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Dairy Program Alternatives for the 1980's

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ABSTRACT

About 10 percent more milk is produced than is needed to balance supply and demand. Annual dairy program costs total over $2.2 billion and CCC stocks are in excess of 15 percent of annual commercial disappearance. These factors have led to pressure to change the dairy price support program, but there appears to be little agreement as to specific changes. This paper analyzes the effects of 17 potential dairy program options on farmers, consumers, and taxpayers. The results provide a basis upon which policymakers, consumers, and farmers can systematically evaluate various dairy program proposals.

Keywords: Dairy, Government cost, milk consumption, milk production, policy alternatives, price supports

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INTRODUCTION

The current cost of the dairy price support program exceeds $2.2 billion annually. CCC stocks of dairy products total over 18.7 billion pounds milk equivalent or more than 15 percent of annual commercial disappearance.

There appears to be considerable agreement among policymakers, farmers, and consumers that a change in the dairy price support program is needed, particularly in view of the high costs to the U.S. Treasury and the rapidly accumulating CCC stocks of dairy products. But, there seems to be little agreement as to specific changes. For example, some dairy price support proposals would attempt to reduce the costs of the program by lowering the level of price supports. Other proposals would reduce costs by offering incentives (disincentives) to limit (expand) milk production and still others would disband the dairy price support program altogether and, instead, support dairy farmers' incomes through direct payments.

This paper analyzes effects on producers, consumers, and taxpayers of various dairy price support options including: (1) setting the support price for manufacturing milk at various levels of parity, (2) using methods, other than parity, to determine the support price for manufacturing milk, (3) lifting the price support program and supporting farmers' income through direct payments, (4) providing incentives for directly limiting milk marketings, (5) expanding exports of dairy products, and (6) gradually reducing the level of dairy price supports.

We do not analyze all of the dairy program proposals that have been presented over the past several months. Instead, we analyze the effects of a diverse set of policy options using a consistent economic framework. The results should provide a basis upon which policymakers can systematically eliminate specific policy options or sets of policy options that possess specific generic characteristics.

Economic models provide a consistent framework for assessing the impacts of alternative policies. We use an annual econometric model of the U.S. agricultural sector in this study. This model, USDA's Food and Agricultural Policy Simulator (FAPSIM), contains a detailed dairy subcomponent. Readers desiring a detailed description of the dairy subcomponent should consult Salathe, Price, and Gadson.1/ Before we discuss the impacts of various policy options, we present the basic underlying forces that are assumed to affect the dairy sector for the duration of the 1980's. We also describe the degree of sensitivity of the analysis to possible errors in predicting the future economic environment in which the dairy industry is assumed to operate.

1/Salathe, Larry E., J. Michael Price, and Kenneth E. Gadson. "The Food and Agricultural Policy Simulator: The Dairy-Sector Submodel." Agricultural Economics Research. Vol. 34, No.3, July 1982, pp. 1-14.

BASIC ASSUMPTIONS

A variety of economic variables directly or indirectly affect the dairy sector and condition the manner in which dairy farmers, processors, wholesalers, retailers, and consumers react to policy changes. Macroeconomic variables such as population growth, inflationary pressures, consumer disposable incomes, the cost of feed, and the price of cattle significantly affect the dairy industry.

The analyses of policy options presented in this paper assume that current limits on dairy product imports will be maintained as world dairy product prices are below the U.S. variable costs of production for milk and are heavily influenced by international policies of reducing internal dairy product surpluses by subsidizing exports. We also assume that real disposable income will increase at the rate of 2-3 percent per year and dairy product processing and marketing costs will increase at the rate of 5-6 percent per year over the remainder of the 1980's. The U.S. population is assumed to increase at the rate of about 0.9 percent per year with the age distribution slowly shifting to the older age categories. But, since the dairy industry is not particularly sensitive to changes in these factors, the predicted impacts are not greatly affected by these assumptions. However, the predictions are quite sensitive to assumptions regarding feed costs and the prices for cattle. For example, high prices for feed and utility cows, by themselves, provide an incentive for dairy farmers to cut back production. Conversely, low prices for cows and feed will tend to fix resources in dairy production and provide an incentive to maintain or even expand milk production.

Feed and cow prices are assumed to increase, on average, by 4.0 to 5.0 percent per year over the next 6 years. Minor adjustments in these annual percentage changes will not affect substantially the outcomes of particular policy options. Major deviations from these assumptions, most likely brought about by poor weather here and abroad, could alter substantially the basic performance indicators for each policy alternative, but the differences in these performance indicators between alternatives remain relatively unaffected.

PRICE SUPPORT ALTERNATIVES

The price support level for milk has been tied to parity for over 30 years. Up until April 1, 1981, the price of manufacturing milk was supported at between 75 and 90 percent of parity. Until November 1983, the support price level of $13.10 per hundredweight had not changed. Yet, Government dairy product removals and milk production have increased.2/ The support price of $13.10 per hundredweight currently reflects a support level of about 62 percent of parity.

