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# THE DAIRY INDUSTRY AND DAIRY POLICY IN 1983

by

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### Preface

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## Introduction

The purpose of this paper is twofold: first, to review the current economic situation of the dairy industry and the dominant dairy policies and issues of 1982 and second, to assess the economic and political outlook for the dairy industry in 1983. The paper begins with a discussion of the economic status of dairy markets in the U.S. and New York at the end of 1982. This is followed by a review of the major policy issues of 1982. The paper concludes with some comments on the 1983 economic outlook for the dairy industry in the U.S. and New York and on the possible policy changes that could shape the dairy economy in the future.

## The Year in Review

### The National Economic Situation

#### Milk Production

With 1982 milk production estimated at 135.8 billion pounds, U.S. dairy farmers exceeded 1981's record production by 2.1 percent (see Table 1). As has been true for the last two years, production increases were due to higher cow numbers as well as greater production per cow. The most recent estimate of over 11 million cows is 1.1 percent greater than the number of cows last year, which is slightly less than the one percent annual increase in cow numbers observed in 1981 (Table 1). Production per cow increased at the very modest rate of 0.9 percent in 1982, compared to 2.4 percent in 1981. Perhaps in part this reflects that farmers have been keeping and adding lower quality cows and heifers to their herds in order to expand production (Table 1). Although the relative number of replacements increased again in 1982, it did so at a lower rate than in previous years.

#### Imports

Although the early estimates tend to be very crude, it appears that dairy product imports were up in 1982 (see Table 2). The greatest increase seems to be in Italian cheese and casein, with American and other cheeses showing smaller gains. Although U.S. manufactured dairy product prices have not increased much this year, world production and the inevitable surpluses have been building again after an off year in 1981; thus encouraging our trading partners to expand their exports.

#### Dairy Product Consumption

Commercial disappearance of dairy products showed a strong 1.7% gain in 1982. In spite of the current recession, consumers are probably finding that dairy products are becoming an increasingly better buy due to the rather small increases in dairy prices. Cheese and lowfat milk continue to lead the way with annual consumption gains of about 3% each (see Table 3). Per capita consumption of whole milk continues to fall,

while lowfat milk consumption increases. Per capita domestic disappearance of all dairy products in 1982 was three percent lower than that in 1972 (see Table 3).

#### Commercial Stocks

Despite the burgeoning milk surplus, total commercial stocks of manufactured dairy products were reduced in 1982 by the largest amount since 1975 (15 percent on a total milk equivalent [BF] basis). As shown in Table 4, commercial stocks of nonfat dry milk and "other" cheese increased somewhat but they decreased considerably for butter and American cheese. This probably reflects the desire of manufacturers to trim their inventories to minimum levels early in 1982 when it appeared that USDA purchase prices for dairy products might be reduced, thus reducing the value of commercial inventories. At least part, perhaps one billion pounds (milk equivalent) by some estimates, of normal commercial inventories were simply sold to the USDA for this reason.

#### USDA Purchases

Estimated USDA net removals of 13.8 billion pounds (M.E.) in fiscal year 1981-1982 established another new record for the dairy industry (see Table 5 and Figure 2). This was almost nine percent more than fiscal year 1980-1981, with the biggest increase in nonfat dry milk purchases. For calendar year 1982, net removals are estimated at about 14.0 billion pounds. Over 10 percent of the milk produced in the U.S. was purchased by the USDA in 1982. Even more striking are the net removals as a percent of production on a commodity basis, as shown in Table 6. Approximately one-fourth of the American cheese, one-third of the butter and two-thirds of the nonfat dry milk produced in 1982 ended up in government hands, with government stocks rising accordingly.

Accompanying these record purchase levels are record USDA expenditures in dairy products (see Table 5). In fiscal year 1981-1982 net expenditures exceeded \$2.2 billion, representing well over 10 percent of farm cash receipts from milk sales (see Figure 3). Total expenditures on major dairy programs increased over eight percent in 1981-1982, with the largest increase in the cost of price support purchases but a large reduction in expenditures under the Special Milk program.

#### Prices

For the first time in 20 years the farm price of all milk decreased, dropping 25 cents per cwt. in 1982 or almost 2% since 1981 (see Table 7). Although the support price for milk has been held constant, USDA purchase prices for dairy products have not been adjusted for higher processing costs. As a result, wholesale prices for cheese, butter and nonfat dry milk have held stable, but manufacturers must reduce the price to farmers in order to cover their operating costs. At the retail level, dairy prices increased at about half the rate of food prices in general.



## The New York and Northeast Situation

### Milk Production and Prices

Milk production, cow numbers, and production per cow in New York (see Table 8) increased at a slightly slower rate in 1982 than they did in the U.S. in total (see Table 1). The growth in New York production has been about the same as the increase in U.S. production for the last several years. One interesting and potentially important departure from this trend appears to have occurred in 1982. The number of milk cow replacements increased over 14 percent in New York (see Table 8) but only about 4 percent in the U.S. (see Table 1). This portends an increased rate of growth in New York milk production for future years.

Dairy farmers in New York, as elsewhere, have been faced with increases in input prices that have been greater than milk price increases for the last several years. Table 9 is a reprint from New York Agricultural Statistics that illustrates this with prices paid and received indices. Since 1978 the ratio of prices received for milk to prices paid by dairy farmers has been declining, and it appears that this will hold true for all of 1982 as well. Although prices paid for inputs seems to have been stable in 1982, the price of milk actually declined.

Another measure of how well New York dairy farmers have been fairing recently is provided in Table 10, which shows estimates of the average costs of producing milk for a sample of New York dairy farmers for selected years. By this measure, net returns to the dairy farmers' fixed assets (labor, management, and capital) have been declining in recent years, but in 1981 they were still well above their level in 1977. Preliminary indications from Cornell management records are that net returns were down further in 1982, with somewhat higher gross returns due to increased production per farm and much higher gross expenses. When the final data are collected, it may be found that net returns declined another 30 to 40 cents per cwt. in 1982.

