

Extension Studies 87-1, August 1987

THE IMPACTS OF THE SUPPLY CONTROL PROGRAMS ON THE U.S. AND PENNSYLVANIA DAIRY SECTORS

Jack J. Kirkland

The Pennsylvania State University
Agricultural Economics and
Rural Sociology Department
Cooperative Extension Service
University Park, PA 16802

The Impacts of the 1985-87 Supply Control Programs on the U. S. and Pennsylvania Dairy Sectors

by

Jack J. Kirkland

The Dairy Termination Program (DTP), often called the Dairy Herd Buyout Program, was designed to reduce the milk surplus in the dairy industry. This program dominated the market situation in 1986 and for the first half of 1987. A total of 13,988 dairy farmers, whose 1985 marketings totaled 12.3 billion pounds of milk, entered the program and will remain out of dairying for at least a 5 year period. These dairy farmers will sell 951,619 cows; 340,789 heifers; and 257,995 calves. The program gave those farmers who entered the program a choice of 3 periods in which they could sell their dairy livestock and stop producing milk. The first period was from April 1 to August 31, 1986; the second period was from September 1, 1986 to February 28, 1987; and the third period was from March 1 to August 31, 1987. Therefore, some participants could have been producing milk as late as August 1987 even though they entered the program in early 1986. The DTP began to have significant impacts on the number of cows, milk production, CCC purchases, and milk prices as the dairy farmers began to sell their cows and stop producing milk in 1986.

The DTP was not the only supply control program in the 1980's which was designed to reduce the milk surplus. The Milk Diversion Program was also designed to encourage dairy farmers to voluntarily reduce milk production. This program was in effect for an 15 month period from January 1, 1984 to March 30, 1985. In this program, dairy farmers agreed to reduce their production a given percentage, from 5 to 30 percent, of their base marketings during a 15 month period. Participants received a payment of \$10 per hundredweight for every hundredweight reduction in their marketings below their base level. This program was effective in the short run as CCC purchases were cut in half for 1984 from 1983 levels. However, at the end of the program, milk production and CCC purchases reached record levels.

In addition to these two supply control programs, the support price of milk was reduced in an effort to reduce milk production and CCC purchases and costs. The demand side was not overlooked either. A farmer funded national advertising and promotion campaign was begun in 1983 to increase the demand for and consumption of dairy products. A 15-cent per hundredweight assessment on all milk marketings funded this advertising effort. Farmers also had a choice to divert up to 10-cents of this assessment to local, state or regional advertising programs. All of these efforts had one basic goal in mind: to decrease the milk surplus.

This paper will examine in detail the impacts of the DTP program on milk production, cow numbers, CCC purchases, and milk prices for 1986 and 1987. The changes occurring in the dairy industry from 1983 to July 1987 resulting from the effort of the decreases in the support price, supply control programs, and the effort to increase the consumption of dairy

products with respect to milk production, number of cows, CCC purchases, consumption, and milk prices will be discussed in detail.

Number of Cows and Milk Production

Mainly as a result of the DTP, the number of milk cows and milk production began to decline in the U. S. around the 3rd quarter of 1986, Figure 1. Milk production in the third and fourth quarters of 1986 was 3% and 4% lower than in 1985.¹ Although milk production decreased in the last half of 1986, the increase in the first half offset that decrease. As a result total milk production for 1986 was 0.7% higher than in 1985. However, this increase was lower than past annual increases in milk production. While milk production was again lower, by 3.6%, in the first quarter of 1987 when compared to 1986, it was slightly higher, by 3.7%, than in the first quarter of 1985. Annual milk production and the average annual number of cows for the 48 contiguous states in 1985 and 1986 are given in Appendix A.

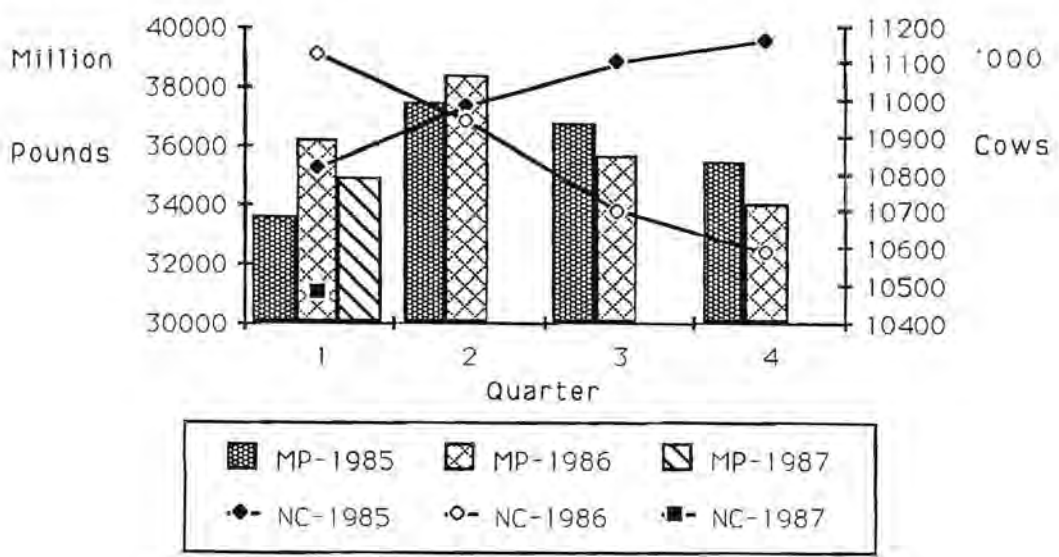
A decrease in the number of cows was probably the main factor resulting in the decrease in milk production. Although milk production per cow continued to increase, the decline in the number of cows offset its effects. The number of milk cows started to decline in May 1986 and since then there has been a steady decrease in the number of cows. By the end of 1986, the number of cows in the 48 States had declined by 5.1% from 1985. This decline continued in 1987 as dairy farmers participating in the

¹Only quarterly data are available for the 48 contiguous states.

DTP continued to sell their cattle. By May 1987, the number of cows in the 21 States had declined to 8.8 million, a 6% decrease from January 1986.

Monthly data on milk production and number of cows are available only for the 21 major dairy states. However, milk production for the 21 major dairy states is about 85% of the 48 states production and is a good indication of the situation in the 48 states. Milk production in the 21 major dairy states continued to decline in April and May of 1987. Milk production in April was 2.4% lower than in April 1986 and was 2.3% lower in May of 1987 than in May of 1986. Monthly milk production and number of cows for the 21 major dairy state are shown in Appendix B.

Figure 1. Number of Cows (NC) and Milk Production (MP), 48 Contiguous States, 1985-87



Regional Changes in Number of Cows and Milk Production

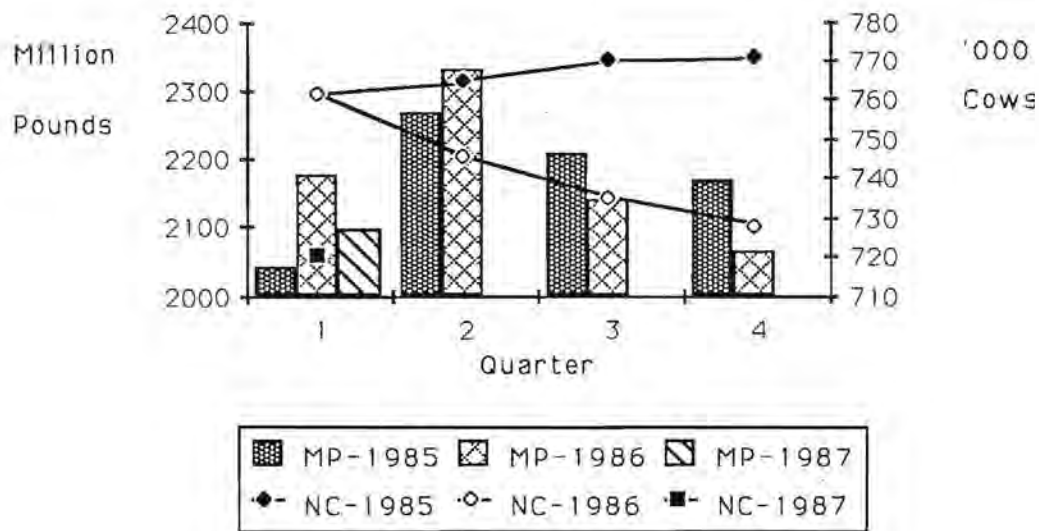
Participation in the DTP was not uniform among the 48 contiguous states and thus the decline in the number of cows and milk production differed between states and regions. The 48 states were grouped into eight regions to determine the regional changes occurring in 1986 and 1987. These regions were the Appalachian Region, the Mid-Western Region, the Mountain Region, the Northeastern Region, the Northern Plains Region, the Pacific Region, the Southern Region, and the Southern Plains Region.

The Appalachian Region

The number of cows and milk production for the Appalachian Region is shown in Figure 2. The Appalachian Region includes Kentucky, North Carolina, Tennessee, Virginia and West Virginia. Milk production started to decline in the third quarter of 1986 and was 3% lower than in 1986. By the fourth quarter of 1986, milk production was 4.7% lower than in 1985. Although milk production decreased in the third and fourth quarters of 1986, total milk production for 1986 was 0.3% higher than in 1985. The decrease in milk production continued in the first quarter of 1987. Milk production in the first quarter of 1987 was 3.5% lower than the first quarter of 1986 but was still 2.7% higher than in the first quarter of 1985. Milk marketings by the DTP participants were 9.6% of the region's 1985

marketings. Although, it is not immediately known how many of the participants have gone out of business by the first quarter of 1987, it appears that there was some expansion by nonparticipants in the region which offset some of the effects of the DTP in the region.

Figure 2. Number of Milk Cows (NC) and Milk Production (MP), Appalachian Region, 1985-87



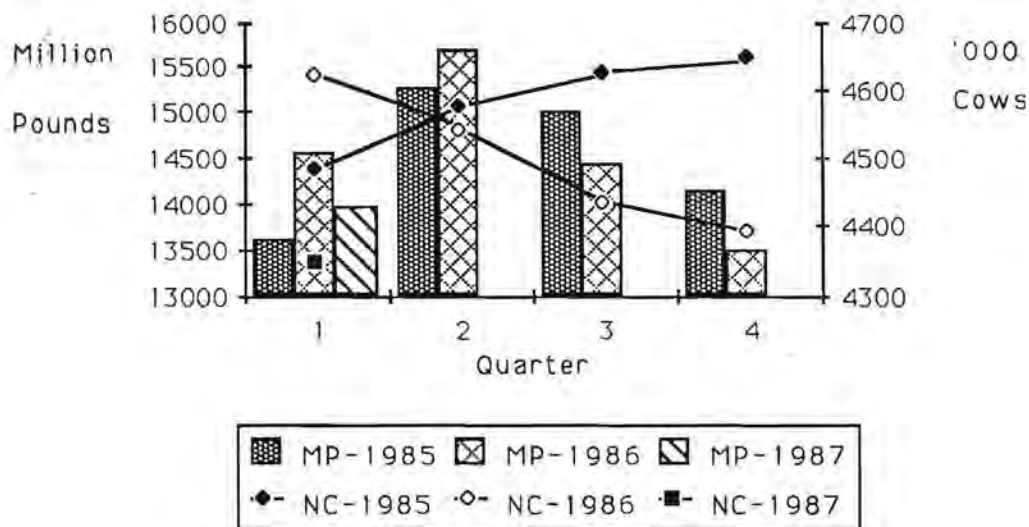
The number of milk cows began to decline in the first quarter of 1986 and declined steadily throughout the year. By the end of 1986, the number of milk cows was 5.6% lower than at the end of 1985. The decrease continued into 1987. In the first quarter of 1987, the number of cows was 5.5% lower than in both the first quarters of 1985 and 1986. The number of cows owned by the participants in the region was about 60,000. The number of cows in the region in the first period of 1987 had

decreased by 51,000 from the fourth period of 1985. Although the number of cows remaining to be sold by DTP participants cannot be determined, it appears that there was not a significant increase in the number of cows in the region by nonparticipants in the DTP.

The Mid-Western Region

Figure 3 shows the number of cows and milk production in the Mid-Western region. The Mid-Western region includes Illinois, Indiana, Iowa,

Figure 3. Number of Milk Cows (NC) and Milk Production (MP), Mid-Western Region, 1985-87



Michigan, Minnesota, Missouri, Ohio and Wisconsin. Milk production began decreasing during the second half of 1986 and was 3.8% lower in the third quarter and 4.9% lower in the fourth quarter of 1986 than in 1985.

However, milk production was higher in the first half of 1986, 7% higher in the first quarter and 2.8% higher in the second quarter than in the respective quarters of 1985. This increase in milk production during the first half of 1986 offset the decrease in the second half and milk production for 1986 was 0.3% higher than in 1985. Milk production in the first quarter of 1987 continued to decrease and was 4.1% lower than in 1986 but was still 2.6% higher than during the first quarter of 1985. In the region, the 1985 marketings by the DTP participants was 6.5% of the region's total marketings.

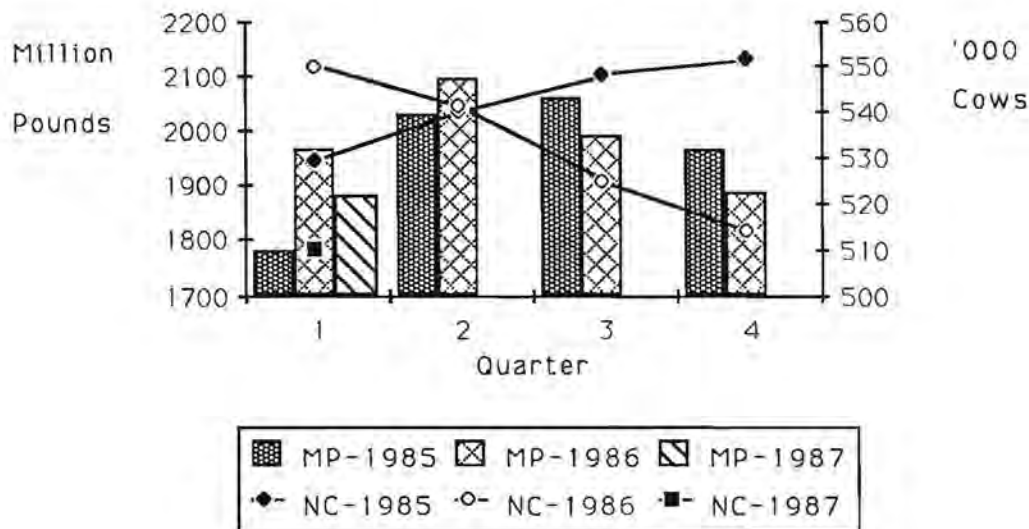
The number of cows in the region began decreasing in the second quarter of 1986. The number of cows was 0.7% lower in the second quarter, 4.1% lower in the third quarter, and 5.5% lower in the fourth quarter of 1986 than in the respective quarters of 1985. By the first quarter of 1987, the number of cows was 6.4% lower than in the fourth quarter of 1985 when the largest number of cows was recorded. The number of cows in the region which were to be sold under the DTP was 303,159. This was 6.5% of the number of cows on farms in the fourth quarter of 1985. Thus it appears that there might even have been a slight reduction in cow numbers by nonparticipants since there are probably more DTP cows to be sold during the months from March to September 1987.

The Mountain Region

The number of cows and milk production in the Mountain region is shown in Figure 4. The Mountain region included Arizona, Colorado, Idaho,

Montana, Nevada, New Mexico, Utah, and Wyoming. Milk production in the first and second quarters of 1986 were 10.4% and 3.4% higher than in the

Figure 4. Number of Milk Cows (NC) and Milk Production (MP), Mountain Region, 1985-87



respective quarters of 1985. However, there was a reduction in milk production in the third quarter of 3.6% and 4.0% in the fourth quarter of 1986 compared to the respective quarters of 1985. The total milk production in the region in 1986 was 1.3% higher than in 1985. Milk production in 1987 continued to decrease and for the first quarter of 1987 was 4.4% lower than in 1986 but 5.5% higher than in 1985. The region's DTP participant's 1985 marketings were 15.4% of the total marketings in the region in 1985. Thus, it appears that, unless there are still a large number DTP participants who are still in business, there has been a fair amount of expansion in the region by nonparticipants.

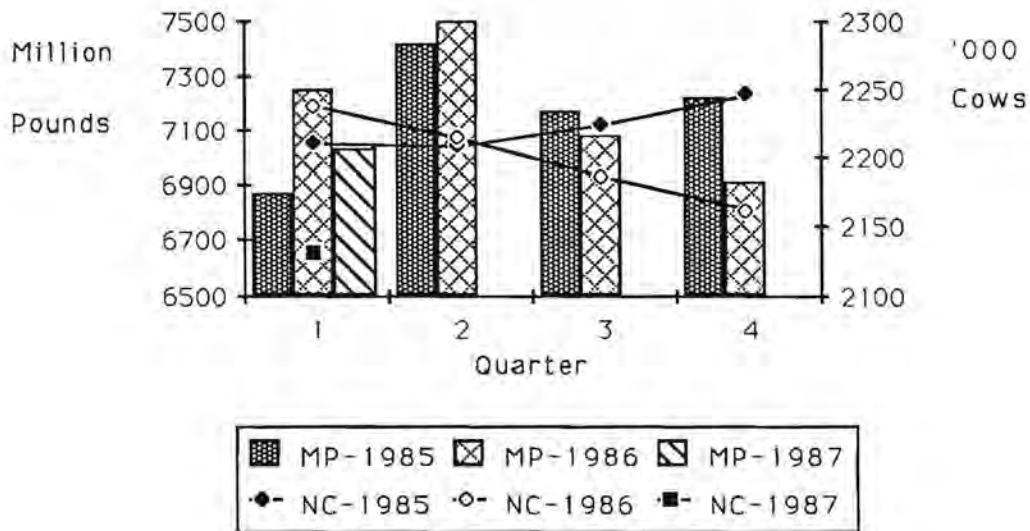
The number of milk cows in the region began to decrease after the second period in 1985. The number of milk cows was 4.3% lower in the third quarter and 6.8% lower in the fourth quarter of 1986 compared to 1985. By the first quarter of 1987, the number of cows in the region was 7.3% lower than in the first quarter of 1986 and 3.7% lower than in the first quarter of 1985. The number of cows in the first quarter of 1987 was 7.5% lower than when the number of cows was at the highest level in 1985, the fourth quarter of 1985. The number of cows to be sold by the DTP participants was 78,581 or 14.3% of the number of cows in the region in the fourth quarter of 1985. Thus, it appears that there was considerable expansion by nonparticipants in the region.

The Northeastern Region

Figure 5 shows the milk production and number of cows in the Northeastern Region. The Northeastern region includes Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont. Milk production during the first half of 1986 was greater than in the first half of 1985. Milk production was 5.4% higher in the first quarter and 2.5% higher in the second quarter of 1986 than in the respective quarters of 1985. For the third and fourth quarters of 1986, milk production was 1.3% and 4.3% lower than in the respective quarters of 1985. Annual milk production for

participants in the region was 4.9% of the region's total 1985 marketings. Thus it appears that there has been some expansion in the region by nonparticipants.

Figure 5. Number of Milk Cows (NC) and Milk Production (MP), Northeastern Region, 1985-87



The number of cows in the region began to decline in the third quarter of 1986. The number of cows in the third quarter was 1.7% lower and in the fourth quarter 3.8% lower than in the third and fourth quarters of 1985. By the first quarter of 1987, the number of milk cows was 3.6% lower than the first quarter of 1985 and 5.1% lower than in the first quarter of 1986. The greatest number of cows in the region was in the fourth quarter of 1986. The number of cows in the first quarter of 1987 was 5.4% lower than was the number of cows in the first quarter of 1986.