Price Supports Tied to Parity

A variety of options have been suggested to lower the level at which milk prices are supported in the hopes of reducing Government outlays for dairy product removals. Four possible price levels at which manufacturing milk might be supported are

2/Price supports were raised for a 20-day period beginning on October 1, 1983.

analyzed below, assuming that each would be instituted on October 1, 1983, and remain in effect thereafter.3/

- o price supported at 75 percent of parity
- o price supported at 60 percent of parity
- o price supported at 50 percent of parity
- o minimum Class I prices held at current levels with manufacturing milk supported at 50 percent of parity

Price supported at 75 percent of parity--Under this option, the support price for manufacturing milk would increase from $13.10 per hundredweight to nearly $22.00 per hundredweight on October 1, 1988. This increase in the support level would make dairying quite attractive and milk production would increase to over 166.0 billion pounds in the 1988/89 marketing year (table 1). CCC removals would increase to 19.9 billion pounds in 1983/84 and reach 39.0 billion pounds in 1988/89 (table 2). CCC net removal costs would increase to over $9.0 billion by 1988/89 (table 3). Cash receipts to dairy producers would total $22.2 billion in 1983/84 and increase to $36.5 billion in 1988/89 (table 4). Consumer expenditures for dairy products would increase from $41.7 billion in 1982/83 to $65.2 billion in 1988/89 (table 5).4/

60 percent of parity--The support price for manufacturing milk would fall to $12.29 per hundredweight on October 1, 1983, under this option. However, the support price would increase to $13.39 on October 1, 1984, and increase to $17.57 on October 1, 1988. This decline in support on October 1, 1983, would result in a drop in milk prices at the farm level of $0.81 per hundredweight (table 6).

Milk production would increase annually under this option but at a slower pace up until 1985/86 than over the past 2 years. And consumption tends to increase faster than milk production up until 1984/85. CCC net removals decline from current levels to 9.9 billion pounds in 1984/85, with costs declining from current levels by $660 million. But, after 1984/85, CCC net removals gradually increase to 13.7 billion pounds and removal costs reach $2.52 billion in 1988/89.

Dairy cash receipts would decline by about $1.0 billion in 1983/84. However, after 1983/84, cash receipts increase on average by about $1.7 billion per year. Consumer expenditures remain fairly stable in 1983/84 and after 1983/84 would increase

3/Parity has serious shortcomings as a basis for setting dairy support prices. These shortcomings and alternative mechanisms for setting support prices are discussed beginning on page 12.

4/See appendix tables for further details on the impacts of each alternative.

Table 1--Milk production under alternative dairy programs

Alternative	Marketing years						
	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	Ave.
	Billion pounds						
Parity level alternatives:							
75 percent	142.0	146.1	151.1	156.4	161.4	166.1	153.8
60 percent	139.3	139.9	141.5	143.7	145.6	147.3	142.9
50 percent	137.6	136.4	136.4	137.1	137.7	138.2	137.2
50 percent manufacturing milk only	138.4	137.6	137.5	138.0	138.4	138.7	138.1
Alternative support mechanisms:							
Input prices	139.0	138.9	139.4	140.3	140.8	141.0	139.9
Milk production per cow	139.1	139.2	140.1	141.4	142.1	142.4	140.7
Input prices and milk production per cow	139.0	138.6	138.6	139.1	139.2	139.3	139.0
CCC net removals	139.4	138.7	138.2	138.4	138.5	138.8	138.7
Direct payments:							
Current production	139.3	139.9	141.5	143.7	145.6	147.3	142.9
85 percent of base production	137.1	136.2	136.5	137.7	138.5	139.4	137.6
Alternative mechanisms for limiting marketings:							
$1.00 per hundredweight deduction	138.5	138.1	138.7	140.1	141.2	142.2	139.9
$250 cow culling payment	139.0	138.9	139.9	141.4	142.7	143.8	140.9
Two-tier price excess plan	130.3	132.0	132.2	133.1	134.4	135.5	132.9
Revolving fund	130.1	131.8	132.0	132.9	134.2	135.3	132.7
Export expansion	139.3	139.9	141.5	143.7	145.6	147.3	142.9
Relaxing Government intervention:							
Lowering of price supports to $12.10	139.6	139.1	138.6	138.4	137.6	136.0	138.2
25-percent reduction in supports	137.4	135.1	133.2	132.8	132.7	133.5	134.1

Table 2--CCC net removals under alternative dairy programs

Alternative	Marketing years						
	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	Ave.
	Billion pounds						
Parity level alternatives:							
75 percent	19.9	22.5	27.5	31.5	35.4	39.0	29.3
60 percent	10.8	9.9	11.3	12.3	13.2	13.7	11.9
50 percent	5.0	2.9	2.7	2.3	2.1	1.6	2.8
50 percent manufacturing milk only	8.1	4.9	4.0	2.9	2.5	1.9	4.1
Alternative support mechanisms:							
Input prices	9.8	7.2	7.3	6.3	5.5	4.3	6.7
Milk production per cow	9.9	8.2	8.5	8.0	7.3	6.0	8.0
Input prices and milk production per cow	9.6	6.5	5.5	4.1	3.0	1.9	5.1
CCC net removals	11.1	6.1	4.1	2.9	2.5	1.8	4.8
Direct payments:							
Current production	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85 percent of base production	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Alternative mechanisms for limiting marketings:							
$1.00 per hundredweight deduction	10.0	8.1	8.6	8.8	8.9	8.9	8.9
$250 cow culling payment	10.5	8.9	9.8	10.1	10.3	10.3	10.0
Two-tier price excess plan	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Revolving fund	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Export expansion	9.8	8.9	10.3	11.3	12.2	12.7	10.9
Relaxing Government intervention:							
Lowering of price supports to $12.10	11.6	6.5	4.5	2.2	-.9	-4.5	3.2
25-percent reduction in supports	4.2	-.7	-3.9	-4.2	-4.3	-3.4	-2.1

