.36 | 15.0 | 5.4 | 7.77 | 28.17 |
| 1973 | 13.98 | 51.7 | 4.9 | 1.7 | 14.5 | 6.0 | 7.91 | 28.41 |
| 1974 | 15.39 | 50.8 | 4.9 | 1.7 | 13.5 | 5.9 | 7.73 | 27.13 |
| 1975 | 14.41 | 56.5 | 4.4 | 1.4 | 12.0 | 6.3 | 7.77 | 26.07 |
| 1976 | 15.25 | 47.0 | 4.9 | 1.3 | 13.1 | 5.9 | 8.15 | 27.15 |
| 1977 | 15.70 | 52.1 | 4.8 | 1.2 | 14.1 | 7.4 | 7.76 | 29.26 |
| 1978 | 15.83 | 51.3 | 4.8 | 1.4 | 13.2 | 7.1 | 7.41 | 27.71 |
| 1979 | 17.23 | 48.2 | 4.7 | 1.5 | 12.5 | 7.9 | 7.32 | 27.72 |
| 1980 | 14.29 | 48.5 | 4.5 | 1.6 | 12.9 | 7.6 | 7.32 | 27.82 |
| 1981 | 14.07 | 43.7 | 4.6 | 1.5 | 12.1 | 7.5 | 7.24 | 26.84 |
| 1982 | 18.19 | 49.2 | 4.2 | 1.53 | 11.4 | 6.9 | 7.24 | 25.54 |
| 1983 | 16.71 | 49.5 | 4.0 | 1.70 | 11.5 | 7.9 | 7.39 | 26.79 |
| 1984 | 18.42 | 44.9 | 3.6 | 1.7 | 10.1 | 9.1 | 7.70 | 26.90 |
| 1985 | 19.42 | 47.7 | 3.7 | 1.7 | 11.7 | 9.0 | 7.70 | 28.40 |
| 1986 | 17.88 | 51.9 | 3.8 | 1.5 | 11.9 | 9.0 | 7.11 | 28.01 |
| Average Annual Percentage De/Increase | +0.76% | -1.54% | -0.64% | +1.94% | -1.43% | +1.08% | -0.62% | -0.04% |
| Average Annual Pound(s) De/Increase | +0.2 | -0.66 | -0.04 | +0.02 | 0.0 | +0.2 | -0.04 | +0.01 |

Source: Vegetable: Situation and Outlook Yearbook, USDA, Economic Research Service, TUS-243, November 1987.

Lastly, Table V presents national per capita utilization figures for onions, potatoes, snap beans, and sweet corn. Utilization is defined as output leaving the farm plus net imports and exports. It is not per capita consumption because shrinkage at wholesale and retail is not known. However, the trend of utilization mirrors consumption.

It is evident that fresh potato utilization is declining every year, but total potato utilization (including processing) has been constant. Onion utilization has been increasing at less than one percent per year - about 0.2 pounds per person per year. Both canned snap beans and sweet corn have been declining, but the frozen market for both has been increasing at better than one percent per year.

These trends are significant because a one percent change per year is indicative of industry growth or decline. The descrepency between percentage de/increases and pound de/increases has to do with the computation of the two figures. In the canned sweet corn case, the year-to-year pound changes sum to zero but, on a percentage basis, the year-to-year changes average -1.43 percent.

**TABLE I.....COUNTY MAKE-UP OF NEW YORK STATE AGRICULTURE AND MARKETS NURSERY SURVEY**

| Region | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Nassau | Dutchess | Albany | Broome | Allegany | Cattaraugus | Orange |
| NY City | Putnam | Clinton | Chenango | Cayuga | Chautauqua | Rockland |
| Suffolk | Westchester | Columbia | Cortland | Chemung | Erie | Ulster |
| | | Essex | Delaware | Livingston | Genesee | |
| | | Franklin | Herkimer | Monroe | Niagara | |
| | | Fulton | Jefferson | Ontario | Orleans | |
| | | Greene | Lewis | Schuyler | Wyoming | |
| | | Hamilton | Madison | Seneca | | |
| | | Montgomery | Oneida | Steuben | | |
| | | Rensselaer | Onondaga | Tompkins | | |
| | | Saratoga | Oswego | Wayne | | |
| | | Schenectady | Otsego | Yates | | |
| | | Schoharie | St. Lawrence | | | |
| | | Warren | Sullivan | | | |
| | | Washington | Tioga | | | |

In 1986, New York State Agriculture and Markets conducted a special study of the state's nursery and sod producers. The purpose of the study was to " . . . more accurately measure the value of this industry and its relative importance among the various segments of the state's agricultural economy." The survey does not include floriculture products, Christmas tree production, nor landscape (solely) operations.