### Production and Sales of Dairy Products

Producers marketed more milk to handlers regulated under the New York-New Jersey federal order and throughout Northeast milk marketing orders in 1982, as shown in Table 11. Producer marketings increased about two percent in the Northeast, less than the three percent increase for all federal orders. The New York-New Jersey and Middle Atlantic orders had the smallest gains among federal orders in the Northeast.

While total producer receipts have been increasing, Class I use has been declining; hence Class I utilization, the percentage of total producer receipts that is used in Class I, has also been declining, as is shown in Table 12. The New York-New Jersey order has the lowest Class I utilization among the Northeast federal orders and is below the average for all federal orders. This has contributed to the modest reduction in the 1982 blend price in the Northeast and the U.S. in general, see Table 13. Changes in certain pricing provisions in the New York-New Jersey order resulted in a slightly higher city zone price in 1982.

## Policy Issues in 1982

As has been true for the last several years, activity in dairy markets has been dominated by the price support program. At the beginning of 1982, support prices were established in accordance with the Agriculture and Food Act of 1981. This Act specified a support price of \$13.10 (at 3.67% fat test) through September 1982 and \$13.25 from October 1982 through September 1983, unless support purchase quantities or expenditures fell to certain levels which would trigger higher prices based on 70 or 75 percent of parity (Novakovic, February 1982). These triggers were set so low as to be obviously ineffective for 1982 and the foreseeable future.

Almost from the beginning it was clear that this support program would not quickly discourage production or reduce USDA price support expenses. In March 1982, the Secretary of Agriculture sponsored a national symposium to consider the many alternative support policies that were already proposed and being discussed. A consensus proposal did not emerge or result from this effort. By Summer, the Secretary, the National Milk Producers Federation, and other prominent groups and individuals were backing specific but widely different proposals. In late August, Congress passed legislation changing support policy, the Omnibus Budget Reconciliation Act. Attempting to reconcile the differences between advocates of a simple cut in the support price (e.g., the Administration) and those who favored a more complex plan involving a two-tiered base-excess type pricing scheme (e.g., the National Milk Producers Federation), Congress froze the support price at \$13.10 through September 1984 and gave the Secretary authority to directly assess producers up to one dollar per hundredweight (in two 50-cent increments), provided projected price support purchases do not fall below certain levels (for further details see Boynton and Novakovic or Novakovic, September 1982).

Opposition to this modified price support program came from all segments of the dairy industry and all around the country, despite the fact that this program reduced the farmers' effective price less than most alternatives farmers had sought. The Administration remained firm, however, in its intention to exercise the authority Congress had given it to assess dairy farmers. The Secretary announced that the first 50-cent deduction would begin with December 1982 marketings and hence would be first reflected in farmers' checks in mid- to late January, 1983. In early January, a Federal District Court Judge in South Carolina issued a preliminary injunction barring the Secretary from collecting any of these deductions pending a full hearing on whether the Secretary violated the Administrative Procedures Act by not inviting public comment on whether or not to impose the assessment. Some other legal issues are also involved and suits have been filed in other parts of the country to stop the assessment program. The Secretary has sought a speedy repeal but if, how or when these legal questions will be settled is not known. In the meantime, the Secretary has initiated steps to implement the full one dollar assessment on April 1. At this time it is not at all clear that he will be successful, but it seems fairly likely.

Although the price support program has held center stage, other dairy policy issues were raised in 1982; even so, these other issues seemed to be related to the price support problem in one way or another. For

example, proposals were made to further restrict dairy imports (especially casein), to increase the levels of nonfat solids in fluid milk products by amending the identity standards for milk, and to expand government authority for farmer-financed dairy product promotion. These proposals had been made off and on for several years but received particular attention in 1982; because many felt that they could help alleviate the surplus problem without lowering prices or without lowering them as much. Funds for Special Milk and School Lunch programs were reduced earlier in the year as part of the President's effort to reduce the cost of social programs. These cuts were vigorously opposed and efforts were made to reinstate or increase funding for these programs and thereby to stimulate dairy product consumption in this way. Another policy topic in 1982 was the still percolating issue of dairy product export subsidies. Again, advocates of subsidies perceived them as at best a way to enhance consumption without a drastic price decline or at worst a necessary device for reducing mammoth stocks of manufactured dairy products. A final major issue that began to heat up in 1982, although it has simmered for several years, involved the performance of milk marketing orders. There seems to be little dispute within the dairy industry that it is becoming increasingly difficult for fluid milk processors to attract raw milk away from manufactured product processors, which is one of the things marketing orders are supposed to facilitate. This problem has spawned new proposals to increase the Class I differential within and across market order areas and other more complex proposals for pooling milk receipts, all of which are intended to make it easier for fluid processors to bid milk away from manufacturers. Clearly the enhanced profitability of manufacturing due to high purchase prices for supported products has greatly contributed to this apparent problem with marketing orders.

#### The Economic and Policy Outlook for 1983

Few, if any, of the important policy issues were resolved last year. The state of limbo in price support policy created by the recent court action has resulted in a host of new or revised alternative legislative proposals. At the time of this writing, the National Milk Producers Federation had just endorsed a complicated proposal that would penalize producers for any quantity of milk produced over some base quota and put these monies into a fund that would be used to pay other producers who reduce their current production to some amount less than their base. Although this scheme was firmly endorsed within NMPF, it is not at all clear that a consensus among producers exists on the preferred program alternative. As with the alternative offered by NMPF in 1982, many producers and producer organizations seem to exhibit stronger support for unity in their position than for the specific position itself. With this kind of situation, one can only guess what will ultimately happen to support prices in 1983. This uncertainty makes it difficult for dairy farmers and other industry participants to plan and make long-run decisions. It is no less difficult to make predictions for 1983 under these circumstances. The economic outlook presented below assumes that the current program or something similar that simply reduces the support price will take effect sometime around mid-year. That this will indeed happen is hardly a certainty, but this seems more probable than any other possibility at this point.