The number of cows in the herds of DTP participants was 104,159 or 4.6% of the number of cows in the fourth quarter of 1985. It appears that there have been a larger reduction in cow numbers in the region than can be accounted for by the DTP. Thus, there must have been some nonparticipants who went out of business and those remaining in business must have increased milk produced per cow.

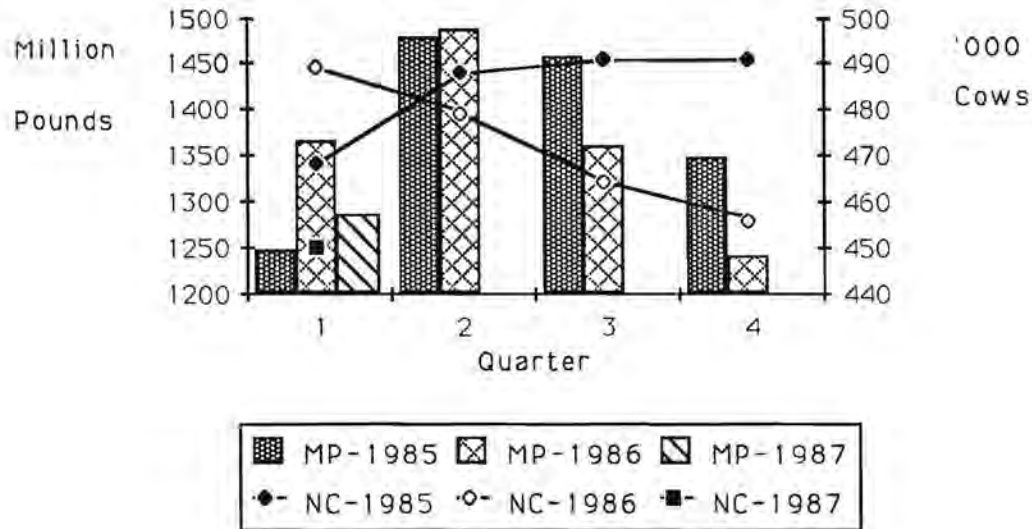
The Northern Plains Region

Milk production and number of cows in the Northern Plains is shown in Figure 6. The Northern Plains region includes Kansas, Nebraska, North Dakota, and South Dakota. Milk production in the first and second quarter of 1986 was 9.6% and 0.6% higher than in the first and second quarter of 1985, respectively. For the third and fourth quarters of 1986 milk production declined and was 6.8% and 8.0% lower than in the third and fourth quarters in 1985, respectively. Annual milk production in 1986 was 1.4% lower in 1986 than in 1985. The Northern Plains region was one of the two regions (the second being the Southern region) in which annual milk production was lower in 1986 than in 1985. Milk production in the first quarter of 1987 was 5.9% lower than in the first quarter of 1986 but was 3.2% higher than in the first quarter of 1985. The 1985 marketings of the DTP participants in the region was 12.1% of the region's total 1985 marketings. Thus, it appears that there has been considerable expansion in the region by nonparticipants.

The number of cows in the region began to decline in the second quarter of 1986. The number of cows in the third and fourth quarter of

1986 was 5.5% and 7.1% lower than in the third and fourth quarter of 1985, respectively.

Figure 6. Number of Milk Cows (NC) and Milk Production (MP), Northern Plains Region, 1985-87

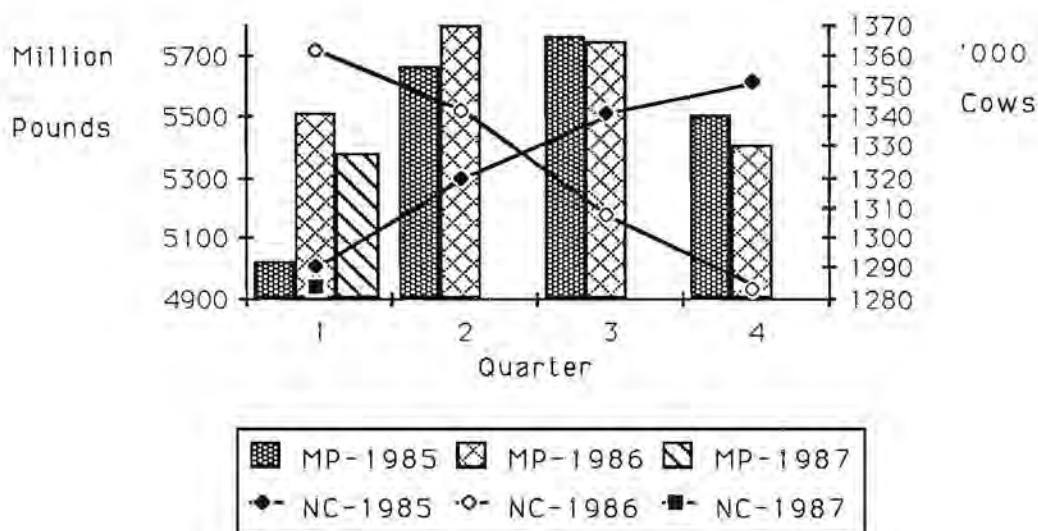


By the first quarter of 1987, the number of milk cows was 3.8% and 8.7% lower than in the first period of 1985 and 1986, respectively. The number of cows in the first quarter of 1987 was 9.1% lower than in the fourth quarter of 1985 at which time the number of cows was the greatest in the three year period. The number of cows owned by the DTP participants was 59,557 or 12.1% of the number of cows in the fourth quarter of 1985. This again points out that there must have been some expansion by nonparticipants.

The Pacific Region

Figure 7 shows the milk production and number of cows in the Pacific region. The Pacific region includes California, Oregon and Washington.

Figure 7. Number of Milk Cows (NC) and Milk Production (MP), Pacific Region, 1985-87



Milk production for the first and second quarter of 1986 was 9.7% and 2.6% higher than in the first and second quarters of 1985, respectively. Milk production decreased slightly during the second half of 1986, a 0.4% decrease in the third quarter and a 1.8% decrease in the fourth quarter from the respective quarters of 1985. Annual milk production in 1986 was 2.3% higher than in 1985. This was the largest annual increase in milk

production of all eight regions. In the first quarter of 1987, milk production was 2.4% lower than in the first quarter of 1986 but was 7.1% higher than in the first quarter in 1985. The 1985 marketings of the DTP participants was 11.4% of the region's total 1985 marketings. Thus, it appears that there has been considerable expansion by nonparticipants and their increases have offset to a large extent the effects of the DTP in the region.

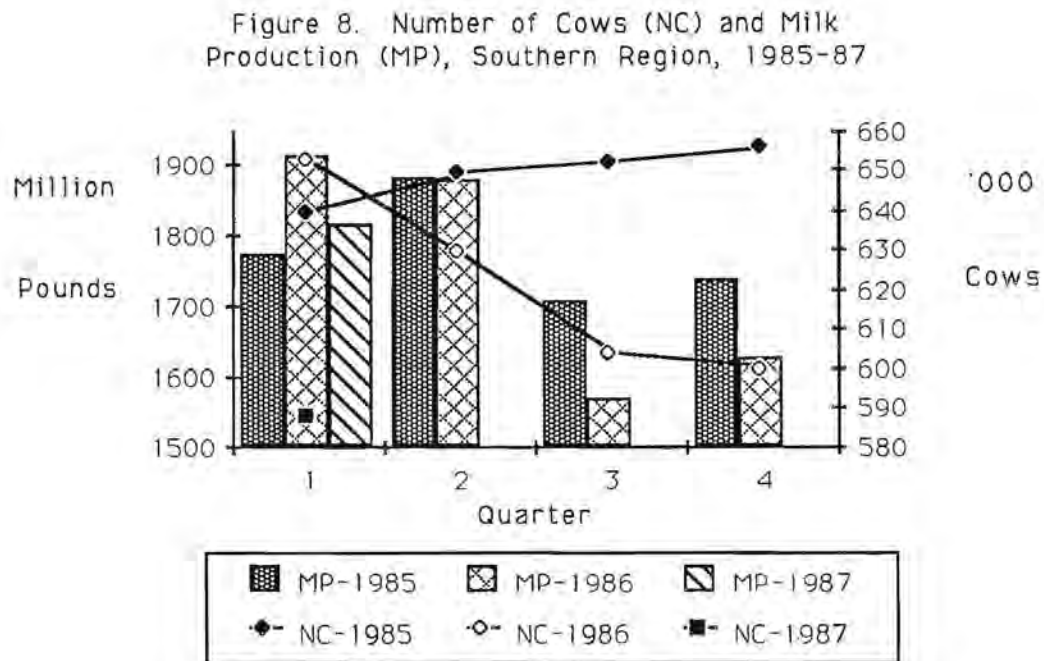
The number of cows began to decline in the third quarter of 1986. The number of milk cows in the third and fourth quarters of 1986 were 2.5% and 5.0% lower than in the third and fourth quarters of 1985, respectively.

By the first quarter of 1987, the number of milk cows was 0.5% and 5.7% lower than in the first quarters of 1985 and 1986, respectively. The greatest number of cows in the region occurred during the first quarter of 1986. The number of cows owned by the DTP participants was 161,537 or 11.9% of the number of cows in the first period of 1986. Therefore, it appears that there has been considerable expansion in the region by nonparticipants.

The Southern Region

Milk production and the number of cows in the Southern region is shown in Figure 8. The Southern region includes Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, and South Carolina. Milk production in the region began to decline in the second quarter of 1986. In the first quarter of 1986, milk production was 7.9% higher than in the first quarter of 1985. For the second, third and fourth quarters of 1986,

milk production was 0.3%, 8.2%, and 6.6% lower than in the second, third, and fourth quarters of 1985. The 1986 annual milk production for the



region was 1.7% lower than in 1985. The region was one of the two regions (the second being the Northern Plains) in which 1986 production was lower than in 1985. This region also had the greatest decrease in annual milk production of the two regions. By 1987, milk production in the first quarter was 5.2% lower than in the first quarter of 1986 but was 2.3% higher than in the first quarter of 1985. The 1985 marketings of the DTP participants were 16.6% of the region's total 1985 marketings.

The number of cows in the region began to decline in the latter part of the first quarter of 1986. The numbers of cows in the second, third, and fourth quarter of 1986 were 3.1%, 7.4%, and 8.5% lower than the number

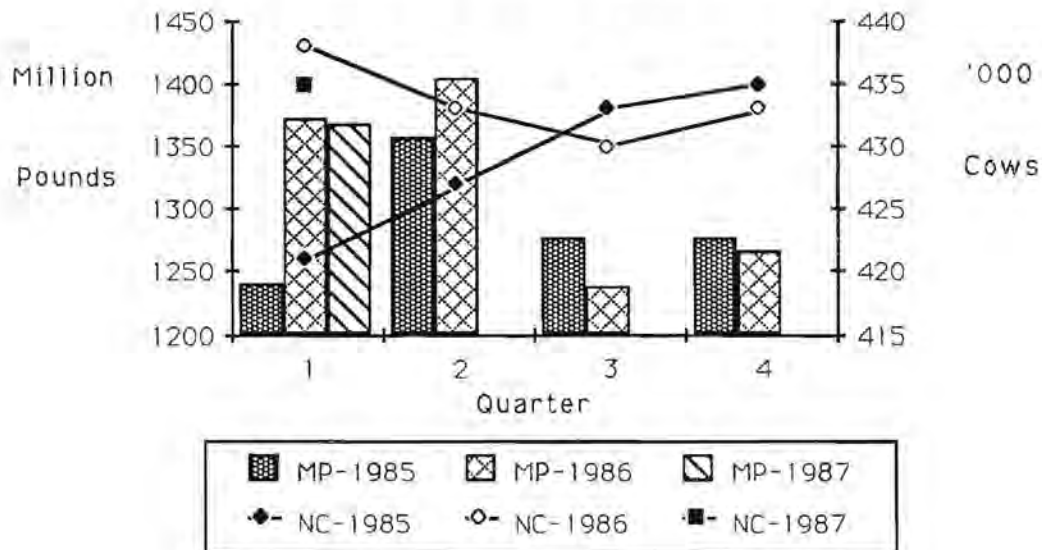
of cows in the second, third, and fourth quarters of 1985, respectively. By the first quarter of 1987, the number of cows was 8.1% and 10.0% lower than in the first quarter of 1985 and 1986, respectively. The number of cows in the region was highest during the fourth quarter of 1985 and the number of cows in the first quarter of 1987 was 10.4% lower than in the fourth quarter of 1985. The number of cows owned by the DTP participants was 103,706 or 15.8% of the number of cows in the fourth quarter of 1985. Thus, it appears that there has been some expansion by nonparticipants in the region.

The Southern Plains Region

Figure 9 shows the milk production and number of cows in the Southern Plains region which includes Oklahoma and Texas. Milk production in the region increased during the first half of 1986 and was 10.6% higher in the first quarter and 3.4% higher in the second quarter of 1986 compared to the first and second quarters of 1985. Milk production in the third and fourth quarters of 1986 was 3.1% and 0.9% lower than in 1985, respectively. The annual milk production in 1986 was 2.5% higher than in 1985. This was the highest annual increase in milk production from 1985 to 1986 of all the regions. Milk production in the first quarter of 1987 was 0.3% lower than in the first quarter of 1986 but was 10.3% higher than in the first quarter of 1985. The 1985 milk marketings of the DTP participants in the region was 15.8% of the region's total 1985 marketings. This would seem to indicate that there has been considerable expansion in the region by nonparticipants and has offset to a large degree the effects of the DTP in the region.

The number of cows in the region began to decline early in 1986, continued to decline until the third quarter, and then began to increase, although the number of cows during the fourth quarter of 1986, still

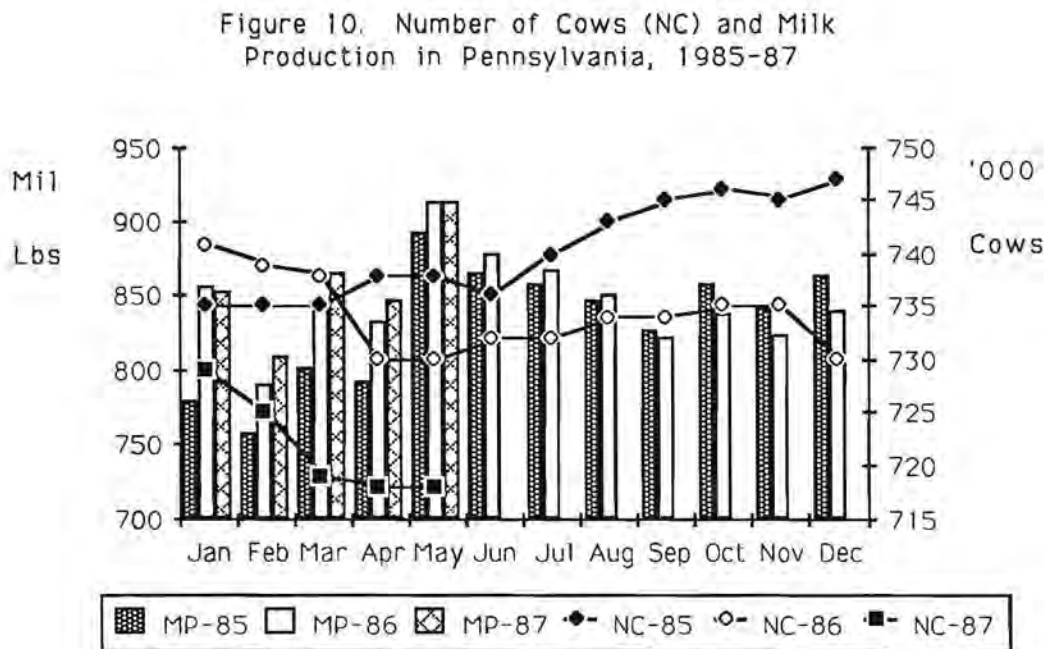
Figure 9. Number of Cows (NC) and Milk Production (MP), Southern Plains Region, 1985-87



remain below the 1985 levels. By the first quarter of 1987 the number of cows had increased to a level only slightly less (0.7%) than the peak number in the first quarter of 1986 and well above (3.3%) the first quarter of 1985. The number of cows owned by the DTP participants was 69,533 or 15.9% of the peak number of cows in the first quarter of 1986. This again provides strong evidence to support the hypothesis that there has been considerable expansion by nonparticipants which has almost totally offset the effects of the DTP in the region.

Milk Production and Number of Cows in Pennsylvania

Milk production and number of cows in Pennsylvania for the period from 1985 to 1987 is shown in figure 10. Pennsylvania's participation in



the DTP, in terms of participants' marketings as a percentage of the total marketings in the state, was the second lowest (2.75%) in the 48 contiguous states. Therefore, the program had little impact on milk production in Pennsylvania in 1986 and 1987. In 1986, milk production was lower than in 1985 during the months from September to December. Milk production in 1986 was 1.7% higher than in 1985. In January 1987, milk production was significantly higher (9.5%) than in 1985 and only slightly (-0.4%) lower than in 1986. For the months of February through

May of 1987, milk production was slightly higher (1.7%) than in 1986 and moderately higher (5.8%) than 1985.

The DTP did have an impact on the number of milk cows in Pennsylvania. The number of cows owned by Pennsylvania participants in the DTP was 20,614. By May 1987, the number of cows was down to 718,000 from 747,000 in December 1985, a reduction of 29,000. This is 8,000 more than called for by participants in the DTP.

Therefore, with four months to go in the DTP, it would seem that either some Pennsylvania farmers not in the DTP are going out of business or they are culling cows faster than they are adding them to their herds. Since production has generally increased from 1985 levels, production per cow must be increasing since the number of cows has been reduced. It cannot be determined if this is due to better quality cows that are now being milked, improved feeding management or heavier feeding levels (especially of concentrates). It is probably a combination of all three.

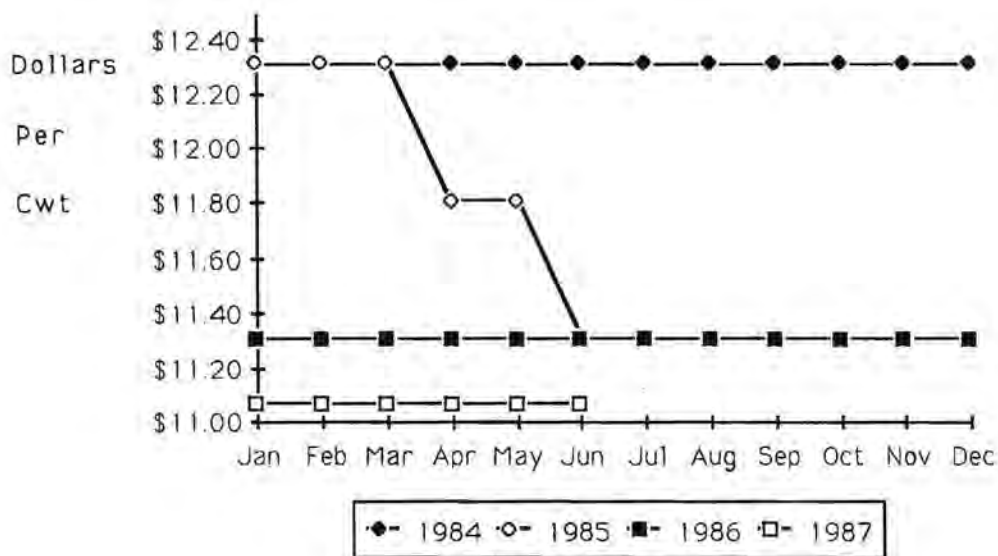
Milk Prices

Milk prices were significantly affected by the DTP as well as by a steadily increasing commercial demand for dairy products. Since the Minnesota-Wisconsin price serves as the base for setting minimum prices for milk in the U. S., this price series will be used to represent U. S. prices. Average blend prices for Federal milk marketing orders 2, 4, and 36 will be used to reflect the price conditions in the Northeast as well as in Pennsylvania. The average wholesale milk price for Pennsylvania will also be used to reflect price conditions in Pennsylvania. These prices will be

reported before deductions for the DTP program and for the advertising and promotion program. The effective prices for the dairy farmer, once the above deductions were made, are given in Appendix C.