Table 3--CCC costs under alternative dairy programs

Alternative	Marketing years						
	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	Ave.
	Billion dollars						
Parity level alternatives:							
75 percent	3.42	4.18	5.40	6.65	7.87	9.28	6.15
60 percent	1.54	1.51	1.79	2.06	2.32	2.52	1.96
50 percent	.63	.35	.30	.22	.17	.13	.30
50 percent manufacturing milk only	.88	.56	.47	.32	.24	.16	.44
Alternative support mechanisms:							
Input prices	1.38	1.05	1.07	.93	.81	.61	.98
Milk production per cow	1.39	1.22	1.28	1.24	1.12	.94	1.20
Input prices and milk production per cow	1.34	.93	.77	.55	.32	.15	.68
CCC net removals	1.60	.80	.54	.32	.20	.20	.61
Direct payments:							
Current production	5.14	4.75	6.02	7.18	8.35	9.48	6.82
85 percent of base production	3.24	1.86	1.96	2.09	1.96	1.83	2.16
Alternative mechanisms for limiting marketings:							
$1.00 per hundredweight deduction	.09	-.10	.00	.08	.16	.19	.07
$250 cow culling payment	2.05	1.88	2.05	2.17	2.29	2.35	2.13
Two-tier price excess plan	.41	.44	.47	.51	.54	.57	.50
Revolving fund	.21	.39	.42	.45	.48	.51	.41
Export expansion	1.49	1.46	1.74	2.01	2.27	2.47	1.91
Relaxing Government intervention:							
Lowering of price supports to $12.10	1.70	.93	.59	.19	-.14	-.77	.42
25-percent reduction in supports	.53	-.09	-.45	-.69	-.76	-.27	-.29

Table 4--Dairy producer gross incomes under alternative dairy programs

Alternative	Marketing years 1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	Ave.
				Billion dollars			
Parity level alternatives:							
75 percent	22.2	24.8	27.4	30.5	33.5	36.5	29.2
60 percent	17.7	19.3	20.8	22.7	24.5	26.2	21.9
50 percent	14.9	16.6	17.7	19.3	20.8	22.3	18.6
50 percent manufacturing milk only	16.2	17.0	17.9	19.2	20.7	22.2	18.9
Alternative support mechanisms:							
Input prices	17.2	18.0	19.1	20.1	21.3	22.4	19.7
Milk production per cow	17.3	18.5	19.6	20.9	21.9	22.9	20.2
Input prices and milk production per cow	17.1	17.7	18.2	19.4	20.5	21.8	19.1
CCC net removals	17.8	17.1	17.6	18.9	20.3	22.2	19.0
Direct payments:							
Current production	17.7	19.3	20.8	22.7	24.5	26.2	21.9
85 percent of base production	16.9	18.5	19.8	21.6	23.0	24.6	20.6
Alternative mechanisms for limiting marketings:							
$1.00 per hundredweight deduction	16.2	17.7	19.0	20.8	22.4	24.0	20.0
$250 cow culling payment	18.2	19.7	21.2	22.9	24.5	26.1	22.1
Two-tier price excess plan	17.1	18.7	19.9	21.6	23.1	24.7	20.8
Revolving fund	17.0	18.8	20.1	21.6	23.2	24.7	20.9
Export expansion	17.7	19.3	20.8	20.7	24.5	26.2	21.5
Relaxing Government intervention:							
Lowering of price supports to $12.10	18.1	17.4	17.6	18.4	18.6	18.6	18.1
25-percent reduction in supports	14.5	14.9	14.9	17.1	18.8	21.7	17.0

Table 5--Consumer expenditures for dairy products under alternative dairy programs

Alternative	Marketing years						
	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	Ave.
	Billion dollars						
Parity level alternatives:							
75 percent	45.7	49.9	53.4	57.3	61.1	65.2	55.4
60 percent	42.0	45.9	49.0	52.5	56.1	59.8	50.9
50 percent	39.3	43.6	46.5	50.0	53.5	57.2	48.3
50 percent manufacturing milk only	42.1	44.8	46.9	49.8	53.3	56.9	49.0
Alternative support mechanisms:							
Input prices	41.5	44.8	47.6	50.4	53.6	56.9	49.1
Milk production per cow	41.6	45.3	48.0	51.0	54.0	57.1	49.5
Input prices and milk production per cow	41.5	44.4	46.6	49.8	52.9	56.4	48.6
CCC net removals	42.2	43.6	46.0	49.5	52.8	56.9	48.5
Direct payments:							
Current production	36.9	41.3	42.9	45.3	47.5	50.0	44.0
85 percent of base production	38.5	44.1	46.9	50.4	53.9	57.7	48.6
Alternative mechanisms for limiting marketings:							
$1.00 per hundredweight deduction	42.0	45.9	49.0	52.4	56.1	59.8	50.9
$250 cow culling payment	42.0	45.9	49.0	52.4	56.1	59.8	50.9
Two-tier price excess plan	42.4	46.2	49.3	53.0	56.4	60.2	51.3
Revolving fund	42.7	46.5	49.6	53.2	56.6	60.4	51.5
Export expansion	42.0	45.9	49.0	52.4	56.1	59.8	50.9
Relaxing Government intervention:							
Lowering of price supports to $12.10	42.4	44.1	45.9	48.9	51.0	53.1	47.6
25-percent reduction in supports	38.9	41.7	43.4	48.1	51.9	56.5	46.8