## The National Economic Outlook

The national outlook is summarized in Table 14. With no change in USDA purchase prices for 1983, it appears that wholesale manufactured product prices will remain at or near current levels. Retail prices for dairy products will consequently reflect only increases in marketing costs and thus continue their extremely modest increases. This also means that the effective support price for milk will also continue to erode as manufacturers face the same price for their product and higher manufacturing costs. Even with a constant support price (of \$13.10), farm prices could be expected to decline about 10 cents next year. If they go into effect on April 1 or thereafter as the Secretary states they will, the Phase I and II assessments will further reduce the "net" price up to \$1 for the period they are in effect. Thus, the U.S. average price for all milk in 1983 will probably be no more than \$13.45 and could be as low as \$12.70, depending on the magnitude and duration of the assessments.

Despite the best intentions of dairy policy makers, it will be difficult to stem the tide of milk production in 1983. The large numbers of replacement stock and continuing low feed prices and poor alternatives for dairy farmers will encourage production. If the assessments go into effect, the Phase II, refundable assessments will be sufficient to encourage some producers to cut back production, probably those who have not increased much from their base production and those who are planning to retire. Others will simply be forced out of business by the price cut (cf. Boynton and Milligan). Most will continue to produce milk and some will even expand even though net returns per hundredweight will be lower in 1983. If the assessments are made they will not take effect until April 1 at the earliest. Unless they simply cannot survive, few farmers will cut back or even quit when their production is peaking in the Spring and the Summer pasture season is just around the corner. Most will find it financially preferable to at least hang on until the Fall. A one dollar assessment will eventually work to reduce aggregate production by putting some farms out of business, but it does not seem likely to affect production in 1983 very much. Our best estimate at this point is that production will increase one to two percent in the U.S. during 1983.

Once again the very modest increases in dairy product prices expected for 1983 should further encourage milk consumption, although it may be optimistic to expect an increase equal to that in 1982. Our best estimate at this point is for about a one percent increase in 1983. An increase in consumption could require slightly larger inventories, but the possibility of lower purchase prices for manufactured products and the resulting decrease in the value of commercial stocks will likely keep those stocks near current low levels. Farm use and imports will probably not change much in 1983.

The outlook for 1983 looks to be a continuation of the last two years--record production, record USDA purchases of dairy products, and record price support expenditures. Officially, expenditures will be reduced if the assessments are collected, but this maneuver is a bit deceptive insofar as it does not actually reduce the cost of the program so much as it shifts who pays for it.

### The New York and the Northeast Outlook

The outlook for New York and the Northeast is similar. The pattern of increasing milk production and declining fluid sales is expected to continue in 1983. In fact, early reports for milk production in 1983 indicate fairly large increases in the Northeast relative to the rest of the U.S. Total milk production in January, 1983 in New York, Pennsylvania and Vermont increased 3.4 percent compared to last year, whereas the production for the rest of the U.S. increased only 1.2 percent. Moreover, most states showed declining January 1 cow numbers in 1983. Of the top five milk producing states, only New York and Pennsylvania had more cows on January 1, 1983 than the year before.

This means that the strength of dairy markets in New York and the Northeast will depend importantly on continued growth in cheese and soft product markets, particularly Italian type cheese. The recent strong market demand in the Northeast is closely related to the addition of new Italian cheese plant capacity in New York and Pennsylvania. The rate of growth in demand for Italian cheese during 1983 will be an important factor in determining the demand for and returns to increasing Northeast milk supplies. Declining Class I utilization and some softness in U.S. manufacturing milk prices will result in 1983 blend prices being 5 to 10 cents per cwt. below 1982 levels.

### Prospects for Policy Changes

Discussions of many dairy policy issues will continue through 1983. Despite heavy pressure from producer representatives, the administration has repeatedly resisted calls for further import restraints. It is unlikely that tighter import quotas will be announced in 1983. The need to reduce government stocks may become so irresistible that something will be done to increase exports, although the administration will resist obvious export subsidies so as to avoid the chance of a trade war. Legislation to change identity standards for fluid milk products was defeated in 1982 but will surely be reconsidered in 1983. Sometime fairly soon, added attention will be paid to marketing orders. This may not happen until the price support problem is solved, but sooner or later marketing order provisions will be scrutinized. Tops on the list of issues will be the level and geographic alignment of order prices, but this will lead to discussions of various related issues, including reconstituted milk pricing, transportation differentials, basing points, the M-W price, pooling criteria, and the geographic size of order areas.

In fact, the stage is already set for a renewed battle over reconstituted milk pricing (see Novakovic and Story, and Novakovic, 1980 for details). An appeals court recently ruled that a lower court's dismissal, on technical grounds, of a suit brought against the Secretary of Agriculture about reconstituted milk pricing was not entirely warranted. The suit was filed against the Secretary of Agriculture by the Community Nutrition Institute, a fluid milk processor, and three individuals identifying themselves simply as consumers. The lower court dismissed the suit on the grounds that the fluid milk processor had not exhausted all administrative recourse and that the other plaintiffs had no legal standing. The

appeals court agreed about the processor and consumers group but decided that the individual consumers did have the right to file a suit against the Secretary on this matter. Although neither court commented on the legal merits of federal order pricing provisions regarding reconstituted milk, the appeals court ruling will encourage individuals to raise the issue by suing the Secretary again, if they are so inclined.

All of these issues will be important, but the major issue for 1983 will again be what to do about dairy price support policy. Moreover, price support policy will hold the political center stage until USDA purchases and expenditures are reduced to much lower levels and they show signs of staying there. Based on how the discussions have gone early this year, it is hard to be optimistic that these goals will soon be reached. Price support policy may still be an unresolved issue well into 1984.