Figure 11 gives the monthly support price for 1985 through 1987. As

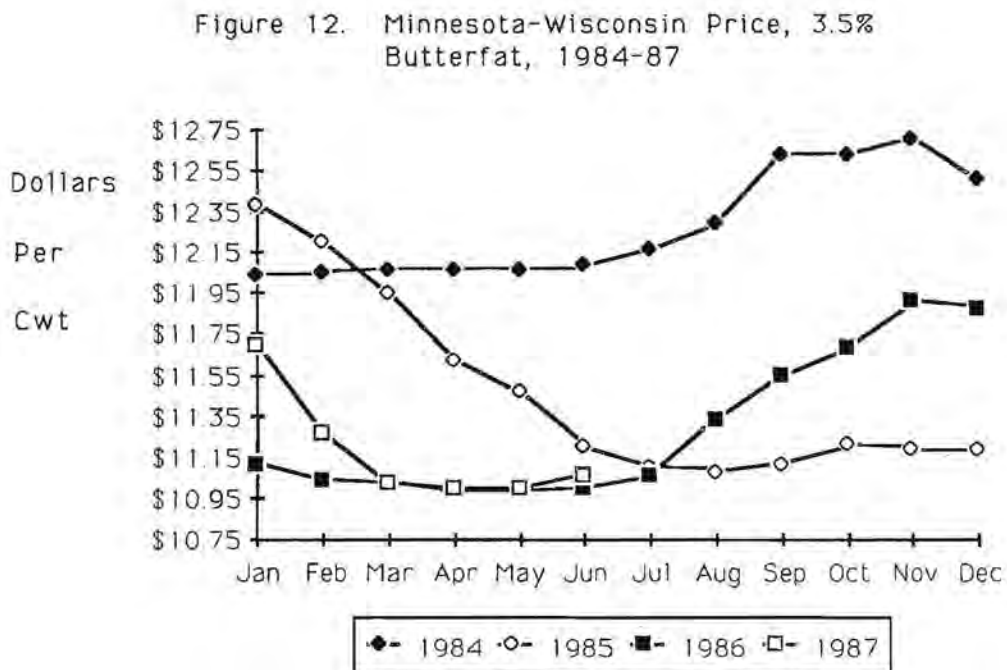
Figure 11. Support Price, 3.5% Butterfat, 1984-87



part of the actions taken to reduce the supply of milk and thus CCC purchases and costs, the support price of milk was reduced \$1.75 from the period from December 1983 to January 1987. The support price was decreased by 50-cents on December 1, 1983, by 50-cents on April 1, 1985, by 50-cents on June 1, 1987 and by 25-cents on January 1, 1987. Another 25-cent reduction is scheduled for October 1, 1987. Further cuts in the support price are contingent on January 1, 1988, 1989, and 1990 forecasts of CCC purchases for the ensuing year. These reductions in the support

price, along with other supply reduction programs, began to have a significant impact, first on the M-W price and minimum Class I, II, and III prices of milk, and then on the supply of milk.

The Minnesota-Wisconsin prices from 1983 to 1987 are shown in Figure 12. The M-W prices were fairly stable in 1983 but were 18 to 32-



cents lower than the support price. During this time CCC purchases were extremely large but not large enough to result in the M-W price attaining the desired support level. With the first reduction in the support price in December 1983, the M-W dropped 45-cents from the preceding month. Although there was no further cut in the support price in 1984, the M-W decreased 6-cents in January, probably in response to the December 1983 cut in the support price. From January through June 1984,

the M-W price held steady, although still at levels, about 25-cents, significantly below the support price. In response to the Diversion Program reducing the supply of milk, the M-W price began to increase in June 1984, slowly at first but then increasing significantly for two months. By September 1984, it had reached \$12.64, 33-cents above the support price.

For the rest of 1984, it remained around that level, but dropped to \$12.52 in December which was still 21-cents above the support price. The average M-W price in 1984 was only 20-cents lower than the average price in 1983, despite the 50-cent reduction in the support price.

In 1985, the M-W continued to decrease until it reached its lowest price of \$11.08 in August. The M-W price declined for two reasons. First, there were two 50-cent reductions, one in April and one in June. Secondly, the supply of milk and CCC purchases began to increase dramatically as the impact of the Diversion program began to fade. In September, the M-W increased slightly, but was still well below the support price. The average M-W price for 1985 was \$11.48, 81-cents below the average M-W price for 1984.

The M-W continued to decline in 1986 until it reached a low of \$10.98 in April. This was due again to the large supply of milk and large levels of CCC purchases during the first half of the year. However, the MTP began to have an impact on the M-W in June as the program resulted in a reduction of the milk supply which began about that time. The M-W increased slowly at first but then increased monthly by fairly large amounts for the rest of the year. By November 1986, the M-W had increased to \$11.91 and was 60-cents above the support price. In December, the M-W price decreased 3-cents, probably due to the expected 25-cent decrease in the

support price due for January 1987. The M-W averaged \$11.30 for 1986, only 1-cent below the support price for the year.

The increase in the M-W during the last half of 1986 is a good indication of how it will respond to a situation in which the commercial market is setting the price and not the government. When there is more milk than the commercial market is willing to purchase, the CCC has to create an artificial demand by buying products from the market. The market price should fall to the support level at which the CCC buys butter, cheese, and nonfat dry milk. However, the purchases of product by the CCC sometimes cannot prevent the M-W from falling below the support price, as happened in 1984 and 1985. At these times CCC purchases are quite large since there is a very large surplus of milk which the commercial market is unwilling to purchase unless the price is much lower.

In January 1987, the M-W price was \$11.70 and had decreased due to the 25-cent reduction in the support price that month. However, it was still well above (63-cents higher) the support price. It dropped 43-cents in February but was still 20-cents above the support price. The decline in the M-W continued until April and May where it stabilized at \$11.00, 7-cents below the support price. In June, the M-W increased to \$11.07 and was equal to the support price. For the first half of 1987, the M-W was 16-cents higher than the M-W in the first half of 1986, despite the 25-cent decrease in the support price in January 1987. This occurred because the DTP had continued to reduce the supply of milk and CCC purchases.

Federal Order Prices

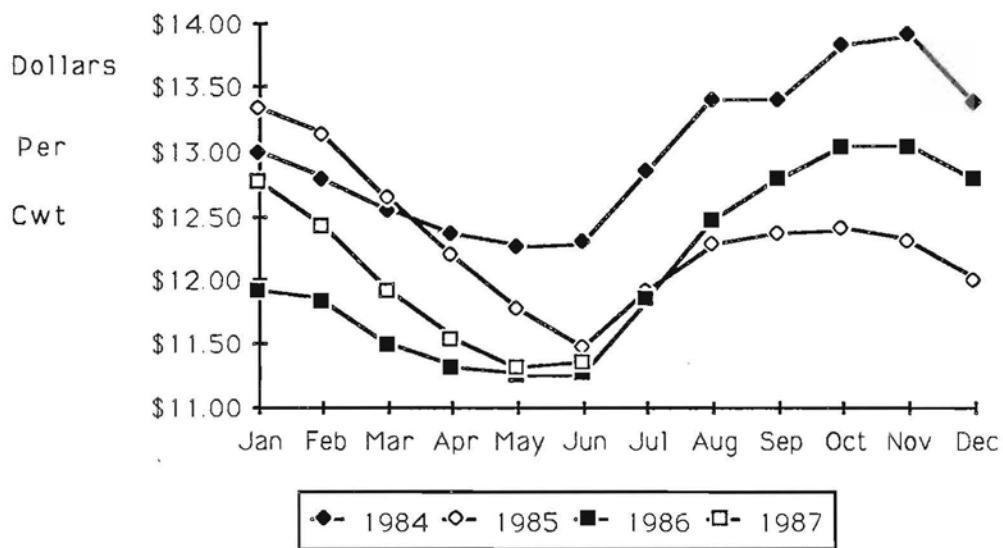
Three Federal milk marketing orders set minimum prices for milk in the Northeast and prices for milk received by Pennsylvania dairy farmers. These are Federal orders #2, #4, and #36. All three use the M-W price as the basis for setting the minimum class prices in the respective order. Generally these prices and the price the farmer receives (the uniform or blend price) follows the directional change in the M-W very closely. The blend price may differ between orders since it is a weighted average of the utilization of milk in each order and since each order has a different transportation differential it uses to set the minimum Class I price. The blend prices reported here are not adjusted for within order location differentials, government assessments, hauling, cooperative dues, or butterfat percentage (prices are for 3.5% butterfat). Effective milk prices or the blend price less the government assessments are given in Appendix C. These prices are the prices farmers receive before the other adjustments mentioned previously are deducted. The assessments resulted in quite different effective prices for farmers from one year to the next.

Order #2 Blend Prices

Blend prices received for dairy farmers who sell their milk in Federal Order #2 are given in Figure 13. In 1984, blend prices decreased from \$12.99 in January to \$12.26 in May. In June the blend price began increasing and reached its highest level for the year, \$13.91 in November but then declined to \$13.38 in December. This increase in the latter half of

the year was in direct response to the effects of the Diversion program. The minimum Class prices increased due to increases in the M-W price and the proportion of the milk used in Class I products increased, 42.4% for the last half of 1984 compared to 37.7% for the first half. Thus dairy farmers

Figure 13. Federal Order #2 Blend Prices, 3.5% Butterfat, 1984-87



received a higher blend price. The average blend price in Order #2 for 1984 was \$13.00.

In 1985, the blend price in Order #2 continued to decline from \$13.34 in January through June where it reached its minimum for the year of \$11.47. The blend price then increased from July to November but decreased again in December. The average blend price for 1985 was \$12.32, 68-cents lower than in 1984. The support price was decreased

\$1.00 during the year and this was a major factor behind the decline in the blend price.

The average blend price for the first half of 1985 was \$12.43 and was \$12.21 in the second half. The blend price was only slightly lower in the second half because the total amount of milk used decreased in the second half and was 3.1% lower than the total amount used in the first half. Along with this decrease in the total amount of milk used, there was an increase of 0.9% in the amount of milk used in Class I products from the first to the second half of 1985. This resulted in a Class I utilization of 40.7% for the second half compared to a Class I utilization of 39.1% in the first half. Thus farmers received a higher Class I price on a greater proportion of their milk during the second half of 1985 and their blend price was only slightly lower in the second half of 1985.

The blend price in Order #2 in 1986 continued its decline due to sharply increased production and reached its low point of \$11.25 for the year in May. The DTP began to affect production and prices in June and the blend price increased by 2-cents from May to June. The blend price then increased by 59-cents from June to July. The blend price continued to increase through October when it reached its highest level of \$13.05, \$1.80 higher than for the lowest level in May, for both October and November. The blend price then dropped slightly to \$12.78 in December probably due to the expected 25-cent decrease in the support price scheduled in January 1987.

The average blend price in Order #2 for 1986 was \$12.09, 23-cents lower than in 1985. The average blend price for the first half of 1986 was \$11.52 compared to \$12.43 for the first half of 1985. For the second half of 1986 the blend price was \$12.71 compared to \$12.21 for the second half

of 1985. In addition to the increase in the blend price in the last half of 1986 as a result of higher M-W prices, there was an increase in the amount of milk used in Class I products and a decrease in the total amount of milk marketed. The amount of milk used in Class I products increased 0.3% while the total amount of milk used decreased 4% during the last half of 1986 from the last half of 1985. Thus, the Class I percentage was slightly higher for the second half of 1986 than in the second half of 1985, 42.4% compared to 40.7%. Thus farmers were also receiving a higher price for a greater proportion of their milk in the last half of 1986.

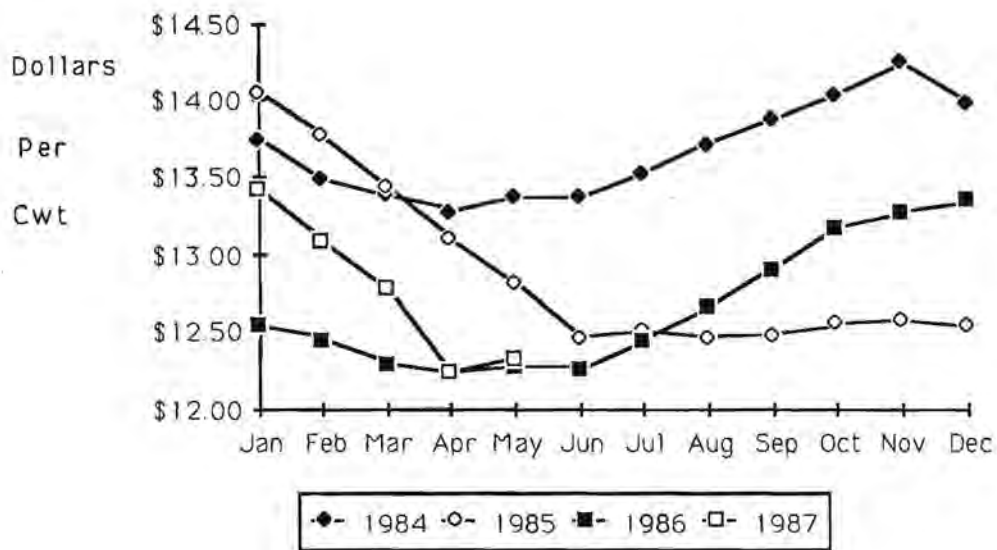
The blend price in Order #2 decreased during the first half of 1987 as expected since the January 25-cent decrease in the support price resulted in a decrease in the M-W price. The blend price decreased from \$12.76 in January to \$11.30 in May but then increased slightly to \$11.35 in June. The average blend price for the first half of 1987 was \$11.88 compared to an average blend price of \$11.52 for the first half of 1986. The blend price was 36-cents higher in the first half of 1987 than in the first half of 1986 despite the 25-cent reduction in the support price in January.

Part of this increase is the continuing decline in the total amount of milk marketed in Order #2. The total amount of milk used in Order #2 in the first half of 1987 declined 5.3% from the amount used in the first half of 1986. Although the amount of milk used in Class I products declined 1.5% from the first half of 1986 to the first half of 1987, the percent Class I utilization increased from 37.4% in 1986 to 38.9% in 1987.

Order #4 Blend Prices

The blend prices received in Order #4 from 1984 to 1987 are shown in Figure 14. Since the prime mover of all Federal Order minimum prices is

Figure 14. Federal Order #4 Blend Prices, 3.5% Butterfat, 1984-87



the M-W price, the blend prices in Order generally followed the same pattern as blend prices in Order #2. However, the actual levels differed since the Class I differential is slightly higher and the levels and percentage of milk used in Class I were different. In 1984, the blend price in Order #4 declined from \$13.76 in January to \$13.28 in May and then began to increase steadily to its highest level of \$14.24 in November before falling to \$13.99 in December. The difference from the highest blend price in November to the lowest blend price in May was 96-cents.

The average blend price for 1984 was \$13.67.

The increase in the blend price in the second half was due primarily to the increase in the M-W price as a result of the diversion program. The average blend price for the first half of 1984 was \$13.44 and was \$13.80 for the second half of 1984. However, part of the increase was due to a decrease in the total milk used and an increase in the use of milk in Class I products. The total amount used in Order #4 decreased 4.9% from the first to the second half of 1984. The amount of milk used in Class I products increased 0.1% from the first to the second half of 1984. Class I utilization for the first half of 1984 was 48.2% and was 50.8% for the second half of 1984.

In 1985, the blend price decreased from \$14.05 in January to \$12.47 in May. There was a slight increase in June to \$12.51 before the blend price reached its lowest level of \$12.46 in August. The blend then increased slightly to \$12.57 in November before decreasing again to \$12.53 in December. The average blend price for 1985 was \$12.90, a 77-cent decrease from the average blend price in 1984. The average blend prices for the first and second halves of 1985 were \$13.28 and \$12.52, respectively. The decrease was due to the decrease in the support and thus the M-W price. However, the amount of the decrease was lessened by an increase in the Class I utilization percentage from 45.7% in the first half to 46.3% in the second half. While the total use of milk increased 1.8%, the amount of milk used in Class I products increased 3.2% and thus farmers received the higher Class I price on a greater proportion of their milk in the second half.

In 1986, the blend price continued its decline from \$12.53 in January to its lowest level in the year of \$12.23 in April. The blend price began a

steady increase from the April level, although it increased slightly from April to May and then decreased slightly from May to June. The blend price in Order #4 reached its highest level of \$13.34 in December. There was a \$1.11 difference in the blend price from April to December. The average blend price for 1986 was \$12.66, 24-cents lower than in 1985.

During the first half of 1986 the blend price was \$12.34, 94-cents higher than in the first half of 1985. The blend price during the second half of 1986 was \$12.97, 45-cents higher than in the second half of 1985 and 63-cents higher than in the first half of 1986. This was primarily due to the DTP program's effect on the M-W price but also to the changes it made in the volumes of milk in Order #4. However, the use of milk in Order #4 also changed from the first to the second half of 1986 and from 1985 levels. The total amount of milk used in the order decreased 3.2% while the amount of milk used in Class I products increased 5.5% from the first half to the second half of 1986. This resulted in a greater proportion of milk receiving the higher Class I prices in the second half of 1986, 48.7% compared to 44.7% in the first half, and thus higher blend prices.

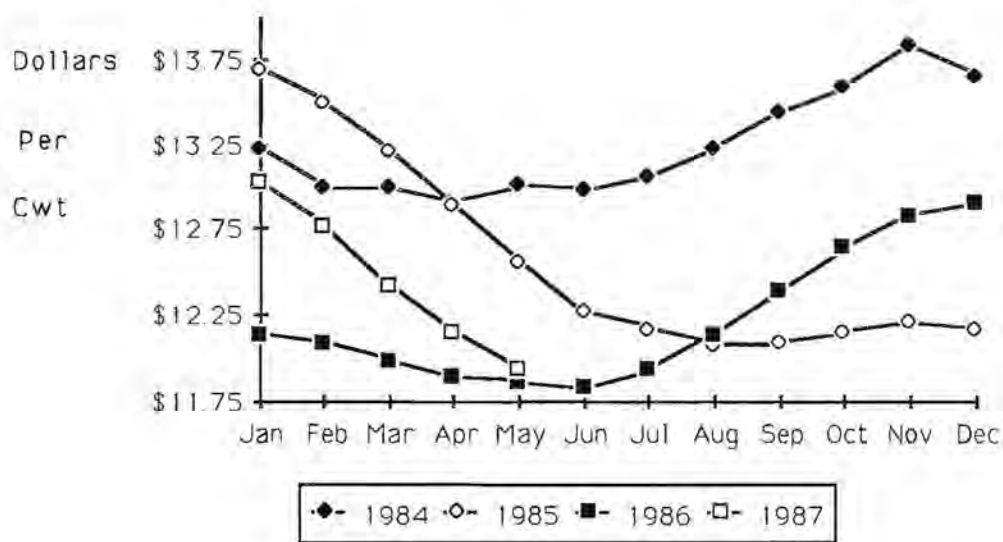
In 1987, the blend price decreased from \$13.42 in January to \$12.23 in April and then increased to \$12.44 in June. The average blend price for the first half of 1987 was \$12.71, 37-cents higher than the average blend price for the first half of 1986 despite the 25-cent reduction in the support price in January. The main reason for this was the higher M-W price as a result of the DTP. The DTP was probably also responsible for a 0.8% decrease in total milk used in the order from the first half of 1986 to the first half of 1987. Along with his decrease in the total milk used, there was a 5.5% increase in the amount of milk used in Class I products from the first half of 1986 to the first half of 1987. The Class I utilization

increased from 46.6% to 47.5%. Thus a greater proportion of milk received the higher Class I price and blend prices increased as a result.