Table 6--All milk price under alternative dairy programs

Alternative	Marketing years						
	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	Ave.
	Dollars per hundredweight						
Parity level alternatives:							
75 percent	15.88	17.24	18.44	19.82	21.11	22.38	19.15
60 percent	12.84	13.95	14.88	16.03	17.07	18.09	15.48
50 percent	10.89	12.28	13.13	14.21	15.28	16.38	13.70
50 percent manufacturing milk only	11.82	12.50	13.13	14.06	15.11	16.22	13.81
Alternative support mechanisms:							
Input prices	12.52	13.12	13.86	14.53	15.31	16.12	14.24
Milk production per cow	12.55	13.46	14.16	14.94	15.63	16.31	14.51
Input prices and milk production per cow	12.45	12.89	13.29	14.08	14.90	15.87	13.91
CCC net removals	12.95	12.44	12.83	13.84	14.82	16.18	13.84
Direct payments:							
Current production	9.30	10.74	10.81	11.21	11.51	11.89	10.91
85 percent of base production	10.34	12.61	13.46	14.50	15.67	16.81	13.90
Alternative mechanisms for limiting marketings:							
$1.00 per hundredweight deduction	12.84	13.95	14.89	16.04	17.08	18.11	15.48
$250 cow culling payment	12.84	13.95	14.89	16.04	17.08	18.11	15.48
Two-tier price excess plan	13.25	14.35	15.28	16.43	17.47	18.49	15.88
Revolving fund	13.40	14.50	15.43	16.55	17.60	18.60	16.01
Export expansion	12.84	13.95	14.88	16.03	17.07	18.09	15.48
Relaxing Government intervention:							
Lowering of price supports to $12.10	13.15	12.67	12.81	13.43	13.68	13.80	13.25
25-percent reduction in supports	10.65	11.10	11.25	13.02	14.33	16.50	12.81

by about $3.5 billion per year. Cow numbers would decline gradually throughout the decade and average 10.6 million head in 1988/89 (table 7).

50 percent of parity--If the support price of manufacturing milk was dropped to 50 percent of parity, the support price would decline from its present level of $13.10 to $10.24 per hundredweight on October 1, 1983. After October 1, 1983, the support price would increase by about $0.88 per hundredweight per year and not surpass its current level until October 1, 1987. This drop in the support price would cause milk prices to fall sharply in 1983/84 ($2.76 per hundredweight), leading to an immediate cutback in milk production and reversing the upward trend in milk production since 1978. After 1983/84, milk production continues its downturn before stabilizing in 1984/85-1985/86 and then increasing to about its present level in 1988/89. CCC net removals would fall to 5.0 billion pounds and CCC removal costs would fall to $630 million in 1983/84. Net CCC removals continue their decline after 1983/84 and costs decline to less than $200 million by 1987/88.

The drop in milk prices in 1983/84 causes a substantial reduction in dairy cash receipts and a somewhat smaller drop in consumer expenditures for dairy products. Dairy cash receipts decline by over $3.7 billion in 1983/84 as compared to 1982/83 and remain below 1982/83 until 1986/87. Consumer expenditures for dairy products fall by about $2.4 billion in 1983/84 but move above 1982/83's level in the following year. Consumer expenditures for dairy products increase to $57.2 billion in 1988/89.

Hold minimum Class I prices at current levels and support manufacturing milk at 50 percent of parity--This option provides added assurance that milk producers would continue to provide adequate supplies to service the fluid milk market under a situation of declining support prices. It tends to cushion the short-term effects on Grade A producers of a substantial drop in the support price. A disadvantage of this option is that it accelerates the conversion of Grade B dairy farms to Grade A, since minimum Class I prices are held at their current levels. Grade B producers convert to Grade A thereby lowering Class I utilization. This additional production of Grade A milk would not appear to be needed to service the fluid market and reflects the response of producers to the relative profitability of producing Grade A versus Grade B milk. This signal is, however, artificial and in no way reflects the need for additional Grade A milk.

Milk prices would tend to fall uniformly across the United States in all of the previous price support options. But under this option, milk prices would fall most in those markets with low Class I utilization. Thus, regional milk production patterns would be affected by this option as producers in low Class I utilization markets would likely bear a disproportionate share of the production adjustment burden.

Table 7--Cow numbers under alternative dairy programs

Alternative	Marketing years						
	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	Ave.
	Million head						
Parity level alternatives:							
75 percent	11.04	11.10	11.23	11.41	11.59	11.75	11.35
60 percent	10.95	10.79	10.70	10.67	10.63	10.59	10.72
50 percent	10.89	10.61	10.40	10.26	10.14	10.01	10.38
50 percent manufacturing milk only	10.91	10.68	10.48	10.33	10.19	10.06	10.44
Alternative support mechanisms:							
Input prices	10.94	10.75	10.59	10.48	10.35	10.22	10.56
Milk production per cow	10.94	10.76	10.63	10.53	10.43	10.31	10.60
Input prices and milk production per cow	10.93	10.73	10.55	10.41	10.26	10.11	10.50
CCC net removals	10.95	10.75	10.54	10.37	10.21	10.07	10.48
Direct payments:							
Current production	10.95	10.79	10.70	10.67	10.63	10.59	10.72
85 percent of base production	10.87	10.58	10.40	10.29	10.18	10.08	10.40
Alternative mechanisms for limiting marketings:							
$1.00 per hundredweight deduction	10.92	10.70	10.54	10.44	10.36	10.27	10.54
$250 cow culling payment	10.92	10.71	10.58	10.49	10.42	10.34	10.58
Two-tier price excess plan	10.22	10.17	9.98	9.86	9.80	9.73	9.96
Revolving fund	10.20	10.14	9.96	9.84	9.78	9.71	9.94
Export expansion	10.95	10.79	10.70	10.67	10.63	10.59	10.72
Relaxing government intervention:							
Lowering of price supports to $12.10	10.96	10.77	10.57	10.38	10.18	9.94	10.47
25-percent reduction in supports	10.88	10.55	10.25	10.00	9.82	9.69	10.20