Table I presents the counties that make up the seven (7) regions the survey used in compiling the data. Table II presents the value of sales in New York State during 1985. It should be noted that the survey acknowledges that the figures most likely under count rather than over count. As such, the industry in 1985 represents 132.3 million dollars. The wholesale value is 55 percent of total sales with landscape value representing 21.1 percent and retail value representing 23.3 of total sales.

Region 1 is the most significant region in the state in regards to total nursery and sod sales - representing 48.3 percent of total state sales. Regions 2, 5, and 6 represent distant secondary producers.

Keep in mind that these figures only represent producer sales. A very large contribution of the whole ornamentals industry is at the retail level. However, gauging the retail sales poses two problems: 1) are these sales 'tracked' by the Department of Agriculture and Markets or by the Department of Commerce; and 2) how does one survey this industry - particularly the landscape contractor segment.

**TABLE II....NURSERY AND SOD SALES BY TYPE OF SALE, BY REGION IN 1985 IN NEW YORK STATE[1]**

| Region | Wholesale | Retail | Landscape | Other | Total |
|---|---|---|---|---|---|
| | thousand dollars | | | | |
| 1 | 46,253.1 (63.1%)[2] | 7,842.9 (28.2%) | 9,668.6 (31.4%) | 54.5 (18.6%) | 63,819.2 (48.3%) |
| 2 | 1,408.4 (1.9) | 4,184.8 (15.0) | 8,779.5 (28.5) | 1.4 (0.5) | 14,374.1 (10.9) |
| 3 | 2,028.2 (2.8) | 3,271.0 (11.7) | 4,504.3 (14.6) | 4.6 (1.6) | 9,808.1 (7.4) |
| 4 | 1,846.6 (2.5) | 1,437.1 (5.2) | 1,290.6 (4.2) | 91.8 (31.4) | 4,666.1 (3.5) |
| 5 | 7,313.8 (10.0) | 8,507.8 (30.6) | 3,809.1 (12.4) | 27.1 (9.3) | 19,657.8 (14.9) |
| 6 | 10,579.2 (14.4) | 1,763.0 (6.3) | 1,692.8 (5.5) | 103.3 (35.3) | 14,138.3 (10.7) |
| 7 | 3,887.4 (5.3) | 840.5 (3.0) | 1,051.2 (3.4) | 10.1 (3.5) | 5,789.2 (4.4) |
| TOTAL | 73,316.6 (55.4%)[3] | 27,847.1 (21.1%) | 30,796.2 (23.3%) | 292.7 (0.2%) | 132,252.8 |

[1]Figures only represent producer sales.
[2]Numbers in parentheses represent percent of total column sales.
[3]Percent of total state sales.

Source: New York Nursery Producer Survey, New York State Department of Agriculture and Markets, Division of Statistics, July 1987.

**TABLE III...SUMMARY OF U.S. FLORICULTURE CROPS WHOLESALE VALUE OF SALES, 1985 AND 1986 - 1,000 DOLLARS**

| Item | 1985 Value | 1985 Percent of Total | 1986 Value | 1986 Percent of Total | De/Increase Over 1985 - Percentage |
|---|---|---|---|---|---|
| Cut flowers | 371,509 | 22.0% | 359,146 | 19.2% | -3.3% |
| Potted flowering[1] | 291,334 | 17.3 | 386,342 | 20.6 | +32.6 |
| Foliage plants[1] | 468,495 | 27.8 | 515,451 | 27.4 | +10.0 |
| Bedding plants[1] | 487,289 | 28.9 | 547,085 | 29.1 | +12.3 |
| Cut greens | 66,733 | 4.0 | 70,316 | 3.7 | +5.4 |
| Total Value[1] | 1,685,360 | 100.0% | 1,878,340 | 100.0% | +11.4% |

[1]1985 and 1986 are not comparable due to changing the minimum time held by growers before resale - from 6 or 12 weeks to 4 weeks.
Source: Floriculture Crops - 1986 Summary, USDA, National Agricultural Statistics Service, Agricultural Statistics Board, April 1987.