Order #36 Blend Prices

The blend prices received in Order #36 from 1984 to 1987 are shown in Figure 15. In 1984, the blend price in Order #36 decreased from \$13.23

Figure 15. Federal Order #36 Blend Prices, 3.5% Butterfat, 1984-87



in January to its lowest level of \$12.92 in April. The the blend price began a steady increase, with a slight drop to \$12.98 in June, to its highest level for the year of \$13.83 in November. In December, the blend price decreased slightly to \$13.66. The average blend price in Order #36 for 1984 was \$13.25.

The average blend price for the second half of 1984 was \$13.47, 45-cents higher than the average blend price in the first half of 1984. This was due to the impact of the Diversion Program on the M-W price and its simultaneous impact on the total amount of milk used in the order. The total amount of milk purchased from farmers, or the total usage, decreased 6.6% from the first to the second half of 1984. The use of milk in Class I products increased 2.3% from the first to the second half of 1984. Thus, farmers were receiving the higher Class I price on a greater proportion of their milk in the last half of 1984 (57.6% in the second half compared to 52.6% in the first half).

The blend price in Order #36 in 1985 decreased sharply from a level of \$13.70 in January to its lowest level of \$12.08 in August as a result of the two 50-cent cuts in the support price that occurred in April and June. The blend price began slowly increasing in September and reached \$12.21 in November before decreasing slightly to \$12.17 in December. The average blend price for 1985 was \$12.59, 66-cents lower than the 1984 average blend price.

The average blend price for the first half of 1985 was \$13.03, 88-cents higher than the average blend price for the second half of 1985. Most of this difference was due to the reduction in the support price. However, there were changes in the volumes of milk used in the order that also contribute to the differences in the blend prices. There was a considerable increase, 5.4%, in the total amount of milk used in the order. There was also a slight increase of 0.7% in the amount milk used in Class I products but this was not enough to offset the negative impact of the increase in total milk marketed in the order. A smaller proportion of milk was used in

Class I products in 1985 than in 1984, 52.6% compared to 55.0%. Thus, this also caused the blend price to be lower in 1985 than in 1984.

During 1984, the total amount of milk marketed increased 1.2% from the first to the second half of the year. The amount of milk used in Class I products decreased 1.6% from the first half to the second half of 1984. Therefore, a smaller proportion, 52.6% compared to 51.1%, of farmer's milk was receiving the higher Class I price. This also contributed to the lower blend prices during the second half of 1985.

In 1986, the blend price continued its decrease and decreased from \$12.14 in January to its lowest level for the year of \$11.82 in June. In July the DTP began to affect the blend price and it began to increase and increased to its highest level of the year of \$12.91 in December. The average blend price for 1986 in Order #36 was \$12.22.

The average blend price during the second half of 1986 was \$12.48, 52-cents higher than the average blend price in the first half. The difference in the blend price can be attributed to the increase in the M-W price as well as changes in the marketings of milk in the order. The total amount of milk marketed in the order decreased 9.7% while the amount used in Class I products increased 3.4% from the first half to the second half of 1986. The average Class I utilization for the first half of 1986 was 48.8% and the Class I utilization for the second half was 54.8%. Thus, more milk was receiving the higher Class I price during the second half of the year and the blend prices higher.

In 1987, the blend price began decreasing from its level of \$13.02 in January to \$11.94 in May before increasing slightly to \$11.98 in June. The average blend price for the first half of 1987 was \$12.38, 42-cents higher than the average blend price for the first half of 1986. This came about

despite the 25-cent reduction in the support price in January 1987. The blend price was higher in the first half of 1987 due to a reduction of 4.5% in the total amount of milk marketed and an increase of 1.4% in the amount of milk used in Class I products. This resulted in an average Class I utilization of 50.8% in the first half of 1987 compared to an average Class I utilization of 48.8% in the first half of 1986. Thus, a greater proportion of milk was receiving the higher Class I price in the first half of 1987 than in the first half of 1986. This caused an increase in the average blend price. Without this increase in Class I utilization, the average blend price would probably have been lower than in the first half of 1986.

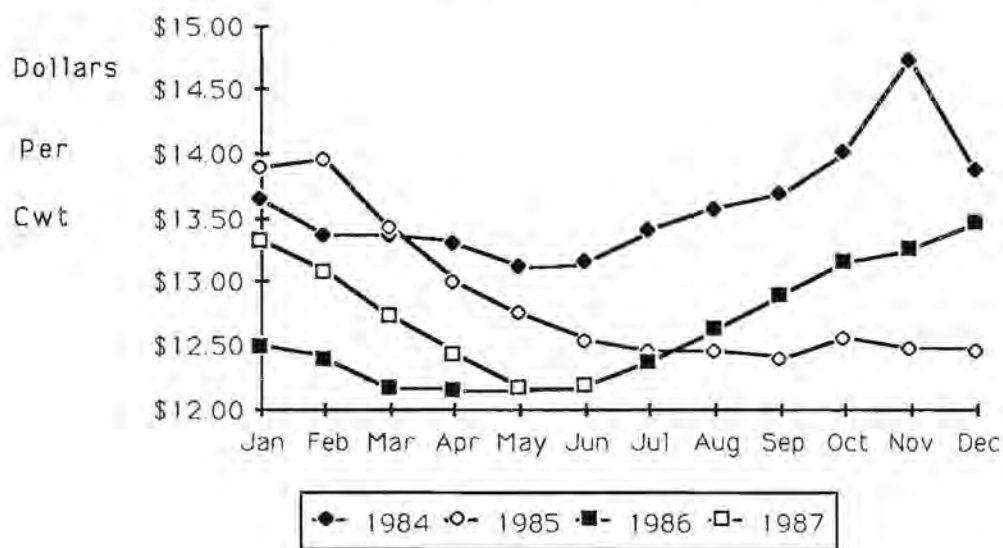
Average Pennsylvania Wholesale Milk Prices

The average wholesale milk prices (average blend prices) received by Pennsylvania dairy farmers from 1984 to 1987 are shown in Figure 16. The average Pennsylvania wholesale milk prices are the average prices received by all dairy farmers in Pennsylvania selling milk in Federal and State Milk Marketing Orders and those who sell Grade B milk.

In 1984, the average wholesale milk price declined from \$13.77 in January to its lowest level for the year of \$13.04 in June. It then began to increase and increased to its highest level during the year of \$14.31 in November before declining to \$14.18 in December. The average wholesale milk price in Pennsylvania in 1984 was \$13.59. The average wholesale milk price in the second half of 1984 was \$13.81, 45-cents higher than in the first half of 1984.

The average wholesale milk price continued to decline in 1985. It declined from \$13.96 in January to \$12.34 in July and then began increasing to \$12.86 in November. In December the wholesale milk price declined slightly to \$12.74. The average wholesale milk price for 1985 was \$12.92, 67-cents lower than in 1984. The average wholesale milk prices for the first and second halves of 1985 were \$13.23 and \$12.60, respectively.

Figure 16. Average Wholesale Pennsylvania Milk Prices, 3.5% Butterfat, 1984-87



In 1986, the average wholesale milk price declined from \$12.75 in January to its lowest level of \$11.93 in June. In July, it began to increase and increased to its highest level of \$13.59 in November before dropping to \$13.15 in December. The average wholesale milk price in 1986 was \$12.68, 34-cents lower than in 1985 and 91-cents lower than in 1984. In

the second half of 1986, the wholesale milk price averaged \$12.99, 63-cents higher than in the first half. The prices in 1986 were almost mirror images of 1985 prices. Prices were higher in the first half of 1985 and lower in the second half while, in 1986, wholesale milk prices were higher in the second half and lower in the first half.

The average wholesale milk price continued to decline from the November 1986 level in response to the 25-cent reduction in the support price in January 1987. The wholesale milk price declined from \$13.33 in January to \$12.17 in May but then increased slightly to \$12.18 in June. The June figure is a preliminary estimate and will probably be a little higher once all the prices for June are computed and received by the USDA. The average wholesale milk price for the first half of 1987 was \$12.65, 29-cents higher than the wholesale milk price for the first half of 1986.

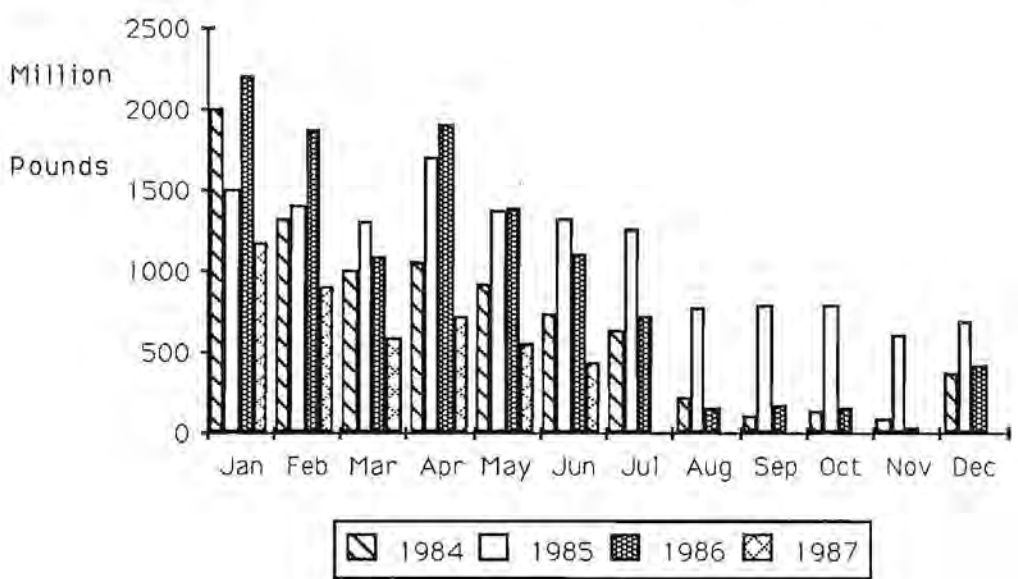
Commodity Credit Corporation (CCC) Purchases

CCC milk equivalent (M.E.) purchases of dairy products through the price support program from 1984-87 are given in Figure 17. The amounts of CCC milk equivalent purchases, purchases of butter, cheese, and nonfat dry milk, both on a total and a regional basis, are given in Appendix E. CCC purchases are usually highest in the first half of a year since higher levels of milk production occur during that time. In the last half of the year, CCC purchases are usually the lowest during the year since production is the lowest during the year and milk supplies are the tightest.

The sharp increases in the support price for milk to relatively high levels in the early 1980's had a very positive effect on milk production.

Milk production and the supply of milk began increasing rapidly during this period and increased at a much faster rate than did commercial consumption. As a result, CCC purchases and costs began to increase and reached alarming levels by 1983. In 1983, CCC purchases totaled 17.2 billion pounds (M.E.) or 12.2% of the total milk production. In order to reduce the CCC purchases various supply control programs, programs

Figure 17. CCC Milk Equivalent Purchases, 1984-87



designed to stimulate demand, and reductions in the support price were enacted during the period from 1983 to 1987.

The CCC purchases were primarily reduced in 1984 as a result of the Diversion Program and a reduction in the support price. In 1984, CCC purchases totaled 8.6 billion pounds (M.E.), a 50% reduction from 1983 levels. Although 1984 CCC purchases were lower than 1983 purchases, the

largest reduction occurred during the last half of 1984. CCC M.E. purchases for the first half of 1984 were 7.1 billion pounds, 38.6% lower than in the first half of 1983. During the second half of 1984, CCC purchases declined to 1.5 billion pounds, 73.7% lower than CCC M. E. purchases in the second half of 1983.

In 1985, CCC purchases increased significantly, as milk production increased sharply with the end of the Diversion program, and totaled 13.4 billion pounds M.E., 56.9% higher than 1984 purchases but still 21.8% lower than the record high 1983 levels. During the first half of 1985, CCC purchases totaled 8.6 billion pounds M.E., 20.9% higher than the purchases in the first half of 1984 but 25.8% lower than the purchases in the first half of 1983. CCC purchases in the second half of 1985 totaled 4.9 billion pounds M.E., 3.3 times higher than in the second half of 1984 but 13.9% lower than the second half of 1983.

CCC purchases during 1986 were significantly affected by the DTP program but not until the last half of 1986. During the first half of 1986, CCC purchases were generally higher than 1985 purchases in all months and totaled 9.6 billion pounds M.E., 11.9% higher than purchased in the first half of 1985. Purchases decreased sharply in the second half of 1986 and totaled 1.6 billion pounds M.E., 67.5% lower than the purchases in the second half of 1985.

CCC purchases in 1987 have also been significantly reduced during the first half of the year, totaling 4.3 billion pounds M. E. The purchases for the first half of 1987 were 55% lower than in 1986, 49.4% lower than in 1985, 38.8% lower than in 1984, and 62.6% lower than in 1983.

Commercial Consumption in the United States

Total commercial consumption of milk from 1970 to 1986 and projected commercial consumption for 1987 are shown in Figure 18. The

Figure 18. Commercial Consumption, Ending Commercial Stocks and CCC Purchases, 1970-86 and Projected 1987.

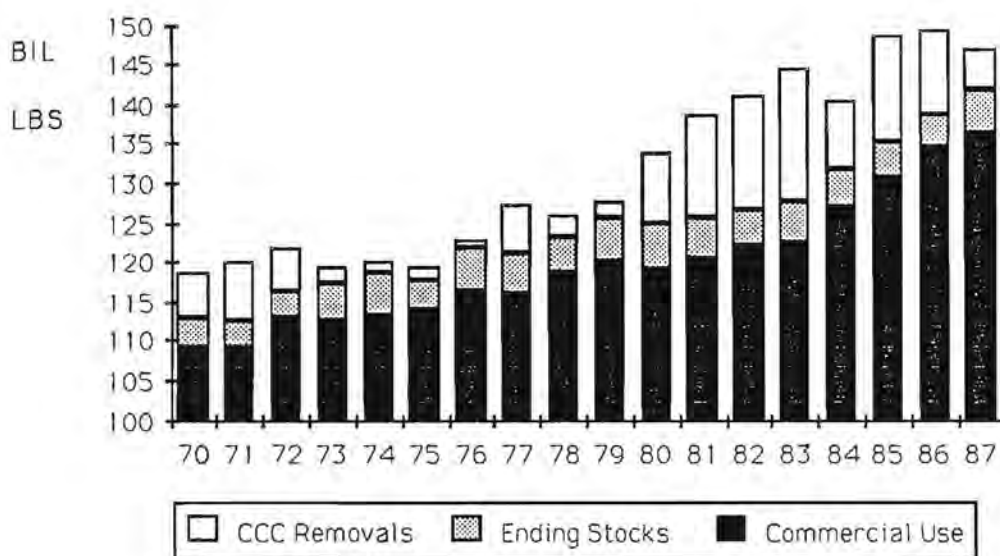


figure also shows CCC purchases, ending commercial stocks. The total of commercial consumption, CCC purchases and ending commercial stocks represents the total utilization of milk in the U. S

During the period from 1970 to 1983, commercial consumption increased at a relatively slow annual rate, an average rate of about 1.1 billion pounds per year. The total increase in commercial consumption from 1970 to 1983 was 13.3 billion pounds, a total increase of 12.2%. From 1983 through 1986, commercial consumption has been increasing at

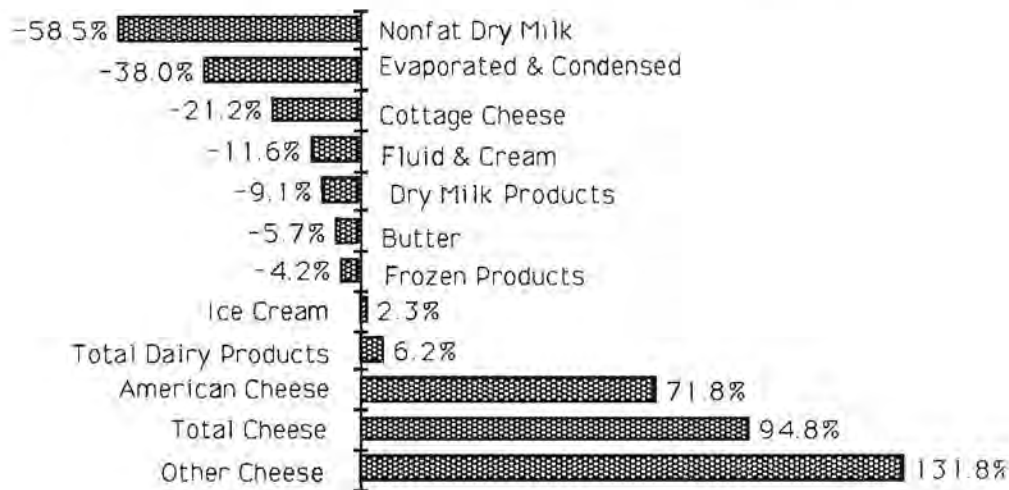
an average rate of 3.9 billion pounds per year or about 3% per year. From 1983 to 1986 the total increase in commercial consumption was 11.8 billion pounds or 9.6%. For the first five months of 1987, commercial consumption was 3.4% higher than in the first five months of 1986.

Not only has the total commercial consumption of dairy products been increasing since 1970, but the per capita consumption of all dairy products has been increasing. In 1970, the civilian per capita consumption of all dairy products was 561 pounds and by 1985 had increased to 596 pounds. From 1970 to 1981, civilian per capita consumption declined to 542 from 561 pounds in 1981. During the period from 1970 to 1981, civilian per capita consumption of all dairy products fluctuated, increasing from one year to the next and then decreasing between some years. However, from 1981 to 1985 there was a steady increase in civilian per capita consumption. Civilian per capita consumption of all dairy products increased from 542 pounds in 1981 to 596 pounds in 1985, an increase of 10.2%. Figures are not yet available for 1986, but they should be expected to show another increase in civilian per capita consumption. However, although the per capita consumption of all dairy products has been increasing since 1981, it still has not reached pre-1970 levels.

The percentage changes in per capita consumption of selected dairy products from 1970 to 1985 are given in Figure 19. Per capita consumption of some dairy products have decreased while others have increased significantly. Nonfat dry milk, evaporated and condensed milk, cottage cheese, total fluid milk and cream, dry milk products, butter, and frozen products decreased during the period from 1970 to 1985. Ice cream and all cheeses have increased during the period. The largest decrease, 58.5%, was for nonfat dry milk and the largest increase, 131.8%,

was for all cheeses other than American Cheese. The cheeses are primarily responsible for the 6.2% increase in consumption of all dairy products from 1970 to 1985.

Figure 19. Percentage Change in Per Capita Consumption of Selected Dairy Products, 1970 to 1985.



For 1986, total consumption of butter increased 1.1%, American cheese increased 5.8%, other cheeses increased 8.2%, nonfat dry milk increased 13.3%, and ice cream increased 0.4% from 1985. Some preliminary figures on 1987 total consumption of dairy products show continuing increases for butter, American cheese, other cheeses, and ice cream and decreases for nonfat dry milk. For the first five months of 1987, butter increased 13.8%, American cheese increased 2.7%, other cheeses increased 5.4%, nonfat dry milk decreased 7.1%, and ice cream increased 0.9% from the same period in 1986.

Summary

The reductions in the support price, the Milk Diversion and the Dairy Termination Program and a steadily increasing commercial consumption of dairy products (resulting, in part, to the increased advertising and promotion of dairy products) have resulted in significant changes in the dairy industry since 1983.

The effects of the Milk Diversion Program, though it was effective and cut CCC purchases in 1984 to half of the 1983 purchases, was short lived. A significant increase in milk production in 1985 resulted in record high levels of CCC purchases in that year and brought about further legislation and programs designed to reduce milk production and CCC purchases and costs. One of these programs was the Dairy Termination Program. It, along with reductions in the support price, began to have a significant impact on the number of milk cows, milk production and milk prices received by farmers in 1986 and 1987.