Table 1. U.S. Milk Production, Cattle Numbers, and Production Per Cow

	1972	1977	1980	1981	1982 <sup>a</sup>	1982 as % of 1981
Milk Production (mil. lbs.)	120,025	122,654	128,525	133,013	135,795	102.1
Production Per Cow (lbs.)	10,259	11,206	11,889	12,177	12,316	101.1
Milk Cows on Farms, average during year (thous.)	11,700	10,945	10,810	10,923	11,026	100.9
Milk Cattle on Farms, January 1 (thousands)						
Milk Cows and Heifers that have Calved	11,776	10,998	10,779 <sup>a</sup>	10,860 <sup>a</sup>	11,012	101.4
Milk Cow Replacements, Heifers 500 Pounds and Over	3,828	3,887	4,158 <sup>a</sup>	4,345 <sup>a</sup>	4,532	104.3
Heifers Per 100 Cows (no.)	32.5	35.3	38.6 <sup>a</sup>	40.0 <sup>a</sup>	41.2	103.0

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

<sup>a</sup>Preliminary.





Table 3. U.S. Domestic Disappearance of Selected Dairy Products from Commercial Sources

	1972	1977	1980	1981	1982 <sup>a</sup>	1982 as % of 1981
(million pounds of product)						
<u>TOTAL DISAPPEARANCE</u>						
Whole Milk	45,390	35,638	32,754	31,685		
Lowfat Milk	14,180	18,988	21,743	22,443		
Cheese <sup>b</sup>	2,683	3,405	3,864	3,988		
Butter	861	860	912	898		
Nonfat Dry Milk	853	698	669	679		
Frozen Desserts <sup>c</sup>	5,662	5,977	5,939	5,940		
All Products (M.E.) <sup>d</sup>	115,883	118,176	122,803	123,295 <sup>a</sup>	128,700	104.4
(pounds)						
<u>PER CAPITA DISAPPEARANCE</u>						
Whole Milk	221.0	164.0	145.0	139.0		
Lowfat Milk	69.1	87.1	96.3	98.4		
Cheese <sup>b</sup>	12.9	15.5	16.9	17.4		
Butter	4.1	3.9	4.0	3.9		
Nonfat Dry Milk	4.1	3.2	2.9	3.0		
Frozen Desserts <sup>c</sup>	27.3	27.2	26.2	26.0		
All Products (M.E.) <sup>d</sup>	514.0	506.0	509.0	517.0	521.0	100.8

Source: Dairy Outlook and Situation, U.S. Department of Agriculture, June and December issues.

<sup>a</sup>Preliminary.

<sup>b</sup>Excludes cottage cheese.

<sup>c</sup>Excludes mellorine.

<sup>d</sup>Domestic civilian disappearance, all sources.

Table 4. U.S. Stocks of Dairy Products, end of year or month

	1972	1977	1980	1981 <sup>d</sup>		1982 <sup>d</sup>		1982 as % of 1981
				Sept.	Dec.	Sept.	Sept.	
				(million pounds of product)				
Commercial								
American Cheese	269.3	361.5	422.8	374.5	373.8	308.3	82	
Other Cheese	62.0	64.0	99.3	95.7	86.6	100.4	105	
Butter	11.1	34.2	36.5	31.9	47.3	23.0	72	
Nonfat Dry Milk	37.9	60.7	85.0	87.2	86.7	89.8	103	
Government								
American Cheese <sup>a</sup>	0.2	60.5	168.6	457.6	515.4	499.1	109	
Butter <sup>b</sup>	96.4	150.7	268.2	511.9	381.9	602.5	118	
Nonfat Dry Milk	6.9	617.2	501.7	721.8	803.0	1150.3	159	
Total Stocks (M.E.) <sup>c</sup>	5,498	8,626	12,959	19,813	18,378	20,736	105	

Source: Dairy Outlook and Situation, U.S. Department of Agriculture, June and December 1982.

<sup>a</sup>Includes process cheese.

<sup>b</sup>Includes butter equivalent of butteroil and ghee.

<sup>c</sup>Includes manufactured products for which current monthly series are available (excludes nonfat dry milk, cream, and bulk milk), computed on fat-solids basis.

<sup>d</sup>Preliminary.

Table 5. USDA Removals of and Net Expenditures on Dairy Products by Fiscal Year<sup>a</sup>

	1977-78	1978-79	1979-80	1980-81	1981-82	1982 as % of 1981
<u>Removals (million pounds)</u>						
Butter	134.6	46.2	233.0	356.5	382.1	107.2
Cheddar Cheese	41.6	12.1	335.6	532.1	598.6	112.5
Nonfat Dry Milk	338.5	202.5	592.2	786.9	953.6	121.2
Evaporated Milk	17.4	17.4	15.4	20.2	19.5	96.5
Milk Equivalent	3,200.0	1,100.0	8,200.0	12,700.0	13,800.0	108.7
<u>Net Expenditures (million dollars)</u>						
Support Purchases	446.4	244.3	1,274.0	1,976.2	2,231.3	112.9
School Lunch and Welfare	5.0	6.3	5.8	7.5	7.9	105.3
Special Milk	137.8	134.1	156.8	118.8	28.1	23.7
Total	589.2	384.7	1,436.6	2,093.5	2,267.3	108.3

Source: Dairy Outlook and Situation, U.S. Department of Agriculture, December issue.

<sup>a</sup>Fiscal year begins October 1.