Tables III and IV address the national and state floriculture industry. As noted on Table II, some figures for 1986 sales are not directly comparable to 1985 figures, but nonetheless it is safe to conclude that segments of the floriculture industry in the U.S. had a healthy increase in 1986. Nationally, in 1986, the floriculture industry had 1,878 billion dollars in sales at the producer level. The largest segment is the bedding plant industry followed by foliage plants. Table IV updates last year's figures for New York State. Total commercial sales increased 30.5 percent over 1985 sales figures. The largest increase was with potted flowering plants (89.4 percent) while foliage for indoor/patio use declined by 38.4 percent.

**TABLE IV....COMMERCIAL PRODUCERS, QUANTITIES SOLD, AND WHOLESALE VALUE OF SELECTED FLORICULTURE CROPS, NEW YORK, 1986**

| Crop | Commercial Producers[1] | Quantity Sold | Wholesale Value |
|---|---|---|---|
| | number | | $1,000 |
| Cut Flowers | | | |
| Carnations | | | |
| Standard | 7 | 1,896,000 blooms | 400 |
| Chrysanthemums | | | |
| Standard | 40 | 774,000 blooms | 448 |
| Pompon | 51 | 180,000 bunches | 409 |
| Roses | | | |
| Hybrid tea | 18 | 13,281,000 blooms | 8,447 |
| Sweetheart | 7 | 4,202,000 blooms | 1,819 |
| Other cut flowers | 49 | -- | 822 |
| Total | | | 12,270 |
| | | | (-18.6%)[2] |
| Potted Flowering Plants | | | |
| African violets | 28 | 1,347,000 pots | 1,455 |
| Chrysanthemums | 111 | 1,648,000 pots | 4,998 |
| Finished florist azaleas | 57 | 1,758,000 pots | 7,120 |
| Easter lilies | 115 | 480,000 pots | 1,824 |
| Other lilies | 29 | 53,000 pots | 215 |
| Poinsettias | 206 | 2,235,000 pots | 7,778 |
| Other flowering plants | 82 | 4,290,000 pots | 6,778 |
| Total | | | 30,168 |
| | | | (+89.4%) |
| Foliage for indoor/patio use | | | |
| Potted foliage | 79 | -- | 3,597 |
| Foliage hanging baskets | 81 | 464,000 baskets | 2,014 |
| Total | | | 5,611 |
| | | | (-38.4%) |
| Bedding garden plants (flats) | | | |
| Geraniums | 86 | 377,000 flats | 2,330 |
| Flowering foliage plants | 304 | 2,142,000 flats | 13,130 |
| Vegetable type plants | 261 | 494,000 flats | 2,875 |
| Total | | | 18,335 |
| | | | (+10.3%) |
| Other potted plants | | | |
| Hardy garden mums | 132 | 855,000 pots | 1,488 |
| Geraniums (cuttings) | 282 | 5,340,000 pots | 6,728 |
| Geraniums (seed) | 77 | 1,769,000 pots | 1,380 |
| Other foliar plants | 123 | 2,247,000 pots | 2,382 |
| Vegetable plants | 46 | 162,000 pots | 139 |
| Total | | | 12,117 |
| | | | (+20.0%) |
| Total of Reported Floriculture Crops | | | 82,320 |
| | | | (+30.5%) |

[1]More than $10,000 in gross sales of all floriculture crops.
[2]Percentage change from 1985 sales.
Source: Floriculture Crops 1986 Summary, U.S. Department of Agriculture, National Agricultural Statistics Service, Agricultural Statistics Board, April 1987.