In 1983/84, the price of manufacturing milk would fall to $9.82 per hundredweight. The average price received for all milk, however, would decline by just $1.83 per hundredweight. Net removals fall to 8.1 billion pounds from their current level of 13.9 billion pounds in 1983/84. Removal costs fall to $880 million in 1983/84.

Milk production, cash receipts, consumer expenditures, and CCC removal costs under this option gradually approach the levels that would occur if prices were supported at 50 percent of parity after 1983/84. Dairy cash receipts under this option are within $150 million of the level with support at 50 percent of parity after 1984/85. And CCC removal costs differ by less than $200 million between this and the 50 percent of parity option. The price of milk averages about $0.15 per hundredweight lower after 1984/85 under this option as compared to supporting all milk prices at 50 percent of parity.

Alternative Mechanisms for Adjusting Support Prices

A number of options have been proposed that could be used to adjust support prices to more nearly reflect productivity, input costs, and the supply-demand situation for milk. These options include adjusting support prices based on changes in dairy specific production input prices, milk production per cow, dairy production costs, and CCC net removals. These alternatives attempt to improve upon the current price support adjustment mechanism by making it more reflective of changes in conditions in the dairy sector.

Adjustments based on input prices--The parity index, used in calculating the support price for manufacturing milk, reflects a general level of purchasing power for the agriculture sector during the period, 1910-14. But since 1910-14, the inputs used in dairy production have become much more specialized, thereby making the parity index less representative of changes in dairy farmers' costs.

An additional shortcoming of the current method of adjusting support prices based on the parity formula is the use of prices received for all farm products. Even if the prices paid by farmers remain unchanged, the support price for manufacturing milk will increase if the prices-received index declines. For example, if average farm prices fall by 2 percent, and prices paid for inputs increase by 5 percent, the support price for manufacturing milk will increase by about 7 percent. This adjustment will occur even though milk prices continue to be supported at the same level of parity.

An input price adjustor that reflects changes in the prices of items used in milk production overcomes the above deficiencies in the current method of calculating the support price. First, it ignores changes in input prices not specific to dairy production. And second, any adjustment in the index solely reflects changes in the prices of dairy inputs.

We begin by adjusting the 1982 parity price for manufacturing milk by the annual change in prices of dairy inputs after 1982

and further assume that milk prices would be supported at 60 percent of this revised support series. Compared to the 60 percent of parity option, a dairy input price index would result in lower consumer expenditures for dairy products, less milk production, lower CCC removals, and lower dairy cash receipts. Unlike the 60 percent of parity option, CCC removal costs fall below $1.0 billion after 1985/86 and fall to nearly $600 million by 1988/89. Farm cash receipts would remain below current levels until 1985/86 and increase to $22.4 billion in 1988/89 as compared with $26.2 billion for 1988/89 in the 60 percent of parity option. Consumer expenditures for dairy products under this option would be about $2.9 billion lower in 1988/89 as compared to supporting milk at 60 percent of parity.

Adjustments based on milk production per cow--Another shortcoming of the current parity formula is its failure to adjust support prices for changes in technology. Improvements in veterinary medicine, management techniques, and animal husbandry have led to increases in milk production per cow and feeding efficiency. Failing to alter the parity formula for these improvements in milk production per cow can lead to an overstatement of the level of prices which will generate an adequate supply of milk. In this alternative, we adjust the support price at 60 percent of parity for increases in milk production per cow.

In comparison with the 60 percent of parity option, adjustments for changes in milk production per cow would result in slightly lower milk production, CCC removals, milk prices, and consumer expenditures in 1983/84. CCC removal costs would decline to $1.4 billion or about $150 million lower than if the support price was set at 60 percent of parity. The average price of milk would decline from its current level of $13.65 to $12.55 per hundredweight in 1983/84.

Despite the rather small deviation from the 60 percent of parity option in 1983/84, substantial differences between the two options occur by 1988/89. Milk production increases by only 4.3 billion pounds over current levels in this option as compared to 9.2 billion pounds under the 60 percent of parity option. CCC removal costs in 1988/89 decline from $2.52 billion in the 60 percent of parity option as compared to $0.94 billion if the support price is adjusted by changes in milk production per cow. However, dairy cash receipts also decline when support prices are adjusted for changes in milk production per cow. Under this option, dairy cash receipts would be about $3.3 billion and consumer expenditures $2.6 billion lower in 1988/89 than if milk prices were supported at 60 percent of parity.

Adjustments based on input prices and milk production per cow--Under this option, we combine the effects of changes in input prices and milk production per cow to form an indicator of changes in dairy production costs. This index reflects both changes in dairy input prices, as well as changes in the productivity of dairy cows. This index more nearly reflects changes in milk production costs than either of the previous mechanisms presented for adjusting support prices.