Table 6. Commercial Use, USDA Net Removals, and Total Supply of American Cheese, Butter, and Nonfat Dry Milk

	1975	1976	1977	1978	1979	1980	1981 <sup>b</sup>
	(million pounds of product)						
American Cheese							
Commercial Use <sup>a</sup>	2,022.8	2,330.7	2,320.3	2,413.8	2,516.7	2,446.2	2,464.8
Net Removals	68.2	38.0	148.2	39.7	40.2	349.7	563.0
Total Supply	2,091.0	2,368.7	2,468.5	2,453.5	2,556.9	2,795.9	3,027.3
Butter							
Commercial Use <sup>a</sup>	956.8	947.0	894.0	918.7	920.2	915.4	925.1
Net Removals	63.4	39.4	221.8	112.0	81.6	257.0	351.5
Total Supply	1,020.2	986.4	1,115.8	1,030.7	1,001.8	1,172.4	1,276.6
Nonfat Dry Milk <sup>a</sup>							
Commercial Use <sup>a</sup>	744.1	818.0	742.9	698.5	695.6	624.8	542.2
Net Removals	394.5	157.1	461.7	285.0	255.3	634.3	851.3
Total Supply	11,138.6	975.1	1,204.6	983.5	950.9	1,259.1	1,393.5

Source: Dairy Outlook and Situation, U.S. Department of Agriculture, March 1981.

<sup>a</sup>Commercial disappearance plus ending commercial stocks.

<sup>b</sup>Preliminary.

Table 7. U.S. Farm Prices for Milk, CCC Purchase, Wholesale, and Retail Prices for Cheese, Butter, and Nonfat Dry Milk and Selected Retail Price Indices

	1977	1978	1979	1980	1981 <sup>c</sup>	1982 <sup>c</sup>	1982 as % of 1981
Farm Milk (\$/cwt., ave. fat):							
All Milk	9.72	10.60	12.00	13.00	13.80	13.55	98
Grade A	9.96	10.80	12.20	13.20	14.00	13.75	98
Grade B	8.70	9.68	11.10	12.00	12.70	12.65	100
Milk/Feed Ratio	1.39	1.53	1.54	1.48	1.44	1.54	107
Cheese (¢/lb.):							
CCC Purchase, Natural Cheddar, Grade A or higher, blocks <sup>a</sup>	96.6	102.6	115.5	132.0	140.0	140.0	100
Wholesale, American Cheddar (40 pound blocks), f.o.b. Wisconsin Assembly Points	96.8	107.1	123.8	133.0	139.4	138.0	99
Retail, American (1/2 lb. pieces)	177.9	191.2	214.0	235.0	255.7	261.0	102
Butter (¢/lb.):							
CCC Purchase, Grade A or higher, Chicago <sup>a</sup>	98.2	106.4	121.5	140.2	149.0	149.0	100
Wholesale, Grade A, Chicago (1 lb.)	98.4	109.8	122.4	139.3	148.0	148.0	100
Retail, Grade AA, sticks (1 lb.)	135.3	149.1	168.3	187.8	199.3	204.0	102
Nonfat Dry Milk (¢/lb.): <sup>b</sup>							
CCC Purchase, Spray Process, Extra Grade, Unfortified <sup>a</sup>	66.6	70.9	78.9	89.1	94.0	94.0	100
Wholesale (1 lb.)	66.5	71.4	80.0	88.7	94.0	94.0	100
Retail Price Indices (1967=100.0):							
Fluid Whole Milk	162.3	171.7	191.4	208.4	220.2	222.0	101
All Dairy Products	173.9	185.6	207.1	227.4	243.6	248.5	102
All Food	192.2	211.4	234.5	254.6	274.6	287.0	105
All Consumer Prices	181.5	195.4	217.4	246.8	272.3	290.0	107

Source: Dairy Outlook and Situation, U.S. Department of Agriculture.

<sup>a</sup>Simple annual average of announced support price.

<sup>b</sup>There is no retail price information for nonfat dry milk.

<sup>c</sup>Estimated.

Table 8. New York Milk Production, Cattle Numbers, and Production Per Cow

	1972	1977	1980	1981	1982	1982 as % of 1981
Milk Production (mil. lbs.)	10,306	10,224	10,974	11,069	11,147 <sup>a</sup>	100.7
Production Per Cow (lbs.)	11,202	11,186	12,046	12,137	12,129 <sup>a</sup>	99.1
Milk Cows on Farms, average during year (thous.)	920	914	911	912	919 <sup>a</sup>	100.8
Milk Cattle on Farms, January 1 (thousands)						
Milk Cows and Heifers that have Calved	925	913	912	915	918	100.3
Milk Cow Replacements, Heifers 500 Pounds and Over	310	354	356	348	398	114.4
Heifers Per 100 Cows (no.)	32.5	38.8	39.0	38.0	43.2	113.7

Source: New York Agricultural Statistics and New York Crop and Livestock Report, New York Crop Reporting Service and New York Department of Agriculture and Markets and Milk Production, U.S. Department of Agriculture, February, 1983.

<sup>a</sup>Preliminary.

Table 9. NEW YORK DAIRY FARM PRICE INDEXES

An Index of Prices Paid by New York Dairy Farmers was developed and published in 1940 by the Department of Agricultural Economics at Cornell University. During 1981 a revised index was constructed in a cooperative effort between the Department of Agricultural Economics and the New York Crop Reporting Service. In addition to shifting the base period for prices to 1977=100, the index contains new weights to reflect current purchasing patterns. This new index is now computed and published monthly by the New York Crop Reporting Service.

The economic position of the farmer depends upon prices that he pays for commodities used in production and in family living as well as prices he receives for the commodities he produces. The Index of Prices Paid by Dairy Farmers is limited to only commodities used in production. An indication of family living costs may be obtained from the Consumer Price Index (CPI) as published monthly by the Bureau of Labor Statistics.

The Index of Prices Paid by Dairy Farmers measures the change in value of a fixed bill of goods typical of dairymen's purchases. It does not measure changes in farm expenditures, but shows the changes in value of a fixed bill of goods used in the production of milk. The average annual expenditures of New York dairymen by major expense categories are shown below as a percent of total.