The number of milk cows in the 48 contiguous states in the first quarter of 1987 was 6% lower than the first quarter of 1986 and 4% lower than in the first quarter of 1985. Milk production in the first quarter of 1987 was 3.5% lower than in the first quarter of 1986 but was still 3.7% higher than in the first quarter of 1985.

The decline in the number of cows and milk production differed between regions of the U. S. The average number of cows in the first quarter of 1987 was lower than in the first quarter of 1985 and 1986 in the Appalachian, the Mid-Western, Mountain, Northeastern, Northern Plains, the Pacific, and the Southern Region. In the Southern Plains region,

the average number of cows in the first quarter of 1987 was lower than in the first quarter of 1986 but significantly higher than in the first quarter of 1985. Milk production in the first quarter of 1987 was lower than in the first quarter of 1986 but higher than in the first quarter of 1985 in all regions.

In Pennsylvania, the number of cows in the first 5 months of 1987 were lower than in the respective months of 1985 and 1986. The number of cows in May 1987 was 3.9% lower than in December 1985, at which time the number of cows in Pennsylvania was at the highest level. However, milk production has not declined as much as cow numbers. In the last four months of 1986, milk production was lower than in the respective months of 1985. In the first five months of 1987, milk production was higher than in the respective months of 1985 and was higher than in the respective months of 1986 except in January and May.

The M-W price was also significantly affected by the changes in milk production and the support price. The M-W price was lower than 1984 levels in all months of 1985, 1986, and 1987 except in January and February 1985. Although the M-W dropped sharply in the first three months of 1987, in response to a 25-cent reduction in the support price, it stabilized and began to increase slightly in May 1987. The M-W price was equal to or higher than 1986 levels in all months in the first half of 1987.

Since, the Federal Orders use the M-W as their base price, the Federal Order prices generally followed the same pattern as the M-W price. Generally, all Federal Order prices are below 1984 and 1985 levels but are above 1986 levels for the first five months of 1987.

CCC purchases were significantly affected by the two supply control programs. In 1984, CCC purchases were reduced to 8.6 billion pounds, half

the level of purchases in 1983. However, CCC purchase in 1985 increased to 13.4 billion pounds as the Milk Diversion Program ended and dairy farmers increased production significantly. CCC purchases for the first half of 1986 were again at very high levels, 11.9% higher than in the first half of 1985. During the second half of 1986, CCC purchases declined significantly and were 68% lower than in the second half of 1985. CCC purchases for 1986 were 17% lower than CCC purchases in 1985. In the first half of 1987, CCC purchases were significantly reduced and were 4.3 billion pounds (M.E.), 49% lower than in the first half of 1986.

Total commercial consumption has been steadily increasing since 1983 at an average annual rate of 3% from 1983 to 1986. This increase has continued into 1987 and for the first five months of 1987, commercial consumption was 3.4% higher than in the first five months of 1986.

Thus, it appears that the surplus, through the effects of the DTP, a much lower support price, and an increasing commercial demand, is under control for 1987. It appears that CCC purchases will not exceed by a large amount, if they do reach, the 5 billion pound target set by the USDA.

APPENDIX A
NUMBER OF COWS
AND
MILK PRODUCTION
48 CONTIGUOUS STATES

Appendix Table A1. Average Number of Milk Cows and Annual Milk Production,
48 Contiguous States, 1985 and 1986.

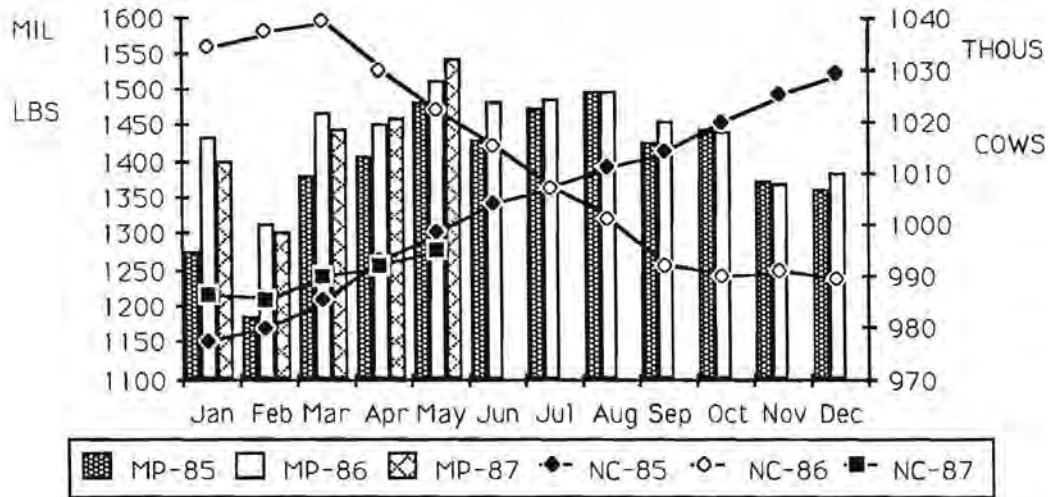
State	Milk Cows			Milk Production		
	1985 Thousands	1986	Change %	1985 Million Pounds	1986	Change %
Alabama	49	44	-10.2	547	529	-3.3
Arizona	86	86	0.0	1,348	1,368	1.5
Arkansas	80	68	-15.0	848	755	-11.0
California	1,004	1,013	0.9	16,768	17,235	2.8
Colorado	78	80	2.6	1,105	1,188	7.5
Connecticut	47	43	-8.5	620	600	-3.2
Delaware	10	10	-1.0	147	147	0.0
Florida	173	179	3.5	2,038	2,153	5.6
Georgia	117	109	-6.8	1,300	1,260	-3.7
Idaho	170	166	-2.4	2,421	2,394	-1.1
Illinois	227	221	-2.6	2,721	2,801	2.9
Indiana	202	202	0.0	2,415	2,456	1.7
Iowa	352	335	-4.8	4,058	3,879	-4.4
Kansas	113	111	-1.8	1,285	1,301	1.2
Kentucky	231	227	-1.7	2,222	2,327	4.7
Louisiana	96	93	-3.1	911	887	-2.6
Maine	55	51	-7.3	673	643	-4.5
Maryland	123	124	0.8	1,625	1,640	0.9
Massachusetts	47	43	-8.5	595	561	-5.7
Michigan	394	379	-3.8	5,568	5,404	-2.9
Minnesota	915	891	-2.6	10,840	10,614	-2.1
Mississippi	87	82	-5.7	876	836	-4.6
Missouri	232	227	-2.2	2,870	2,930	2.1
Montana	28	27	-3.6	349	337	-3.4
Nebraska	109	108	-0.9	1,340	1,350	0.7
Nevada	19	19	1.1	266	274	3.0
New Hampshire	29	28	-3.4	364	371	1.9
New Jersey	38	36	-5.3	487	482	-1.0
New Mexico	67	66	-1.5	1,078	1,092	1.3
New York	948	947	-0.1	11,731	11,744	0.1
North Carolina	128	121	-5.5	1,748	1,695	-3.0
North Dakota	101	97	-4.0	1,120	1,074	-4.1
Ohio	388	383	-1.2	4,870	4,936	1.4
Oklahoma	110	111	0.9	1,183	1,190	0.6
Oregon	100	99	-1.0	1,438	1,471	2.3
Pennsylvania	740	734	-0.8	9,983	10,152	1.7
Rhode Island	4	3	-8.6	44	42	-4.5
South Carolina	48	47	-2.1	584	565	-3.3
South Dakota	162	156	-3.7	1,781	1,723	-3.3
Tennessee	210	207	-1.4	2,235	2,221	-0.6
Texas	319	323	1.3	3,968	4,089	3.0
Utah	83	79	-4.8	1,135	1,155	1.8

Appendix Tabel A1 Cont'd

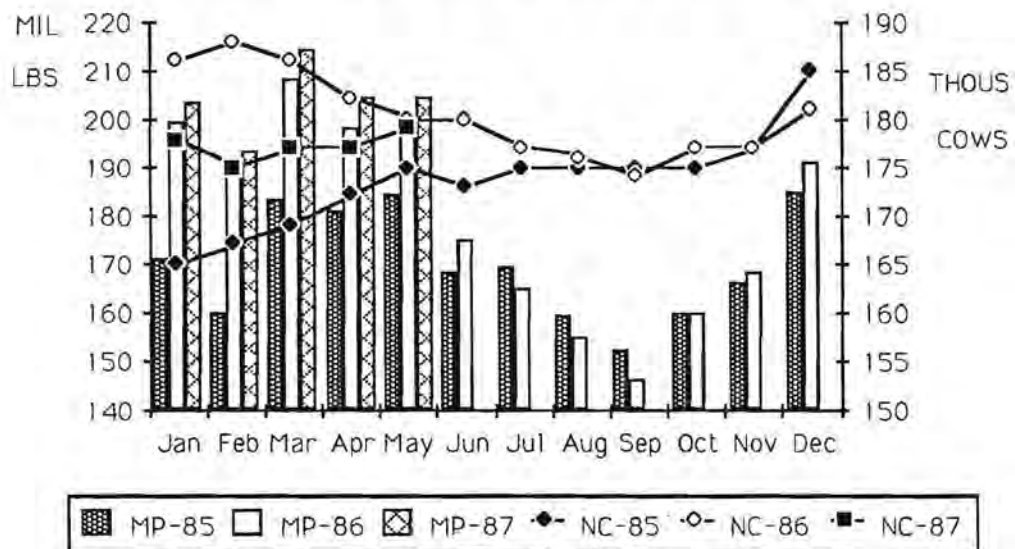
State	Milk Cows			Milk Production		
	1985 Thousands	1986	Change %	1985 Million Pounds	1986	Change %
Vermont	183.0	181.0	-1.1	2,410	2,457	2
Virginia	164.0	155.0	-5.5	2,102	2,096	-0.3
Washington	222.0	212.0	-4.5	3,750	3,762	0.3
West Virginia	34.0	33.0	-2.9	382	375	-1.8
Wisconsin	1,876.0	1,862.0	-0.7	24,700	25,200	2
Wyoming	11.6	10.8	-6.9	134	131	-2.2
Total	11,009.2	10,829.2	-1.6	142,983	143,892	0.6

APPENDIX B
NUMBER OF COWS
AND
MILK PRODUCTION
MAJOR DAIRY STATES

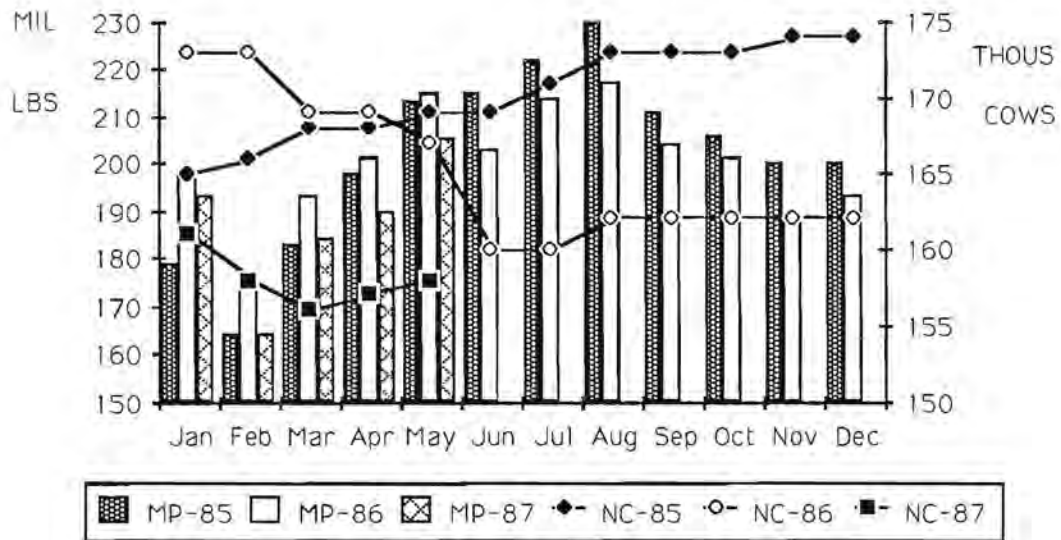
APPENDIX FIGURE 1. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN CALIFORNIA, 1985-87



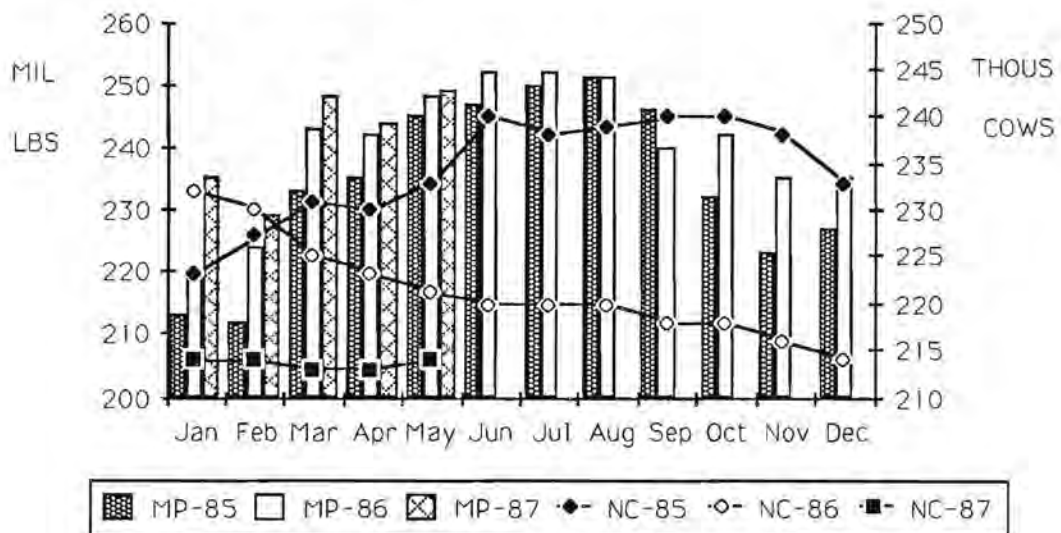
APPENDIX FIGURE 2. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN FLORIDA, 1985-87



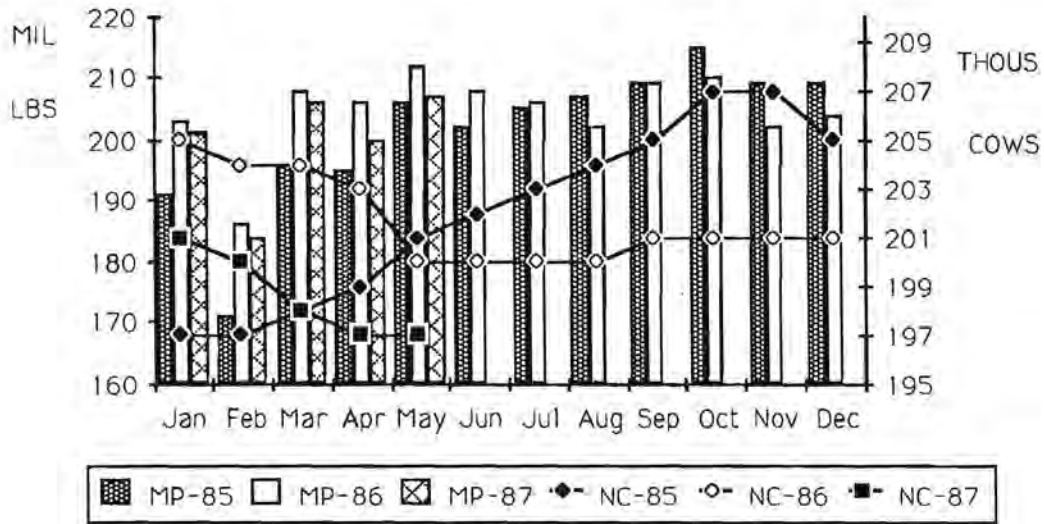
APPENDIX FIGURE 3. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN IDAHO, 1985-87



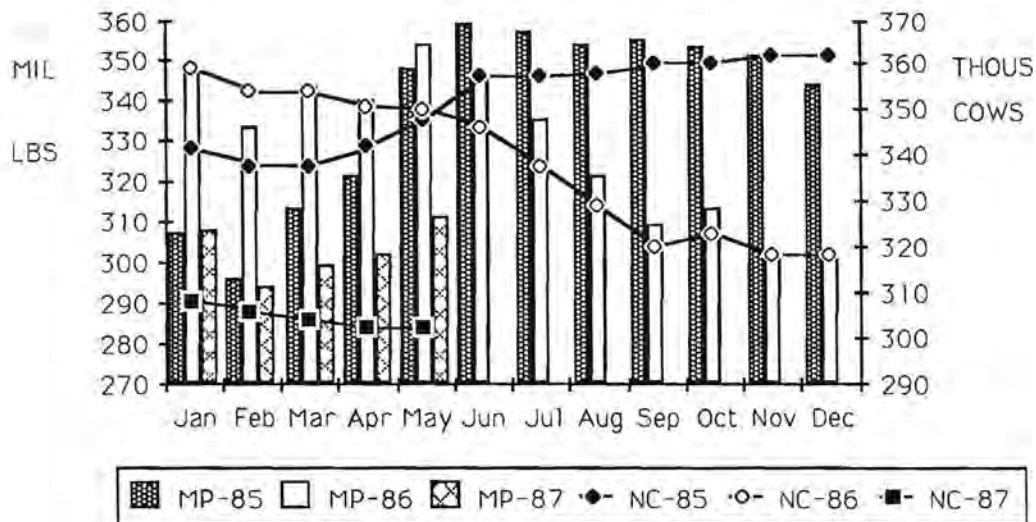
APPENDIX FIGURE 4. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN ILLINOIS, 1985-87



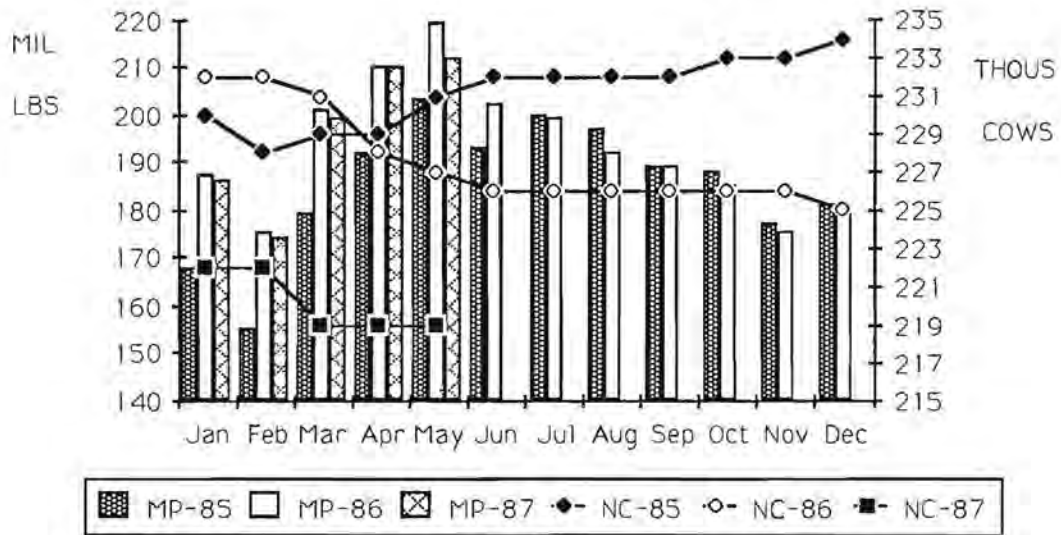
APPENDIX FIGURE 5. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN INDIANA, 1985-87