In comparison with the previous two options, this option would result in lower milk production, CCC removals, milk prices, and consumer expenditures in 1983/84. CCC removal costs would decline to $1.3 billion or about $200 million lower than if the support price was set 60 percent of parity. The average price of milk would decline from its current level of $13.65 to $12.45 per hundredweight in 1983/84.

Milk production remains essentially stable under this option and by 1988/89 increases moderately to 139.3 billion pounds. CCC removals steadily decline from current levels, reaching 3.0 billion pounds in 1987/88 and less than 2.0 billion pounds in 1988/89.

The leveling off of milk production is indicative of the slower increase in support prices under this option. The support price by 1987/88 falls below that occurring when support prices are set at 50 percent of parity. The average price of milk increases to $15.87 per hundredweight as compared to $16.38 per hundredweight in 1988/89 under the 50 percent of parity option. Cash receipts from milk sales total $21.8 billion as compared to $22.3 billion with supports set at 50 percent of parity. Consumer expenditures are about $0.7 million lower under this option in 1988/89.

Adjustments based on CCC net removals--Another criticism of the current method of supporting milk prices is its inflexibility and lack of recognition of movements in consumption over time. Adjusting the support price upward regardless of movements in consumption may only exacerbate a surplus problem. Therefore, one alternative is to adjust support prices downward when removals become large. These adjustments in support might be as follows:

CCC Net Removals	Change in Real Support Price
More than 6.0 billion pounds	-10 percent
5.9 to 4.0 billion pounds	-5 percent
3.9 to 2.5 billion pounds	No change
2.4 to 1.0 billion pounds	+5 percent
Less than 1.0 billion pounds	+10 percent

Under this formula, the support price would be adjusted downward in real terms in 1983/84 and 1984/85 by 10 percent and another 5 percent in 1985/86.5/ Then, after 2 years of no adjustment

5/Changes in the GNP deflator were used to adjust support prices over time to account for inflation in this option. However, an index that specifically measures changes in dairy production costs (such as that described in the previous option) could be used to adjust support prices.

(in real terms), the support price would be increased by 5 percent in real terms in 1988/89.

Milk prices under this option would decline from their current level of $13.65 to $12.95 in 1983/84 to $12.44 per hundredweight in 1984/85 before increasing in 1985/86. Milk prices would not move above current levels until 1986/87 and would average $16.18 per hundredweight in 1988/89. Dairy cash receipts follow a similar pattern and would not move above current levels until 1986/87. Milk production would increase above current levels in 1983/84, but decline in 1984/85, and remain steady at about 138.5 billion pounds thereafter.

Throughout the period of 1983/84 to 1988/89, demand outpaces production which causes declines in CCC removals. In 1983/84, removal costs fall to $1.6 billion and by 1985/86 removal costs total about $0.5 billion. CCC removal costs would average less than $0.4 billion after 1985/86.

DIRECT INCOME SUPPORT ALTERNATIVES

The costs of supporting milk prices and the problems of storing, transporting, and disposing of surplus production have resulted in proposals to support and/or stabilize farmers' incomes through a system of direct payments. This system might be analogous to the current mechanism used to support feed grain, wheat, rice, and cotton farmers' incomes through deficiency payments. Below, we analyze the effects of two direct payment alternatives. In each alternative, the direct payment is calculated as the difference between the market price of milk assuming the support price was set at 60 percent of parity and the equilibrium market price that prevails with CCC net removals equal to 3.0 billion pounds of milk equivalent. The first direct payment option assumes that payments are based on current milk marketings, while the latter assumes payments are based on 85 percent of historical (base) milk marketings.

Direct payments based on current marketings--Under this option, CCC net removal costs would fall from their current level of $2.2 billion to less than $0.3 billion in 1983/84. The average price of milk would fall to $9.30 per hundredweight or by $4.35 from its current level and remain below current levels past 1988/89. Consumer expenditures would decline by $4.8 billion in 1983/84.

Despite the decline in milk prices, milk production would continue to increase under this option. This continued increase in milk production occurs because the direct payment is based on current marketings. As a result, the severe drop in milk prices in 1983/84 does not cause farmers to cut back, as any reduction in price is compensated for by higher direct payments and, thus, disproportionately awards those farmers who expand.

Total Government outlays increase above current levels under this option. For 1983/84, direct Government payments to farmers would amount to $4.8 billion. This more than offsets the reduction in CCC removal costs causing total CCC outlays to increase from the current level of $2.2 billion to over $5.1

billion dollars in 1983/84. By 1988/89, total CCC outlays would increase to over $9.4 billion.

Direct payments based on 85 percent of historical marketings--Under this alternative, dairy farmers' incomes are supported by direct payments on 85 percent of base milk marketings. The base is calculated as average milk production for marketing years 1981/82 and 1982/83 less farm use.

Milk prices would fall sharply in 1983/84, approximately $3.31 per hundredweight from current levels. As a result of this drop in milk prices, milk production would fall to about 137.1 billion pounds in 1983/84. This drop in milk production coupled with the sharp decline in milk prices would reduce dairy cash receipts by over $4.5 billion and consumer expenditures by $3.2 billion from current levels. However, dairy farmers' gross incomes would decline by less than $1.7 billion from current levels as direct payments in 1983/84 would total $2.9 billion.