AVERAGE ANNUAL EXPENDITURES FOR MILK PRODUCTION

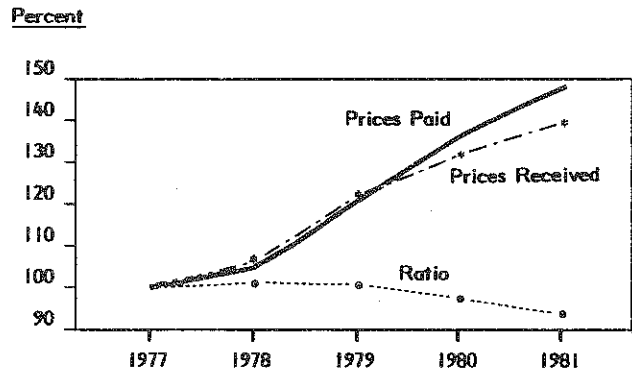
Item	Percent of Total
1. Feed	31
2. Purchased Animals	3
3. Fuel and Energy	5
4. Fertilizer	5
5. Seed	2
6. Machinery	18
7. Building and Fencing Supplies	8
8. Farm Services and Rent	8
9. Agricultural Chemicals	1
10. Interest Rates	7
11. Farm Wage Rates	9
12. Taxes	3
Total	100

An index of prices received by all New York farmers is not available, but since milk accounts for 60 percent of all cash farm receipts in New York, an index of prices received for milk by New York dairymen serves as a useful indicator for the State's agricultural economy. Due to the seasonality of milk prices, monthly adjustment factors were developed based on the 36 month period January 1976-December 1978. Adjusting the index for seasonality provides for a more meaningful comparison between the monthly prices received for milk and the prices paid indexes.

It is for this ready comparison between prices received and prices paid that ratios showing the relationship between the indexes were developed. These ratios measure the exchange value of units of commodities farmers buy in relation to units of commodities they sell.

The purchasing power of the farm dollar can be expressed as the ratio of prices received to prices paid. The 1981 ratio of 94, as shown in the table below, indicates that the dairymen's dollar would buy six percent less in 1981 than it would in the base period of 1977.

**RATIO: Prices Received for Milk and Prices Paid**  
by Dairy Farmers, New York, 1977-1981  
Index numbers (1977=100)



**DAIRY FARM PRICE INDEXES: Prices received and prices paid,**  
New York, 1977 to date

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual average
<u>INDEX OF PRICES RECEIVED FOR MILK, SEASONALLY ADJUSTED</u> (1977 = 100)													
1977	97	98	98	100	101	102	101	101	102	101	101	102	100
1978	101	103	103	106	107	108	107	108	109	112	115	118	108
1979	118	121	119	121	123	124	122	122	123	123	126	127	122
1980	126	128	129	132	134	134	131	130	131	132	135	139	132
1981	138	141	142	144	144	144	140	137	136	135	137	139	140
1982	137	139	140	142	142								
<u>INDEX OF PRICES PAID BY DAIRY FARMERS</u> (1977 = 100)													
1977	101	102	101	100	101	101	101	98	98	100	100	102	100
1978	103	103	103	104	104	106	107	105	107	108	110	111	106
1979	113	114	117	116	119	120	122	123	123	126	126	128	121
1980	130	131	132	133	133	134	134	137	139	143	146	147	137
1981	150	150	150	149	149	150	148	148	149	148	148	148	149
1982	147	149	148	148	150								
<u>RATIO OF INDEX OF PRICES RECEIVED FOR MILK TO INDEX OF PRICES PAID BY DAIRY FARMERS</u>													
1977	96	96	97	100	100	101	100	103	104	101	101	100	100
1978	98	100	100	102	103	102	100	103	102	104	105	106	102
1979	104	106	102	104	103	103	100	99	100	98	100	99	101
1980	97	98	98	99	101	100	98	95	94	92	92	95	96
1981	92	94	95	97	97	96	95	93	91	91	93	94	94
1982	93	93	95	96	95								

Table 10. Average Cost of Producing Milk on Selected New York Dairy Farms\*

Item	1973	1977	1980	1981
	(\$/cwt.)			
<u>Cash Operating Expenses</u>				
Hired labor	.65	.84	1.09	1.20
Purchased feed	2.34	2.90	3.60	3.62
Purchased animals	.42	.27	.29	.23
Vet. & medicine	.12	.17	.24	.28
Breeding fees	.09	.12	.16	.18
Other dairy expenses	.37	.58	.82	.89
Machinery repairs	.40	.57	.75	.81
Auto expenses (f.s.)	.03	.03	.04	.04
Gas & oil	.22	.31	.55	.62
Lime & fertilizer	.36	.49	.66	.72
Seed & plants	.11	.16	.20	.23
Spray & other crop	.08	.13	.16	.21
Land, bldg., fence repair	.15	.16	.21	.22
Taxes	.20	.27	.31	.35
Insurance	.14	.18	.23	.23
Electricity (f.s.)	.12	.17	.24	.27
Telephone (f.s.)	.03	.04	.04	.05
Interest paid	.53	.72	1.17	1.43
Miscellaneous	.18	.25	.37	.41
Total	6.54	8.36	11.13	11.99
<u>Other Expenses</u>				
Depreciation: mach. and bldg.	.80	.89	1.42	1.56
Unpaid labor	.08	.12	.14	.14
Total	.88	1.01	1.56	1.70
Gross farm operating cost	7.42	9.37	12.69	13.69
<u>Less:</u> Non-milk cash receipts	1.36	1.04	1.66	1.58
Inc. in feed & supplies	.47	.00	.43	.11
Inc. in livestock	.25	.08	.39	.25
NET COST OF MILK PRODUCTION	\$5.34	\$8.25	\$10.21	\$11.75
AVERAGE FARM PRICE OF MILK	\$7.30	\$9.61	\$12.65	\$13.66
Return per cwt. to farmer's labor, capital and management	\$1.96	\$1.36	\$2.44	\$1.91
Rate of return on farm equity capital	4.5%	-0.6%	2.5%	2.0%

Source: New York Farm Business Summary data.