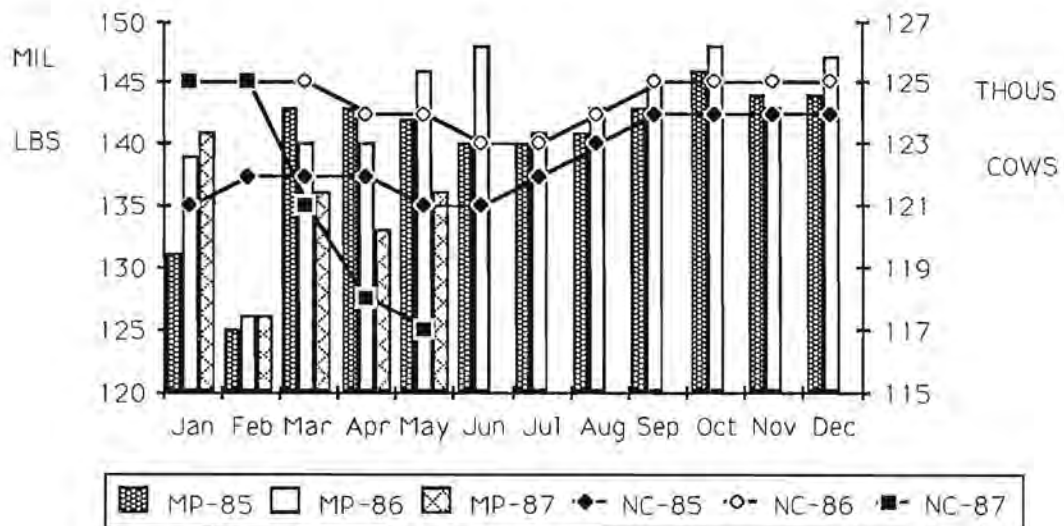
APPENDIX FIGURE 6. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN IOWA, 1985-87



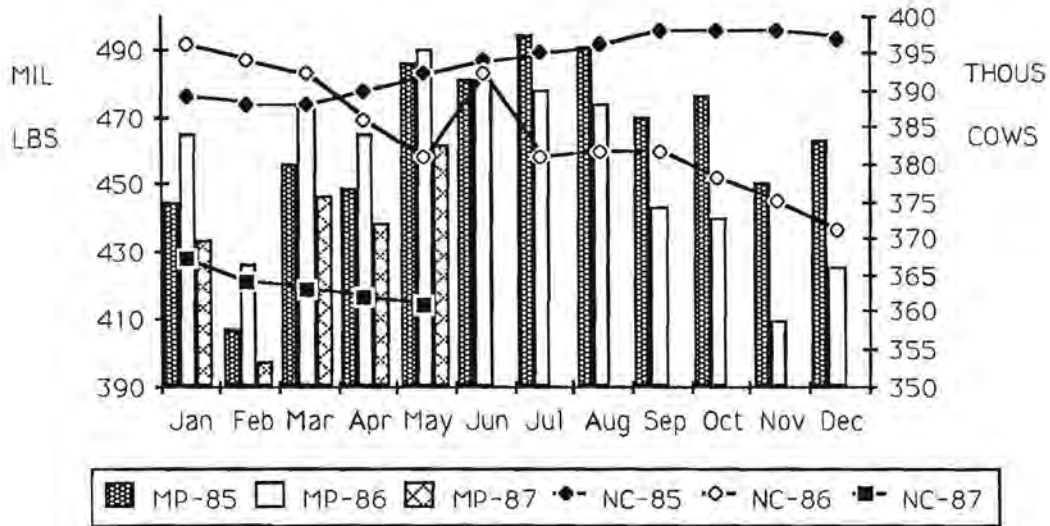
APPENDIX FIGURE 7. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN KENTUCKY, 1985-87



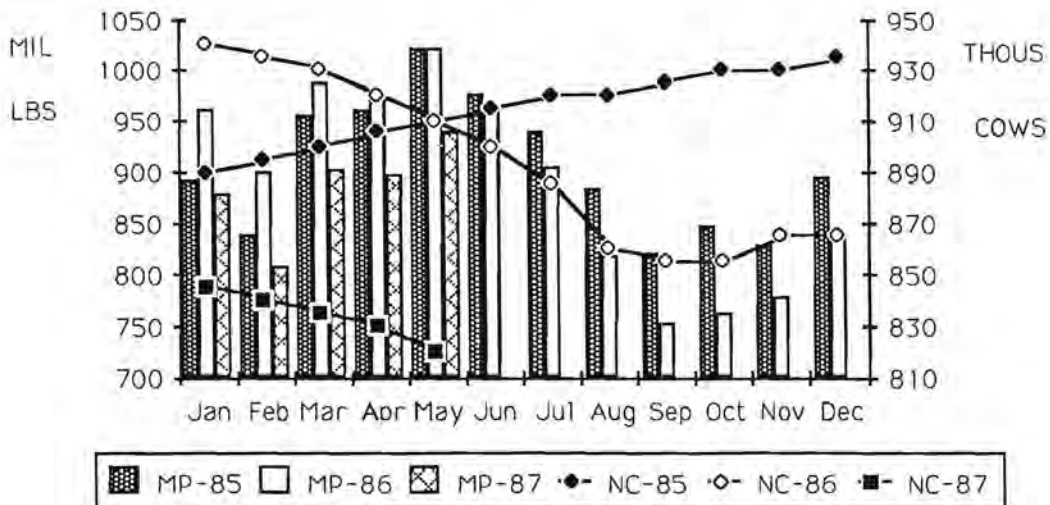
APPENDIX FIGURE 8. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN MARYLAND, 1985-87



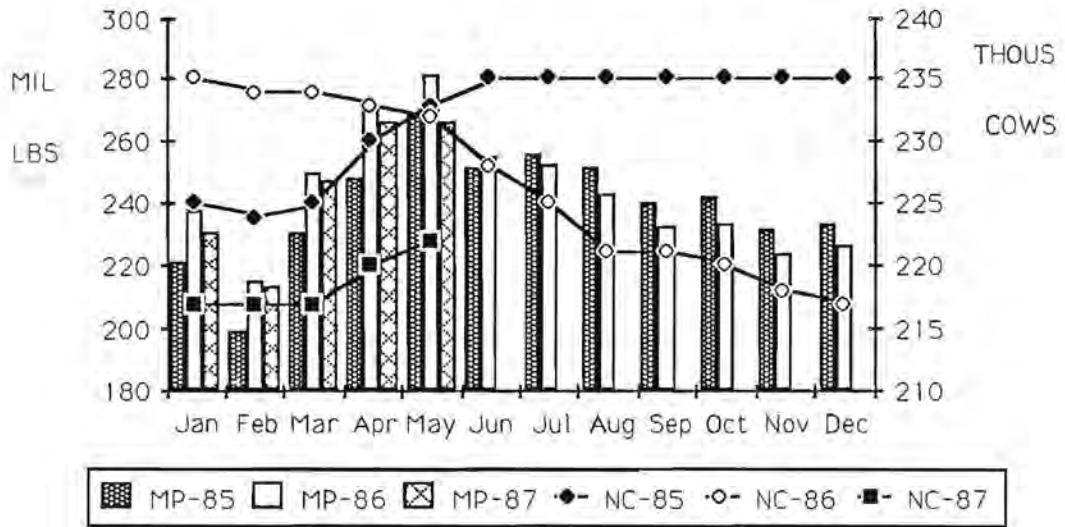
APPENDIX FIGURE 9. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN MICHIGAN, 1985-87



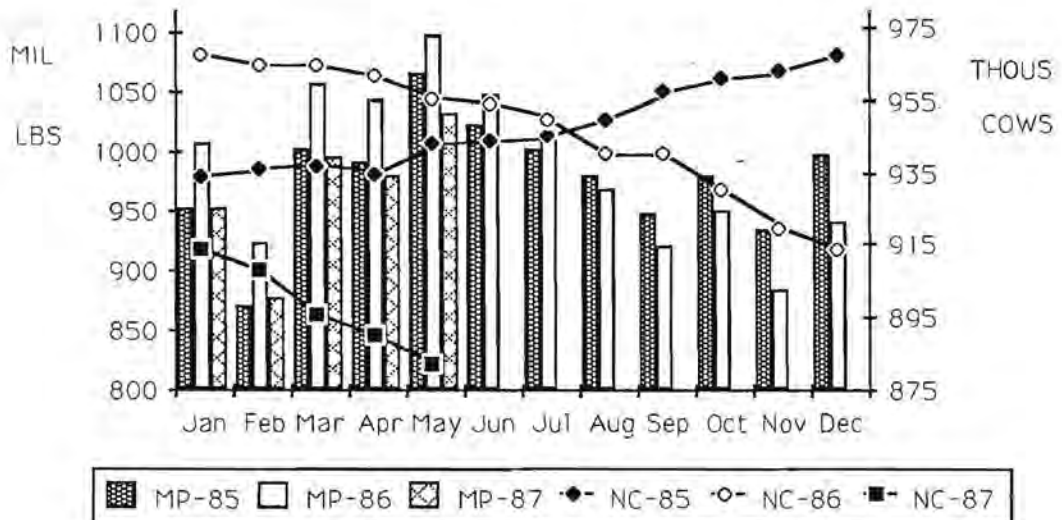
APPENDIX FIGURE 10. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN MINNESOTA, 1985-87



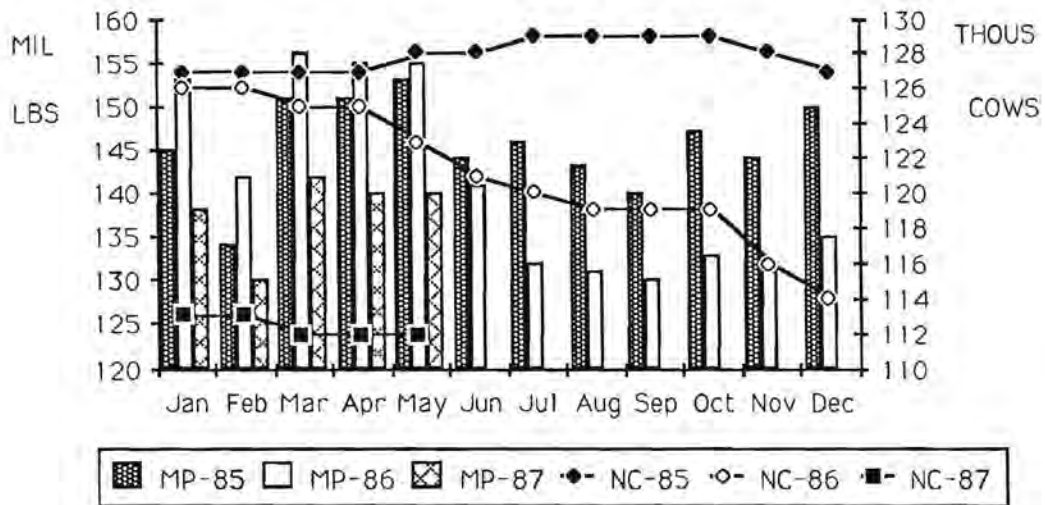
APPENDIX FIGURE 11. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN MISSOURI, 1985-87



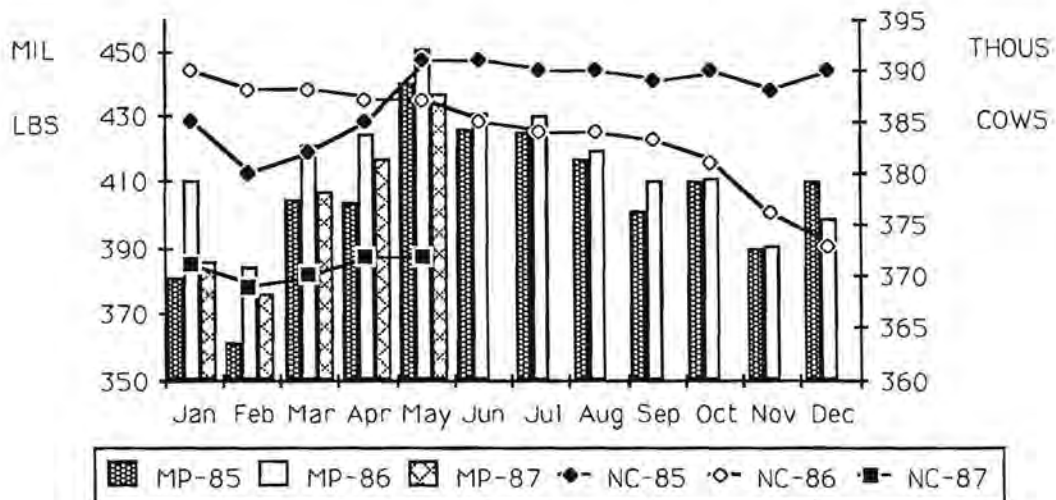
APPENDIX FIGURE 12. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN NEW YORK, 1985-87



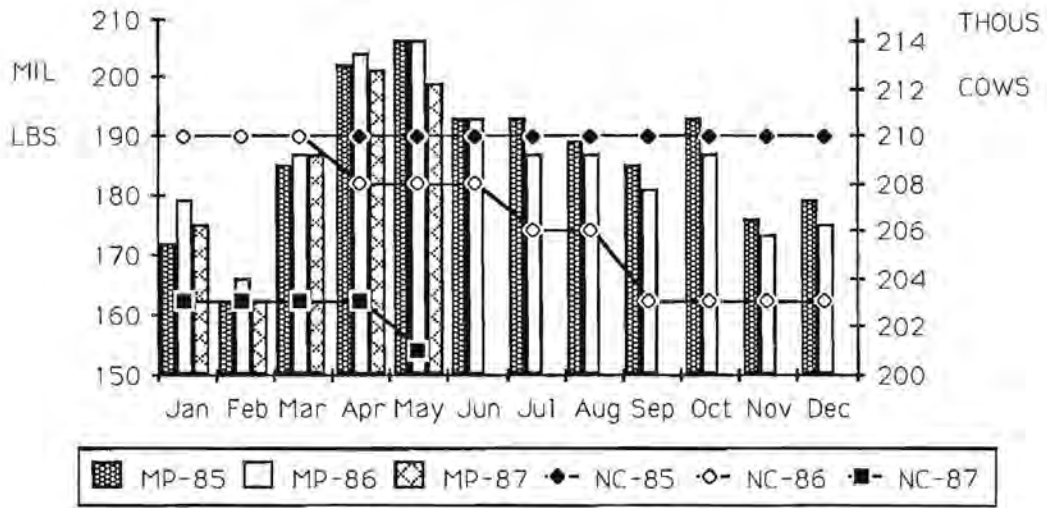
APPENDIX FIGURE 13. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN NORTH CAROLINA, 1985-87



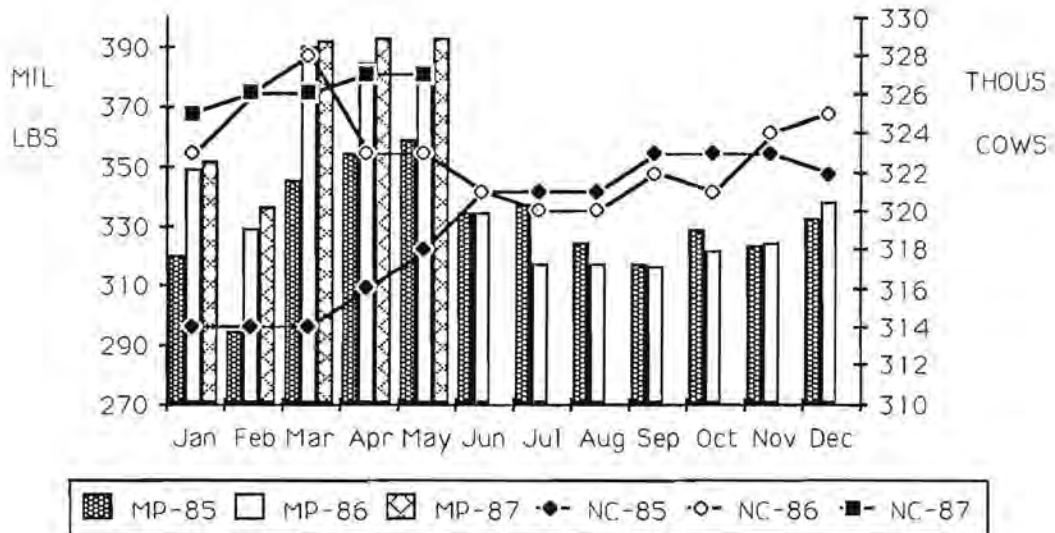
APPENDIX FIGURE 14. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN OHIO, 1985-87



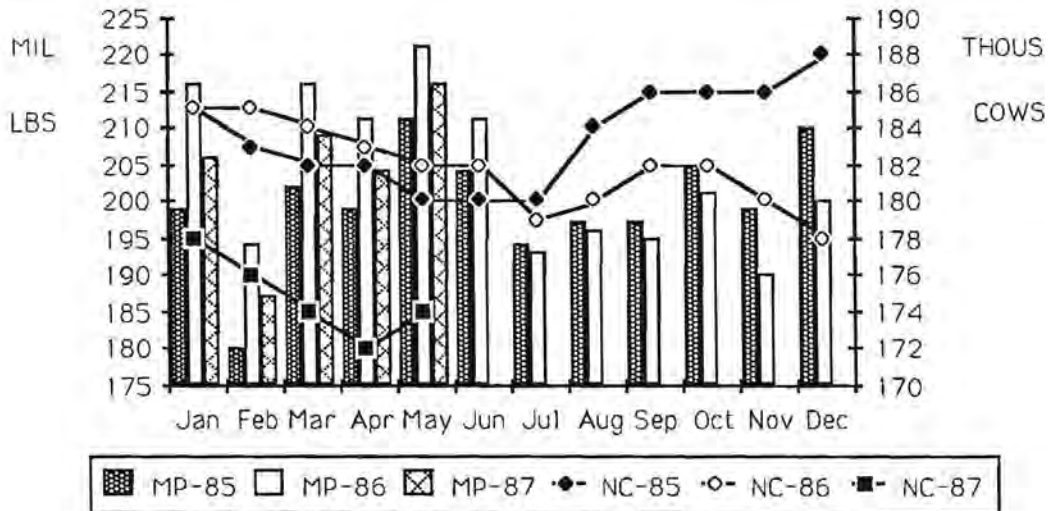
APPENDIX FIGURE 15. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN TENNESSEE, 1985-87



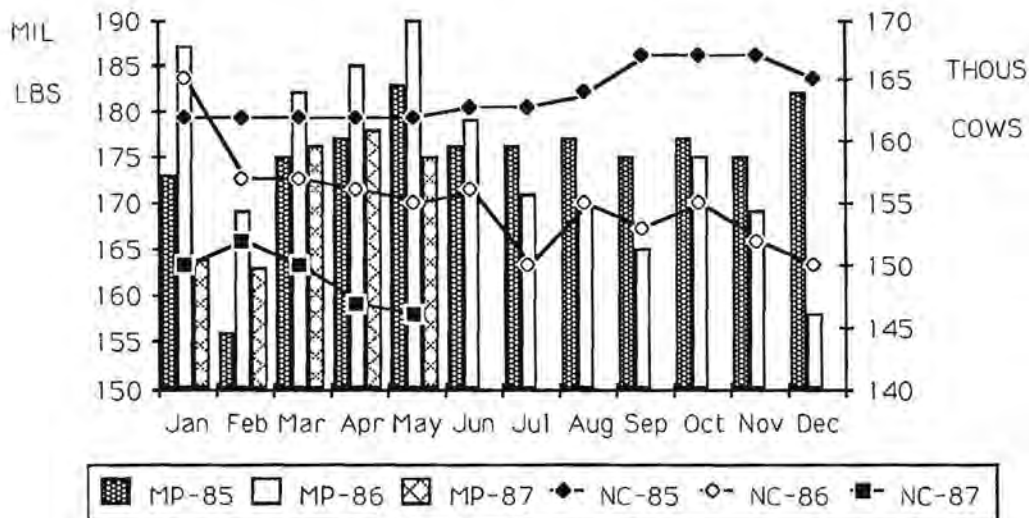
APPENDIX FIGURE 16. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN TEXAS, 1985-87