In comparison with supporting prices at 60 percent of parity, this option results in only slightly lower farmers' incomes in 1983/84. Consumer expenditures are considerably lower, while total CCC costs are considerably higher. CCC costs more than double, increasing to $3.2 billion under this option, as compared to $1.5 billion when milk prices are supported at 60 percent of parity. Consumer expenditures for dairy products decline by nearly $3.5 billion in 1983/84.

Lower milk prices and the fact that the direct payments are not related to actual marketings cause milk production to decline considerably below the level that would occur if milk prices were supported at 60 percent of parity. By 1988/89, milk production increases to 139.4 billion pounds or nearly 8.0 billion pounds below the level with supports at 60 percent of parity. CCC costs are lower ($0.7 billion) than costs incurred under the 60 percent of parity price support option for 1988/89. Dairy farmers' incomes are about $1.6 billion lower and consumer expenditures are about $2.0 billion lower in 1988/89 under this option as compared with supports at 60 percent of parity.

Direct payments based on historical marketings do not disproportionately award farmers who expand production in the future. However, it does disproportionately award those dairy farmers who expanded during marketing years 1981/82 and 1982/83. Like any base or quota plan, this option would be difficult to administer. Bases would have to be set for all dairy producers and rules for transferring or reallocating the bases of farmers who leave dairying would be needed. The program could also increase the cost of entering dairying. For example, if bases were tied to existing facilities, the costs of acquiring those facilities would tend to include the value of the base.

ALTERNATIVES FOR LIMITING MARKETINGS

The high costs of the current price support system have led to proposals that provide various incentives to farmers for cutting milk production and/or disincentives for expanding production.

All of these proposals assume that the current price support system would remain unchanged, but in an attempt to reduce the current level of costs, measures would be added to facilitate a reduction in the level of milk production. These alternatives include assessments based on current milk marketings, payments for culling dairy cows, marketing reduction payments, and two-tier pricing schemes. The following alternatives are analyzed:

- o a $1.00 assessment on milk marketings
- o a $250 payment for each dairy cow culled
- o a two-tier price plan with excess production priced at the General Agreement on Tariffs and Trade (GATT) minimum (approximately $4.00 per hundredweight)
- o a revolving fund in which payments for cutting production would be obtained through assessments on producers

To facilitate comparisons, we assume for each alternative that the support price for milk is set at 60 percent of parity.

$1.00 per hundredweight assessment on milk marketings--Under this option, a $1.00 per hundredweight deduction was assumed to have been instituted on October 1, 1983. No portion of this deduction was assumed to be refundable. This deduction would have reduced CCC net costs to less than $100 million in 1983/84 as compared to $1.5 billion with supports at 60 percent of parity and no deduction. The reduction in costs stems from two sources: first, the reduction reflects the amount collected by the CCC from producers; second, assessments lower profits of farmers causing them to reduce production which, in turn, leads to a decline in CCC removals. Milk production would be 0.8 billion pounds lower in 1983/84 with a $1.00 per hundredweight assessment. CCC net removals would have amounted to 10.0 billion pounds of milk equivalent in 1983/84 and, despite the assessment of $1.00 per hundredweight, CCC net removals would average over 8.9 billion pounds per year. Thus, the deduction by itself would not eliminate the problem of large accumulations of CCC stocks of dairy products.

Dairy cow culling payment of $250--Under this option, we assume that dairy farmers would be eligible for a $250 payment for each dairy cow culled from their herd. We also assume that each farmer could replace each cow culled if it was profitable for the farmer to do so. Milk production would increase to 139.0 billion pounds in 1983/84 under this option, or be moderately lower (0.3 billion pounds) without the culling payment. CCC outlays for dairy product removals would be slightly lower by $40 million with a culling payment but total CCC costs would increase by over $0.5 billion as culling payments would exceed the decline in CCC removal costs. Dairy farmers' gross incomes would increase with a culling payment by about $0.5 billion in 1983/84 as compared to without a

culling payment. Consumer expenditures for dairy products would remain unchanged.

A culling payment would lead to a slight reduction in CCC costs and farmers' incomes by 1988/89. These reductions would occur as the culling payment over time causes additional adjustments in dairy cow numbers. By 1988/89, milk production would be 3.5 billion pounds lower with a $250 culling payment than without. CCC outlays would be about $0.2 billion lower and total dairy receipts including the culling payments would be about $0.1 billion lower. However, a $250 culling payment coupled with price supports at 60 percent of parity would lead to total CCC costs in excess of $2.0 billion in all years except 1984/85 ($1.9 billion).

These results suggest that paying farmers a subsidy for each dairy cow slaughtered would not be very effective in reducing milk marketings. Many of the payments would be for cows which would have been culled anyway. In addition, farmers would react to a long-term culling payment program by expanding the number of heifers in order to replace dairy cows culled under the program. But, when implemented in conjunction with a lowering of price supports, such payments could help producers through the short-term adjustment process.

Two-tier price plan with excess marketings supported at GATT minimum--Under this option, only the price of that quantity of milk needed to satisfy commercial plus domestic food program uses would be supported through the price support system. All remaining marketings would be supported at the GATT minimum (approximately $4.00 per hundredweight). Thus, dairy farmers are allowed to market all available milk, but the price received for excess milk would be substantially below the prevailing support price. In this option, the support level for excess milk is below the variable costs of production for milk. This ensures that dairy farmers would not produce large quantities of milk beyond that needed to satisfy commercial and domestic food aid uses.