\* Using farm unit (whole farm) method.

*Net out the difference L.S.  
from into ...*



Table 11. Milk Marketed by Producers to Handlers Regulated Under Northeast Milk Marketing Orders

Order	1977	1980	1981	1982	1982 as % of 1981
	(million pounds)				
New York-New Jersey	9,629	10,560	10,925	11,077	101.4
New England	4,993	5,221	5,093	5,234	102.8
Middle Atlantic	5,664	5,634	5,940	6,038	101.6
E. Ohio-W. Pennsylvania	3,493	3,379	3,356	3,480	103.7
NORTHEASTERN FEDERAL ORDER TOTAL	23,779	24,794	25,314	25,829	102.0
New York State Orders (Niagara Frontier and Rochester)	1,080	1,091	1,081	1,083	100.2
Northeastern State Orders (Maine and Pennsylvania)	1,152	1,136	1,190 <sup>a</sup>	1,120 <sup>a</sup>	102.5
NORTHEASTERN ORDER TOTAL	26,011	27,021	27,585	28,132	102.0
U.S. FEDERAL ORDER TOTAL	77,972	83,996	87,997	90,650 <sup>a</sup>	103.0

Source: Federal Milk Order Market Statistics and various State reports.

<sup>a</sup> Estimated by author from available data.

Table 12. Producer Receipts Used in Class I as a Percentage of Total Producer Receipts in Northeast Milk Marketing Orders

Order	1977	1980	1981	1982	1982 as % of 1981
New York-New Jersey	47	44	42	41	98
New England	59	55	55	53	96
Middle Atlantic	58	51	48	46	96
E. Ohio-W. Pennsylvania	60	59	58	56	97
NORTHEASTERN FEDERAL ORDER TOTAL <sup>b</sup>	54	50	48	46	96
New York State Orders <sup>b</sup> (Niagara Frontier and Rochester)	45	43	42	41	98
Northeastern State Orders <sup>b</sup> (Maine and Pennsylvania)	87	87	86 <sup>a</sup>	86 <sup>a</sup>	100
NORTHEASTERN ORDER TOTAL <sup>b</sup>	55	51	50	48	96
U.S. FEDERAL ORDER TOTAL <sup>b</sup>	53	49	46	44	96

Source: Federal Milk Order Market Statistics and various State reports.

<sup>a</sup>Estimated by author from available data.

<sup>b</sup>Based on total producer receipts and total receipts used in Class I.

Table 13. Minimum Blend Prices in Northeast Milk Marketing Orders, City Zone Prices at 3.5% Butterfat

Order	1977	1980	1981	1982	1982 as % of 1981
	(dollars per hundredweight)				
New York-New Jersey	9.85	12.97	13.80	13.85	100.4
New England	10.39	13.53	14.38	14.33	99.7
Middle Atlantic	10.10	13.20	13.95	13.80	98.9
E. Ohio-W. Pennsylvania	9.59	12.77	13.55	13.43	99.1
NORTHEASTERN FEDERAL ORDER TOTAL <sup>a</sup>	9.98	13.11	13.92	13.88	99.7
New York State Orders (Niagara Frontier and Rochester)	9.68	12.82	13.57	13.42	98.9
NORTHEASTERN ORDER TOTAL <sup>a</sup>	9.96	13.10	13.91	13.86	99.6
U.S. FEDERAL ORDER TOTAL <sup>a</sup>	9.69	12.86	13.63	13.53	99.3

Source: Federal Milk Order Market Statistics and various State reports.

<sup>a</sup> Average weighted by producer receipts.

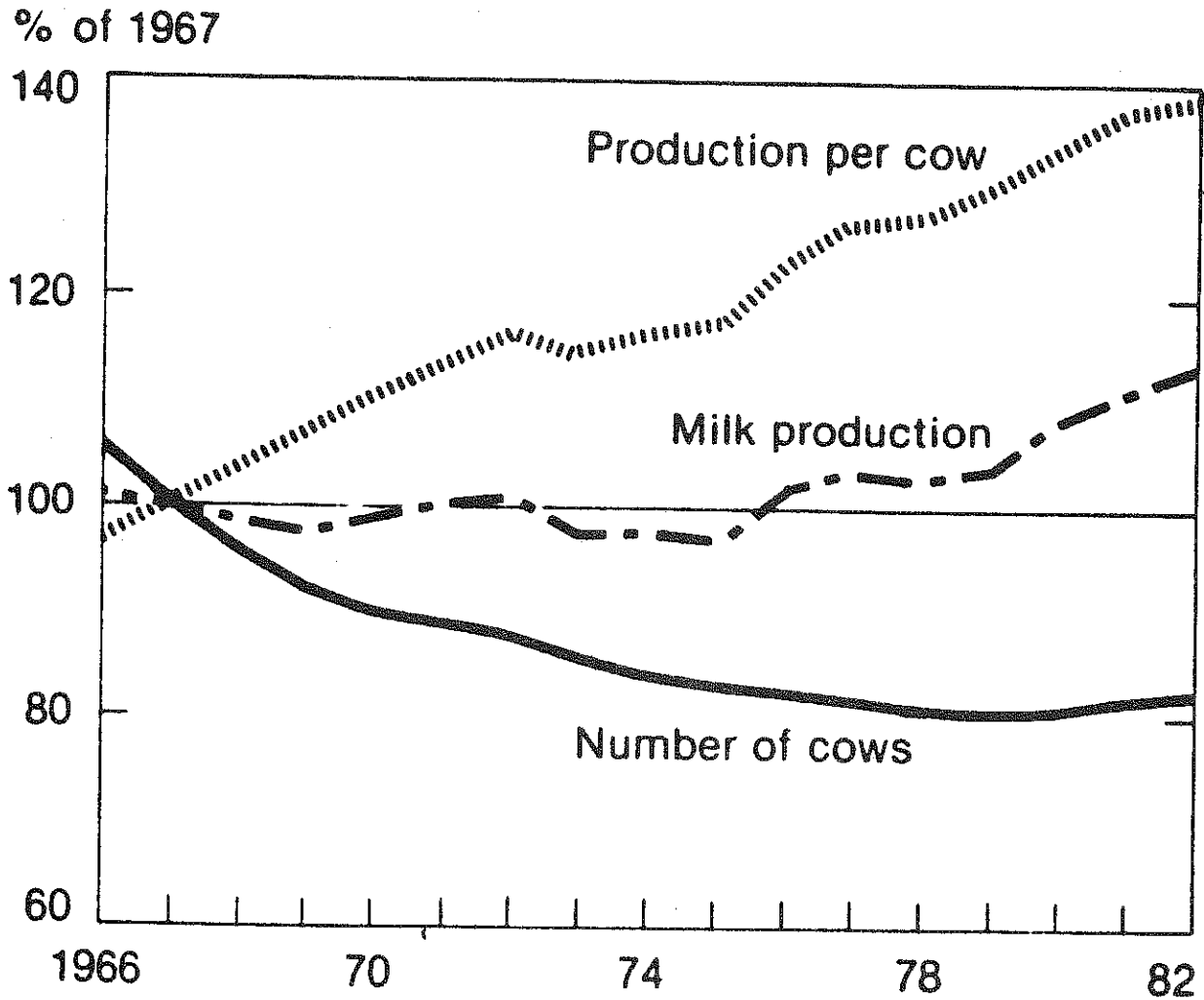
Table 14. U.S. Milk Supply, Utilization, and Prices