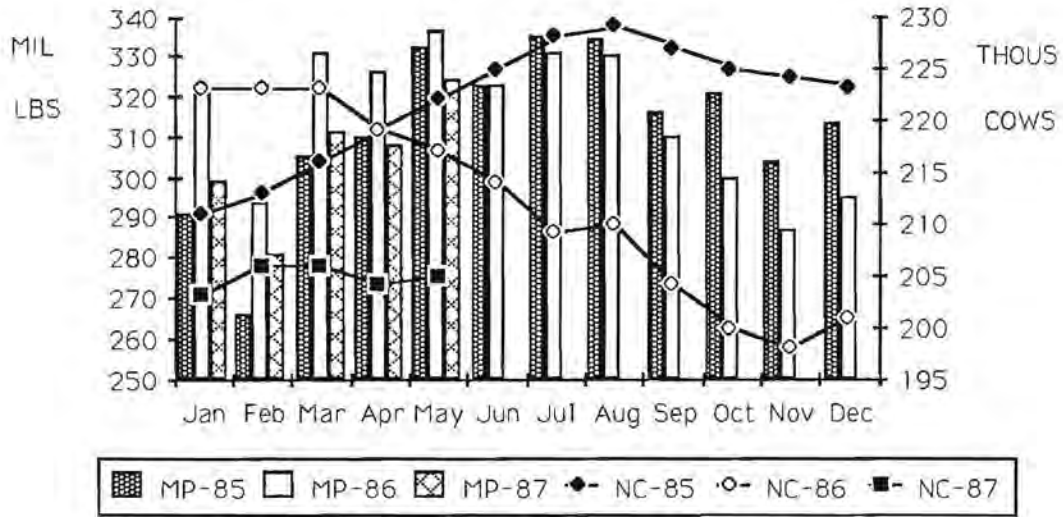
APPENDIX FIGURE 17. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN VERMONT, 1985-87



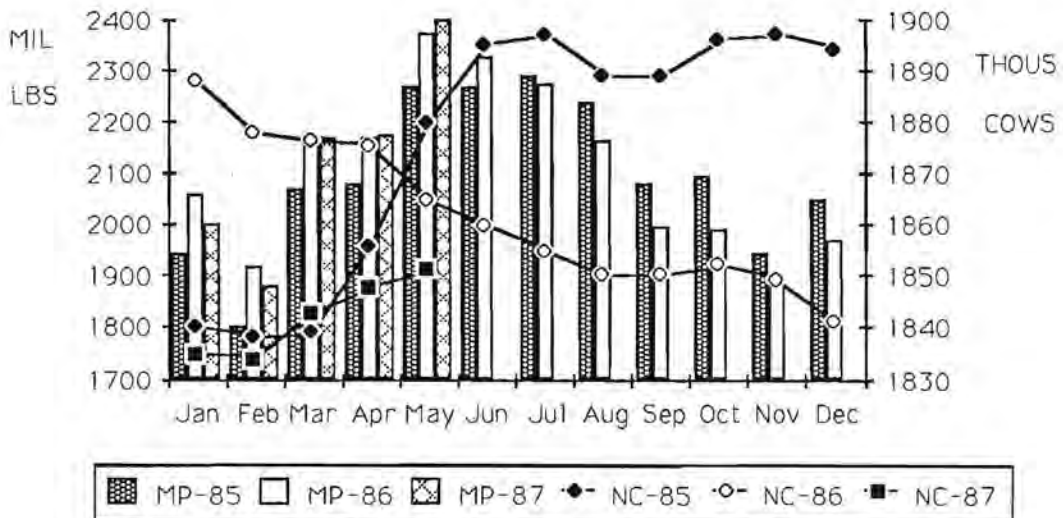
APPENDIX FIGURE 18. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN VIRGINIA, 1985-87



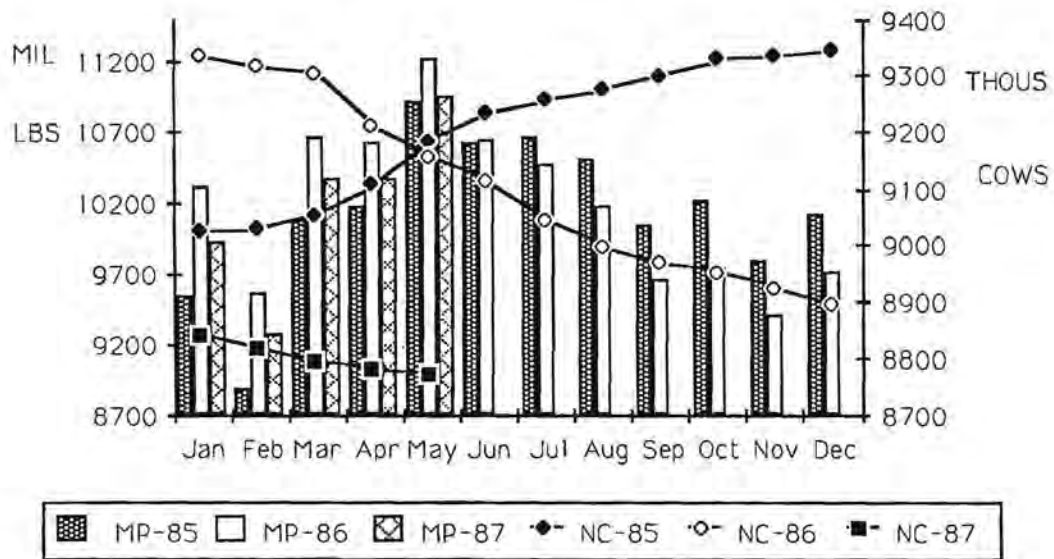
APPENDIX FIGURE 19. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN WASHINGTON, 1985-87



APPENDIX FIGURE 20. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC) IN WISCONSIN, 1985-87



APPENDIX FIGURE 21. MILK PRODUCTION (MP) AND NUMBER OF COWS (NC), 21 MAJOR DAIRY STATES, 1984-87



APPENDIX C
ACTUAL AND EFFECTIVE BLEND PRICES
IN FEDERAL ORDERS #2, #4, AND #36
AND
ACTUAL AND EFFECTIVE AVERAGE WHOLSALE MILK PRICE
IN PENNSYLVANIA

Appendix Table C1. U. S. Support Price for Milk, 3.5% Butterfat, 1984-87

Month	1983	1984	1985	1986	1987
January	\$12.80	\$12.31	\$12.31	\$11.31	\$11.07
February	\$12.80	\$12.31	\$12.31	\$11.31	\$11.07
March	\$12.80	\$12.31	\$12.31	\$11.31	\$11.07
April	\$12.80	\$12.31	\$11.81	\$11.31	\$11.07
May	\$12.80	\$12.31	\$11.81	\$11.31	\$11.07
June	\$12.80	\$12.31	\$11.31	\$11.31	\$11.07
July	\$12.80	\$12.31	\$11.31	\$11.31	
August	\$12.80	\$12.31	\$11.31	\$11.31	
September	\$12.80	\$12.31	\$11.31	\$11.31	
October	\$12.80	\$12.31	\$11.31	\$11.31	
November	\$12.80	\$12.31	\$11.31	\$11.31	
December	\$12.31	\$12.31	\$11.31	\$11.31	
Average	\$12.76	\$12.31	\$11.64	\$11.31	\$11.07

Appendix Table C2. Minnesota-Wisconsin Price, 3.5% Butterfat, 1983-87.

Month	1983	1984	1985	1986	1987
January	\$12.62	\$12.05	\$12.40	\$11.12	\$11.70
February	\$12.59	\$12.06	\$12.21	\$11.04	\$11.27
March	\$12.53	\$12.08	\$11.95	\$11.02	\$11.03
April	\$12.51	\$12.07	\$11.62	\$10.98	\$11.00
May	\$12.51	\$12.08	\$11.46	\$10.98	\$11.00
June	\$12.50	\$12.09	\$11.20	\$11.00	\$11.07
July	\$12.50	\$12.17	\$11.10	\$11.06	
August	\$12.48	\$12.30	\$11.08	\$11.33	
September	\$12.48	\$12.64	\$11.12	\$11.55	
October	\$12.52	\$12.64	\$11.21	\$11.69	
November	\$12.56	\$12.72	\$11.19	\$11.91	
December	\$12.11	\$12.52	\$11.18	\$11.88	
Average	\$12.49	\$12.29	\$11.48	\$11.30	\$11.18

Appendix Table C3. Federal Order #2 Price for Milk (201-210 mile zone),
3.5% Butterfat, 1983-87

Month	1983	1984	1985	1986	1987
January	\$13.35	\$12.99	\$13.34	\$11.92	\$12.76
February	\$13.35	\$12.79	\$13.13	\$11.84	\$12.42
March	\$13.01	\$12.55	\$12.64	\$11.50	\$11.92
April	\$12.85	\$12.36	\$12.19	\$11.31	\$11.55
May	\$12.64	\$12.26	\$11.78	\$11.25	\$11.30
June	\$12.61	\$12.29	\$11.47	\$11.27	\$11.35
July	\$13.12	\$12.84	\$11.93	\$11.86	
August	\$13.59	\$13.39	\$12.27	\$12.46	
September	\$13.74	\$13.39	\$12.37	\$12.79	
October	\$13.74	\$13.83	\$12.40	\$13.05	
November	\$13.63	\$13.91	\$12.30	\$13.05	
December	\$13.07	\$13.38	\$12.01	\$12.78	
Average	\$13.23	\$13.00	\$12.32	\$12.09	\$11.88

Appendix Table C4. Federal Order #4 Milk Prices, 3.5% Butterfat, 1983-87.

Month	1983	1984	1985	1986	1987
January	\$13.92	\$13.76	\$14.05	\$12.53	\$13.42
February	\$13.98	\$13.49	\$13.77	\$12.45	\$13.09
March	\$13.91	\$13.38	\$13.44	\$12.30	\$12.78
April	\$13.80	\$13.28	\$13.11	\$12.23	\$12.23
May	\$13.66	\$13.37	\$12.82	\$12.27	\$12.32
June	\$13.70	\$13.36	\$12.47	\$12.26	\$12.44
July	\$13.76	\$13.52	\$12.51	\$12.45	
August	\$13.87	\$13.72	\$12.46	\$12.66	
September	\$13.98	\$13.88	\$12.49	\$12.91	
October	\$13.92	\$14.04	\$12.55	\$13.18	
November	\$13.96	\$14.24	\$12.57	\$13.28	
December	\$13.74	\$13.99	\$12.53	\$13.34	
Average	\$13.85	\$13.67	\$12.90	\$12.66	\$12.71

Appendix Table C5. Federal Order #36 Price for Milk 3.5% Butterfat, 1983-87.

Month	1983	1984	1985	1986	1987
January	\$13.53	\$13.23	\$13.70	\$12.14	\$13.02
February	\$13.54	\$13.00	\$13.50	\$12.09	\$12.77
March	\$13.46	\$13.00	\$13.22	\$11.98	\$12.42
April	\$13.43	\$12.92	\$12.90	\$11.88	\$12.15
May	\$13.27	\$13.01	\$12.57	\$11.86	\$11.94
June	\$13.07	\$12.98	\$12.26	\$11.82	\$11.98
July	\$13.09	\$13.06	\$12.17	\$11.93	
August	\$13.33	\$13.23	\$12.08	\$12.14	
September	\$13.44	\$13.44	\$12.09	\$12.39	
October	\$13.43	\$13.59	\$12.15	\$12.64	
November	\$13.47	\$13.83	\$12.21	\$12.84	
December	\$13.29	\$13.66	\$12.17	\$12.91	
Average	\$13.36	\$13.25	\$12.59	\$12.22	\$12.38

Appendix Table C6. Average Pennsylvania Wholesale Milk Prices, 3.5% Butterfat, 1983-87.

Month	1983	1984	1985	1986	1987
January	\$14.00	\$13.77	\$13.96	\$12.75	\$13.33
February	\$13.91	\$13.49	\$13.83	\$12.71	\$13.08
March	\$13.76	\$13.37	\$13.46	\$12.49	\$12.72
April	\$13.71	\$13.25	\$13.10	\$12.22	\$12.44
May	\$13.40	\$13.25	\$12.69	\$12.08	\$12.26
June	\$13.27	\$13.04	\$12.35	\$11.93	
July	\$13.26	\$13.12	\$12.34	\$12.15	
August	\$13.47	\$13.36	\$12.40	\$12.42	
September	\$13.65	\$13.72	\$12.51	\$12.89	
October	\$13.92	\$14.17	\$12.78	\$13.36	
November	\$14.08	\$14.31	\$12.86	\$13.59	
December	\$13.81	\$14.18	\$12.74	\$13.51	
Average	\$13.69	\$13.59	\$12.92	\$12.68	\$12.77

Appendix Table C7. Dairy Assessments by the Federal Government.

Month	1983	1984	1985	1986	1987
January	\$0.00	\$0.50	\$0.65	\$0.15	\$0.40
February	\$0.00	\$0.50	\$0.65	\$0.15	\$0.40
March	\$0.00	\$0.50	\$0.65	\$0.15	\$0.40
April	\$0.50	\$0.50	\$0.15	\$0.55	\$0.40
May	\$0.50	\$0.65	\$0.15	\$0.55	\$0.40
June	\$0.50	\$0.65	\$0.15	\$0.67	\$0.40
July	\$0.50	\$0.65	\$0.15	\$0.67	\$0.40
August	\$0.50	\$0.65	\$0.15	\$0.67	\$0.40
September	\$1.00	\$0.65	\$0.15	\$0.67	\$0.40
October	\$1.00	\$0.65	\$0.15	\$0.55	\$0.15
November	\$1.00	\$0.65	\$0.15	\$0.55	\$0.15
December	\$0.50	\$0.65	\$0.15	\$0.55	\$0.15
Average	\$0.50	\$0.60	\$0.28	\$0.49	\$0.34

Appendix Table C8. Effective Average Pennsylvania Wholesale Milk Prices, 3.5% Butterfat, 1983-87.

Month	1983	1984	1985	1986	1987
January	\$14.00	\$13.27	\$13.31	\$12.50	\$12.93
February	\$13.91	\$12.99	\$13.18	\$12.56	\$12.68
March	\$13.76	\$12.87	\$12.81	\$12.34	\$12.32
April	\$13.21	\$12.75	\$12.95	\$11.67	\$12.04
May	\$12.90	\$12.60	\$12.54	\$11.53	\$11.86
June	\$12.77	\$12.39	\$12.20	\$11.26	
July	\$12.76	\$12.47	\$12.19	\$11.48	
August	\$12.97	\$12.71	\$12.25	\$11.75	
September	\$12.65	\$13.07	\$12.36	\$12.22	
October	\$12.92	\$13.52	\$12.63	\$12.81	
November	\$13.08	\$13.66	\$12.71	\$13.04	
December	\$13.31	\$13.53	\$12.59	\$12.96	
Average	\$13.19	\$12.99	\$12.64	\$12.18	\$12.37

Appendix Table C9. Effective Federal Order #2 Price for Milk (201-210 mile zone),
3.5% Butterfat, 1983-87

Month	1983	1984	1985	1986	1987
January	\$13.35	\$12.49	\$12.69	\$11.77	\$12.36
February	\$13.35	\$12.29	\$12.48	\$11.69	\$12.02
March	\$13.01	\$12.05	\$11.99	\$11.35	\$11.52
April	\$12.35	\$11.86	\$12.04	\$10.76	\$11.15
May	\$12.14	\$11.61	\$11.63	\$10.70	\$10.90
June	\$12.11	\$11.64	\$11.32	\$10.60	
July	\$12.62	\$12.19	\$11.78	\$11.19	
August	\$13.09	\$12.74	\$12.12	\$11.79	
September	\$12.74	\$12.74	\$12.22	\$12.12	
October	\$12.74	\$13.18	\$12.25	\$12.50	
November	\$12.63	\$13.26	\$12.15	\$12.55	
December	\$12.57	\$12.73	\$11.86	\$12.23	
Average	\$12.73	\$12.40	\$12.04	\$11.60	\$11.59

Appendix Table C10. Effective Federal Order #4 Milk Prices, 3.5% Butterfat, 1983-87.

Month	1983	1984	1985	1986	1987
January	\$13.92	\$13.26	\$13.40	\$12.38	\$13.02
February	\$13.98	\$12.99	\$13.12	\$12.30	\$12.69
March	\$13.91	\$12.88	\$12.79	\$12.15	\$12.38
April	\$13.30	\$12.78	\$12.96	\$11.68	\$11.83
May	\$13.16	\$12.72	\$12.67	\$11.72	\$11.92
June	\$13.20	\$12.71	\$12.32	\$11.59	\$12.04
July	\$13.26	\$12.87	\$12.36	\$11.78	
August	\$13.37	\$13.07	\$12.31	\$11.99	
September	\$12.98	\$13.23	\$12.34	\$12.24	
October	\$12.92	\$13.39	\$12.40	\$12.63	
November	\$12.96	\$13.59	\$12.42	\$12.73	
December	\$13.24	\$13.34	\$12.38	\$12.79	
Average	\$13.35	\$13.07	\$12.62	\$12.17	\$12.31

Appendix Table C11. Effective Federal Order #36 Price for Milk 3.5% Butterfat,
1983-87.

Month	1983	1984	1985	1986	1987
January	\$13.53	\$12.73	\$13.05	\$11.99	\$12.62
February	\$13.54	\$12.50	\$12.85	\$11.94	\$12.37
March	\$13.46	\$12.50	\$12.57	\$11.83	\$12.02
April	\$12.93	\$12.42	\$12.75	\$11.33	\$11.75
May	\$12.77	\$12.36	\$12.42	\$11.31	\$11.50
June	\$12.57	\$12.33	\$12.11	\$11.15	\$11.58
July	\$12.59	\$12.41	\$12.02	\$11.26	
August	\$12.83	\$12.58	\$11.93	\$11.47	
September	\$12.44	\$12.79	\$11.94	\$11.72	
October	\$12.43	\$12.94	\$12.00	\$12.09	
November	\$12.47	\$13.18	\$12.06	\$12.29	
December	\$12.79	\$13.01	\$12.02	\$12.36	
Average	\$12.86	\$12.65	\$12.31	\$11.73	\$11.97

APPENDIX D
TOTAL MILK MARKETINGS
AND
TOTAL CLASS I MARKETINGS
AND
CLASS I PERCENTAGES
IN FEDERAL ORDERS #2, #4, AND #36

Appendix Table D1. Total Pounds of Farmers' Milk Sold in Federal Order #2, 1984-87.

Month	1984	1985	1986	1987
January	976,226,353	945,711,201	1,003,678,531	940,836,616
February	927,547,466	870,914,618	921,781,433	851,979,371
March	1,011,721,422	998,111,888	1,052,975,355	997,590,830
April	994,478,762	1,004,935,190	1,052,911,432	999,023,358
May	1,047,778,034	1,088,342,251	1,123,711,445	1,071,874,379
June	996,122,345	1,028,078,155	1,038,351,456	1,001,034,793
July	949,691,577	996,600,104	993,232,840	
August	908,757,347	972,808,435	957,253,993	
September	878,622,408	930,795,739	913,099,858	
October	893,075,176	961,754,177	899,335,456	
November	856,208,591	917,872,507	858,952,068	
December	917,150,011	972,856,248	913,914,183	
Total	11,357,379,492	11,688,780,513	11,729,198,050	5,862,339,347

Appendix Table D2. Pounds of Farmers' Milk Sold in Class I Products in Federal Order #2, 1984-87.