	1977	1978	1979	1980	1981	1982 <sup>a</sup>	1983 <sup>b</sup>	1983 as % of 1982
(billion pounds)								
<u>Supply</u>								
Production	122.7	121.5	123.4	128.5	133.0	135.8	138.0	102
Farm Use	2.8	2.7	2.5	2.3	2.3	2.2	2.2	100
Marketing	119.8	118.8	120.9	126.2	130.7	133.6	135.8	102
Beginning Commercial Stocks	5.3	4.9	4.5	5.4	5.8	5.4	4.8	89
Imports	2.0	2.3	2.3	2.1	2.3	2.4	2.4	100
TOTAL SUPPLY	127.1	126.0	127.7	133.7	138.8	141.4	143.0	101
<u>Utilization</u>								
Commercial Disappearance	116.1	118.8	120.2	119.2	120.5	122.6	123.8	101
Ending Commercial Stocks	4.9	4.5	5.4	5.8	5.4	4.8	4.9	102
Net Government Removals	6.1	2.7	2.1	8.8	12.9	14.0	14.3	102
TOTAL USE	127.1	126.0	127.7	133.7	138.8	141.4	143.0	101
(dollars per hundredweight)								
<u>Prices</u>								
All Farm Milk	9.72	10.60	12.00	13.00	13.80	13.55	12.75	94

Source: Dairy Outlook and Situation, U.S. Department of Agriculture.

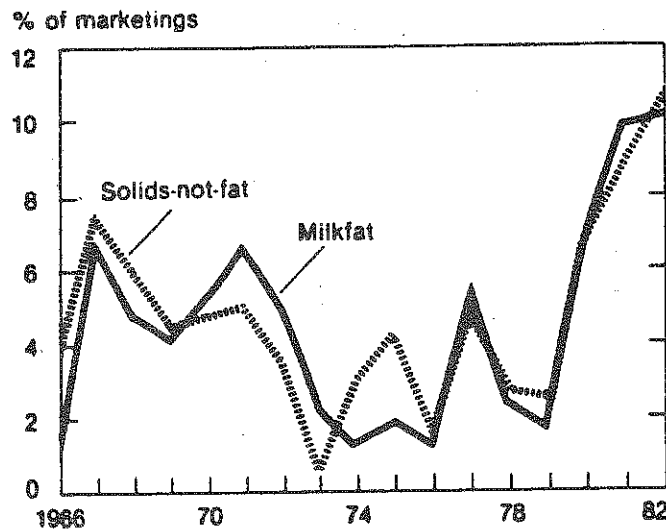
<sup>a</sup>Preliminary, based on USDA estimates or Cornell estimates from earlier USDA data.

<sup>b</sup>Estimated by the authors.



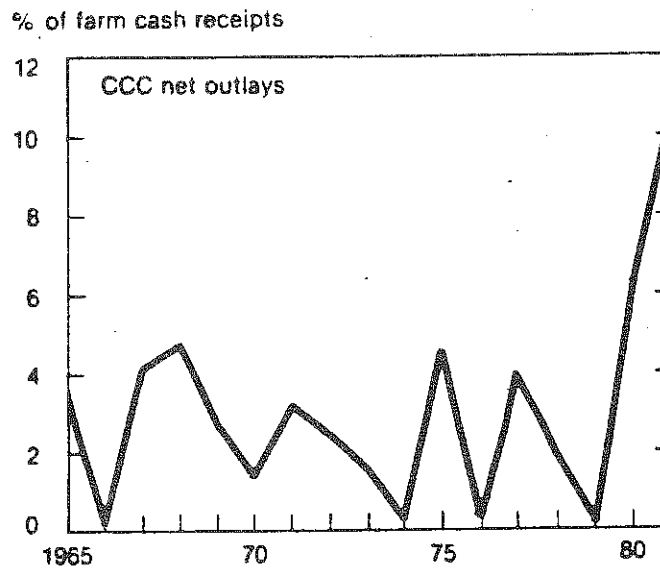
Source: U.S. Department of Agriculture

Figure 1. Relative changes in milk production, numbers of cows, and production per cow.



Source: U.S. Department of Agriculture

Figure 2. Milk solids purchased under USDA programs as a percentage of all milk marketed.



Source: U.S. Department of Agriculture

Figure 3. Net government expenditures for dairy products as a percentage of farm cash receipts from milk sales.

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