Month	1984	1985	1986	1987
January	389,689,470	401,159,031	409,008,708	410,206,224
February	357,727,653	363,933,865	366,166,612	348,143,447
March	399,245,349	403,574,437	396,568,262	397,146,426
April	360,911,807	390,212,840	388,240,222	376,895,491
May	383,636,370	397,448,034	391,492,838	386,201,371
June	351,532,749	364,106,799	365,905,420	363,249,157
July	351,509,052	370,722,974	377,633,813	
August	369,398,500	377,870,761	372,772,423	
September	375,576,552	386,518,213	398,149,915	
October	407,278,489	411,992,616	416,296,100	
November	395,939,165	395,012,311	383,754,589	
December	391,224,344	399,324,691	399,252,162	
Total	4,533,669,500	4,661,876,572	4,665,241,064	2,281,842,116

Appendix Table D3. Total Pounds of Farmers' Milk Sold in Federal Order #4, 1984-87.

Month	1984	1985	1986	1987
January	512,397,049	509,322,529	551,757,646	540,720,978
February	481,064,014	466,680,827	499,249,451	494,548,993
March	514,614,602	530,532,555	544,581,703	556,126,479
April	499,963,533	527,751,273	551,711,895	551,028,738
May	515,854,590	547,987,566	576,832,783	568,294,898
June	474,457,010	509,239,461	529,061,922	517,909,480
July	470,717,233	520,923,526	523,386,491	
August	461,000,127	528,996,280	531,300,933	
September	466,236,098	510,668,390	513,496,964	
October	478,015,036	531,769,249	523,763,852	
November	468,853,742	512,719,828	510,994,245	
December	506,698,258	542,407,634	546,113,396	
Total	5,849,871,292	6,238,999,118	6,402,251,281	3,228,629,566

Appendix Table D4. Pounds of Farmers' Milk Sold in Class I Products in Federal Order #4, 1984-87.

Month	1984	1985	1986	1987
January	256,824,060	261,552,828	263,038,147	279,309,489
February	233,207,216	228,687,485	232,645,373	238,658,540
March	257,133,338	243,415,257	244,305,078	263,161,279
April	234,778,323	237,638,953	242,997,569	256,293,612
May	242,654,562	232,670,872	245,428,050	251,100,306
June	221,949,522	208,037,817	224,341,195	244,151,436
July	225,717,233	225,106,445	238,366,932	
August	239,646,744	236,503,405	242,668,125	
September	233,347,387	241,301,013	261,043,634	
October	257,073,026	257,027,666	277,473,667	
November	249,129,384	248,628,941	246,329,149	
December	243,786,443	248,837,800	267,312,521	
Total	2,895,247,238	2,869,408,482	2,985,949,440	1,532,674,662

Appendix Table D5. Total Pounds of Farmers' Milk Sold in Federal Order #36, 1984-87

Month	1984	1985	1986	1987
January	314,401,975	302,602,712	330,794,420	305,411,255
February	296,182,948	277,188,790	302,804,539	284,677,131
March	319,129,181	319,776,528	344,519,518	329,688,556
April	314,618,785	325,520,315	349,409,844	333,301,177
May	335,878,451	357,689,650	370,706,925	361,813,676
June	317,351,043	338,144,450	342,664,303	334,154,778
July	310,474,969	336,968,230	331,254,227	
August	302,259,144	329,786,330	322,948,502	
September	289,047,034	316,325,212	302,113,396	
October	294,427,283	327,894,728	301,201,708	
November	279,498,047	308,777,126	285,406,085	
December	296,205,099	325,180,943	299,872,820	
Total	3,669,473,959	3,865,855,014	3,883,696,287	1,949,046,573

Appendix Table D6. Pounds of Farmers' Milk Sold in Class I Products in Federal Order #36, 1984-87.

Month	1984	1985	1986	1987
January	170,910,204	180,919,681	175,292,997	179,469,165
February	161,554,037	162,874,204	157,136,673	158,672,032
March	180,328,982	175,635,375	168,287,345	170,195,598
April	160,500,555	168,791,767	163,854,149	164,739,916
May	169,235,109	168,904,194	165,559,000	163,139,408
June	155,356,545	152,857,041	145,940,775	153,363,568
July	157,569,955	158,684,711	154,268,005	
August	167,534,801	169,562,879	161,793,286	
September	166,912,181	166,189,170	170,993,878	
October	181,162,683	179,706,642	180,223,367	
November	174,961,413	177,253,869	166,972,093	
December	173,073,069	171,934,472	174,783,628	
Total	2,019,099,534	2,033,314,005	1,985,105,196	989,579,687

Appendix Table D7. Percentage Class I Utilization of Milk in Federal Order #2,
1984-87.

Month	1984	1985	1986	1987
January	39.9	42.4	40.8	43.6
February	38.6	41.8	39.7	40.9
March	39.5	40.4	37.7	39.8
April	36.3	38.8	36.9	37.7
May	36.6	36.5	34.8	36.1
June	35.3	35.4	35.2	36.3
July	37.1	37.2	38.1	
August	40.6	38.8	38.9	
September	42.7	41.5	43.6	
October	45.6	42.8	46.3	
November	46.2	43.1	44.7	
December	42.7	41.1	43.7	
Average	39.9	39.9	39.8	

Appendix Table D8. Percentage Class I Utilization of Milk in Federal Order #4,
1984-87.

Month	1984	1985	1986	1987
January	50.1	51.4	47.7	51.7
February	48.5	49.1	46.6	48.3
March	50.1	45.9	44.1	47.3
April	46.1	45.1	44.1	46.5
May	47.1	42.5	42.6	44.2
June	46.8	40.9	42.4	47.1
July	48.1	43.2	45.5	
August	52.1	44.7	45.7	
September	50.1	47.3	50.8	
October	53.8	48.3	53.1	
November	53.1	48.5	48.2	
December	48.1	45.9	49.1	
Average	49.5	46.1	46.6	

Appendix Table D9. Percentage Class I Utilization of Milk in Federal Order #36, 1984-87.

Month	1984	1985	1986	1987
January	54.4	59.8	52.9	58.8
February	54.6	58.8	51.9	55.7
March	56.5	54.9	48.9	51.6
April	51.1	51.9	46.9	49.4
May	50.4	47.2	44.7	45.1
June	48.9	45.2	42.6	45.9
July	50.8	47.1	46.6	
August	55.4	51.4	50.1	
September	57.8	52.5	56.6	
October	61.5	54.8	59.8	
November	62.6	57.4	58.5	
December	58.4	52.9	58.3	
Average	55	52.6	51.1	

APPENDIX E
CCC MILK EQUIVALENT PURCHASES
AND
CCC PURCHASES OF BUTTER, CHEESE, AND NONFAT DRY MILK

Appendix Table E1. CCC Monthly Milk Equivalent Purchases, in Million Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	2,270.9	1,996.7	1,490.4	2,194.5	1,160.4
February	1,875.7	1,339.5	1,397.1	1,858.9	895.4
<i>March</i>	<i>1,596.1</i>	<i>1,217.4</i>	<i>1,379.7</i>	<i>1,072.4</i>	<i>581.0</i>
April	1,885.3	840.1	1,296.1	1,886.5	700.9
May	2,184.5	961.2	1,667.6	1,375.6	542.2
June	1,712.7	721.0	1,315.9	1,190.9	431.1
July	1,367.0	443.7	1,240.3	711.6	
August	1,322.8	386.7	753.8	144.1	
September	654.9	88.0	769.4	155.6	
October	630.7	100.1	575.7	144.0	
November	790.4	106.2	800.9	22.3	
December	900.0	363.3	738.7	409.8	
Total	17,190.7	8,563.9	13,435.6	11,166.2	4,311.0

Appendix Table E2. CCC Monthly Purchases of Butter, in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	75,010,331	66,437,981	51,734,092	75,408,658	45,101,069
February	58,272,032	44,002,346	44,617,331	67,164,868	31,124,623
March	41,279,094	26,834,804	34,173,325	30,470,082	14,403,803
April	52,416,672	22,220,527	30,608,645	56,109,003	16,109,006
May	52,182,665	18,397,708	48,056,654	37,024,271	13,965,215
June	46,929,446	4,787,509	29,221,087	20,276,573	4,048,617
July	25,038,360	2,178,355	20,595,885	6,080,571	
August	19,389,643	3,282,722	11,550,295	-2,556,094	
September	9,818,425	-82,476	13,282,268	0	
October	19,106,110	0	18,021,959	176,256	
November	9,370,438	642,634	12,055,563	0	
December	16,935,978	8,664,609	17,129,530	9,609,538	
Total	425,749,194	197,366,719	331,046,634	299,763,726	124,752,333

Note: A negative value represents cancellations of sales previously contracted.

Appendix Table E3. CCC Monthly Purchases of Cheese, in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	65,039,735	61,747,861	38,226,168	58,056,854	21,344,922
February	65,548,754	40,888,202	45,781,371	45,839,376	21,141,525
March	74,885,489	41,845,440	64,638,790	43,760,006	24,373,479
April	80,157,403	60,761,999	67,207,578	73,162,686	32,495,763
May	75,209,639	55,123,799	65,556,232	59,525,651	23,126,080
June	109,520,218	63,009,758	69,168,512	66,469,280	31,566,483
July	85,913,032	49,028,221	80,470,402	55,121,439	
August	89,827,611	29,060,316	46,509,527	19,405,844	
September	49,789,658	9,080,821	45,770,300	15,340,851	
October	31,843,954	9,696,551	39,366,878	8,737,625	
November	41,373,850	8,993,199	34,893,631	2,257,089	
December	48,349,781	14,157,684	35,126,688	15,588,023	
Total	817,459,124	443,393,851	632,716,077	463,264,724	154,048,252

Appendix Table E4. CCC Monthly Purchases of Nonfat Dry Milk, in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	99,964,629	84,938,726	57,522,561	95,790,161	47,147,733
February	84,723,766	70,239,059	52,922,718	81,897,540	36,706,152
March	97,148,424	58,382,864	60,897,782	65,107,845	42,052,194
April	100,546,963	80,485,583	61,343,972	109,623,645	62,467,547
May	100,844,930	68,604,815	105,123,204	90,769,981	54,928,591
June	136,864,906	72,699,809	105,645,295	92,263,358	64,971,888
July	107,375,871	58,392,859	110,039,774	85,347,704	
August	108,048,770	57,858,294	77,543,648	43,179,966	
September	69,557,688	27,317,034	69,170,197	39,427,785	
October	71,087,589	27,676,689	75,172,513	18,963,472	
November	52,759,124	28,936,282	49,840,805	20,333,364	
December	52,998,623	31,724,719	59,317,187	48,568,843	
Total	1,081,921,283	667,256,733	884,539,656	791,273,664	308,274,105

Appendix Table E5. CCC Monthly Purchases of Butter from the East, in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	13,261,810	10,906,577	3,516,626	7,149,878	3,546,630
February	9,467,500	8,219,307	3,436,106	6,966,554	344,433
March	8,162,661	6,441,089	2,239,065	3,014,895	385,102
April	10,421,983	4,851,081	1,639,909	6,111,574	44,064
May	8,709,322	1,008,324	4,476,349	5,182,479	-44,064
June	6,810,779	-313,399	1,598,824	-425,849	0
July	1,734,832	0	388,700	-290,032	
August	470,420	-38,412	-41,579	-88,125	
September	242,382	-44,064	0	0	
October	1,320,188	0	44,064	0	
November	1,046,201	0	-44,064	0	
December	2,519,108	0	93,908	0	
Total	64,167,186	31,030,503	17,347,908	27,621,374	4,276,165

Note: A negative value represents cancellations of previously contracted sales.

Appendix Table E6. CCC Monthly Purchases of Cheese from the East, in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	572,465	394,599	1,014,526	1,062,660	554,270
February	839,137	835,872	1,877,733	1,360,019	0
March	686,580	356,444	2,688,409	344,287	0
April	261,304	508,744	1,298,310	2,610,620	0
May	448,464	202,245	868,538	1,593,334	0
June	379,327	532,247	693,301	1,194,282	0
July	375,899	537,192	416,704	2,332,311	
August	206,741	0	331,993	40,975	
September	201,302	0	125,150	1,264,800	
October	0	558,000	148,800	186,000	
November	1,764,972	0	254,503	0	
December	493,090	632,400	293,298	0	
Total	6,229,281	4,557,743	10,011,265	11,989,288	554,270

Appendix Table E7. CCC Monthly Purchases of Nonfat Dry Milk from the East, in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	18,265,976	16,503,845	6,469,839	16,003,680	3,120,476
February	17,203,389	12,844,023	8,048,525	12,485,592	2,585,929
March	17,898,235	9,092,850	7,196,937	7,605,694	3,461,050
April	20,315,029	13,730,618	9,084,525	16,835,972	4,928,032
May	17,911,816	10,995,734	16,033,020	16,811,870	1,970,101
June	24,506,685	8,780,224	16,271,132	15,013,125	239,896
July	19,682,005	4,101,368	11,755,709	9,118,945	
August	15,748,641	1,368,135	6,602,946	623,013	
September	8,109,312	-115,360	5,209,917	268,966	
October	7,676,344	0	7,340,823	0	
November	5,410,409	0	4,259,043	0	
December	9,761,980	1,033,210	8,226,206	3,967,556	
Total	182,489,821	78,334,647	106,498,622	98,734,413	16,305,484

Note: A negative value represents cancellations of previously contracted sales.

Appendix Table E8. CCC Monthly Purchases of Butter from the Mid-West, in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	40,972,373	38,546,830	28,588,554	43,852,956	24,361,047
February	35,797,650	24,206,735	25,597,388	38,950,956	17,725,014
March	22,782,478	10,755,909	20,160,787	15,955,853	5,428,013
April	30,563,574	5,251,667	14,761,375	31,269,144	2,613,655
May	29,753,029	7,513,654	26,294,002	17,392,677	2,579,015
June	26,388,622	-269,391	14,144,179	8,263,161	477,012
July	13,269,556	-211,819	5,919,109	-1,225,971	
August	7,622,402	-157,738	585,550	0	
September	721,516	0	653,004	0	
October	6,872,422	0	3,975,616	0	
November	2,699,491	0	2,679,822	0	
December	7,506,022	1,514,162	4,772,198	4,100,472	
Total	224,949,135	87,150,009	148,131,584	158,559,248	53,183,756

Note: A negative value represents cancellations of previously contracted sales.

Appendix Table E9. CCC Monthly Purchases of Cheese from the Mid-West, in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	55,354,756	53,661,631	35,703,466	52,329,430	17,432,841
February	57,451,619	35,106,259	41,106,751	40,990,543	17,656,914
March	66,492,270	37,391,941	56,371,014	39,839,847	19,428,844
April	73,187,247	53,547,176	58,428,548	64,929,713	28,641,648
May	66,843,785	49,001,808	56,072,706	51,398,908	16,636,132
June	97,049,753	56,668,641	61,331,651	58,678,425	24,573,773
July	74,015,307	42,890,053	70,752,267	44,483,633	
August	76,801,346	25,737,153	38,781,363	12,680,318	
September	42,355,579	8,308,053	37,690,256	7,930,412	
October	26,686,556	9,138,551	31,467,865	3,079,603	
November	35,092,623	7,839,999	31,806,404	1,431,844	
December	44,159,371	13,302,084	30,067,499	13,344,630	
Total	715,490,212	392,593,349	549,579,790	391,117,306	124,370,152

Appendix Table E10. CCC Monthly Purchases of Nonfat Dry Milk from the Mid-West, in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	47,109,206	34,509,207	16,328,895	36,836,081	15,196,657
February	42,658,444	22,642,955	17,326,106	36,849,882	10,018,263
March	50,243,591	23,396,018	23,451,660	28,111,054	14,638,977
April	50,218,522	28,289,736	29,673,265	49,460,067	22,348,995
May	49,631,614	28,004,143	42,930,785	38,206,876	19,204,617
June	67,799,063	29,119,398	48,917,480	41,446,190	21,475,566
July	52,090,035	22,495,124	47,815,118	35,188,411	
August	51,770,652	17,933,598	32,632,719	15,537,560	
September	30,853,936	6,082,989	26,897,785	11,155,055	
October	31,532,355	5,376,141	27,830,433	3,515,537	
November	20,925,676	2,754,453	17,606,668	3,244,984	
December	21,104,045	5,225,509	18,712,211	15,270,170	
Total	515,937,139	225,829,271	350,123,125	314,821,867	102,883,075

Appendix Table E11. CCC Monthly Purchases of Butter from the West, in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	20,776,148	16,984,574	19,658,912	24,405,824	17,193,392
February	13,006,882	11,576,304	15,583,837	21,247,358	13,055,176
March	10,333,955	9,637,806	11,773,473	11,499,354	8,590,688
April	11,431,115	12,117,779	14,207,361	18,728,285	13,451,287
May	13,720,304	9,875,730	17,286,303	14,449,115	11,430,264
June	13,730,045	5,370,299	13,478,084	12,439,261	3,571,605
July	10,033,972	2,390,174	14,288,076	7,596,574	
August	11,296,821	3,478,872	11,006,324	-2,467,969	
September	8,854,527	-38,412	12,629,264	0	
October	10,913,500	0	14,002,279	176,256	
November	5,624,746	642,634	9,419,745	0	
December	6,910,848	7,150,447	12,263,424	5,509,066	
Total	136,632,863	79,186,207	165,597,082	113,583,124	67,292,412

Note: A negative value represents cancellations of previously contracted sales.

Appendix Table E12. CCC Monthly Purchases of Cheese from the West, in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	9,112,514	7,691,971	1,508,176	4,664,764	3,357,811
February	7,257,998	4,946,071	2,742,887	3,488,814	3,484,611
March	7,706,639	4,097,055	5,579,367	3,575,872	4,944,635
April	6,708,852	6,706,079	7,480,720	5,622,353	3,854,115
May	7,917,390	5,919,746	8,614,988	6,533,409	6,489,948
June	12,091,138	5,808,870	7,143,560	6,596,573	6,992,710
July	11,521,826	5,600,976	9,301,431	8,305,495	
August	12,819,524	3,323,163	7,396,171	6,684,551	
September	7,232,777	772,659	7,954,894	6,145,639	
October	5,157,398	0	7,750,213	5,472,022	
November	4,516,255	1,153,200	2,832,724	825,245	
December	3,697,320	223,200	4,765,891	2,243,393	
Total	95,739,631	46,242,990	73,071,022	60,158,130	29,123,830

Appendix Table E13. CCC Monthly Purchases of Nonfat Dry Milk from the West,
in Pounds, 1983-87.

Month	1983	1984	1985	1986	1987
January	35,589,447	33,925,674	34,723,827	42,950,400	28,830,600
February	24,861,933	24,752,081	27,548,087	32,562,066	24,101,960
<i>March</i>	<i>29,006,598</i>	<i>25,893,996</i>	<i>30,249,185</i>	<i>29,391,097</i>	<i>23,952,167</i>
April	30,013,412	38,465,229	22,586,182	43,327,606	35,190,520
May	33,301,500	29,604,938	46,159,399	33,751,235	33,816,873
June	44,559,158	34,800,187	40,456,683	35,804,043	43,256,423
July	35,603,831	31,793,367	50,468,947	41,110,348	
August	40,529,477	38,566,561	38,307,983	27,019,393	
September	30,594,440	21,349,405	37,062,495	28,003,764	
October	31,878,890	22,300,548	40,001,257	15,447,935	
November	26,423,039	26,181,829	27,975,094	17,088,380	
December	22,132,598	25,466,000	32,378,770	29,331,117	
Total	384,494,323	353,099,815	427,917,909	375,787,384	189,148,543