Milk production in 1983/84 would decline to 130.3 billion pounds, 7.8 billion pounds below current levels. CCC net costs would decline to about $0.4 billion in 1983/84. Dairy cash receipts decline in 1983/84 by about $1.5 billion from their level in 1982/83, while consumer expenditures for dairy products increase by about $0.7 billion from current levels.

In comparison with supporting all milk prices at 60 percent of parity, this option results in lower CCC removal costs, lower cash receipts, and higher consumer expenditures. This option lowers CCC removal costs by about $1.1 billion and dairy farmers receipts by about $0.6 billion in 1983/84. Consumer expenditures for dairy products are about $0.4 billion higher under this option as the sizable cutback in milk production moderately forces up retail prices. These differences between the two options increase over time. By 1988/89, CCC removal costs under this option would amount to $0.6 billion as compared to over

$2.5 billion under the 60 percent of parity option. Cash receipts in 1988/89 would be about $1.6 billion lower and consumer expenditures about $0.4 billion higher under this option.

Revolving fund for controlling excess marketings--Under this option, dairy farmers would receive payments for reducing their marketings. Such payments would be financed through deductions on each hundredweight of milk marketed. We assume that such a program would be designed to be self-financing; or, in essence, that the revenue generated from the deduction would be enough to compensate those producers who cut back on their marketings. In addition, if some farmers chose not to participate, the revenues generated by the deduction would exceed the value of payments to complying farmers. These excess funds could be used to partially offset CCC removal costs. We present an illustration of this option below:

Current milk marketings	135.9 billion pounds
Desired milk marketings 1983/84	125.9 billion pounds
Desired marketing reduction 1983/84	10.0 billion pounds
Percentage reduction from current level	7.36 percent
Expected revenue generated by $.75 assessment	$944 million
Payments per hundredweight to compensate producers	$9.44
Total payments if all producers participate	$944 million

Now assume all producers do not participate and actual marketings in 1983/84 equal 127.9 billion pounds. Then, the revenue generated by a $0.75 per hundredweight assessment would amount to $960 million. The reduction in marketings from 135.9 to 127.9 rather than 125.9 implies that some farmers did not cut back their production. In this example, about 20 percent of the producers do not cut back. Total payments to complying farmers would amount to $755 million, leaving a surplus accruing to the CCC of $205 million. This money could be used to reduce the cost of CCC removals resulting from less than 100-percent participation and/or distributed back to dairy farmers.

In comparison with the two-tier price plan, this option would lead to about the same producer receipts and slightly higher consumer expenditures for dairy products in 1983/84 ($0.2 billion). CCC removal costs, however, would be lowered by about $0.2 billion. After 1983/84, this option would lead to slightly higher producer receipts, moderately lower CCC removal costs, and moderately higher consumer expenditures for dairy products

as compared to the previous option. All of the above differences amount to less than $0.3 billion.

This option would result in lower CCC outlays, lower cash receipts, and higher consumer expenditures than if the current price support system continued and supports were set at 60 percent of parity. This option lowers CCC costs by about $1.3 billion and dairy farmers' receipts by about $0.7 billion in 1983/84. Consumer expenditures for dairy products are about $0.7 billion higher under this option in 1983/84. By 1988/89, this option would lower CCC costs to about $0.5 billion as compared to over $2.5 billion under the 60 percent of parity option. Cash receipts in 1988/89 would be about $1.5 billion lower and consumer expenditures $0.6 billion higher under this option.

This option and the previous option necessitate that bases be determined for individual farms. In addition, there would have to be precise rules for determining bases for new dairy farmers, as well as for transfer of bases over time. In addition to problems of administration, these options tend to disproportionately award those farmers who expanded immediately prior to the program's introduction. Another disadvantage is that the bases themselves become valuable property and the costs of producing milk may over time begin to reflect the capitalized value of the base.

EXPANDING DAIRY PRODUCT EXPORTS

The current imbalance between supply and demand for dairy products could be alleviated by expanding dairy product exports. U.S. exports of dairy products account for less than 1.0 percent of butter and cheese production. These low levels of exports reflect the current disparity between U.S. internal domestic prices for butter and cheese and world prices for these products. As a result, significant expansion in exports of butter and cheese would require the use of export subsidies.

Another important consideration in expanding exports of dairy products is the impacts on major dairy product exporting countries. Countries such as New Zealand, France, and the Netherlands would face significant reductions in world demand for their dairy products. A policy to significantly expand dairy product exports could severely exacerbate an already tense relationship between the United States and the European Community. Thus, the benefits of subsidizing U.S. dairy products onto world markets must be carefully weighed against the costs of increasing friction with the EC and other major dairy product exporting countries.

Below, we analyze the effects of a modest export subsidization program for dairy products that would increase U.S. commercial exports of dairy products to 1.0 billion pounds milk equivalent. We estimate that to expand exports of dairy products to 1.0 billion pounds milk equivalent would require a subsidy of $50 million in 1983/84 if the support price is set at 60 percent of parity. Over time, the subsidy would have to be increased. This increase reflects the increase in support prices and the

reaction of other dairy exporting countries to a U.S. program of subsidizing dairy product exports. This option would not alter farm prices or consumer expenditures for dairy products from those that would occur at 60 percent of parity without an export subsidy. CCC costs, however, would decline $50-55 million per year if 1.0 billion pounds milk equivalent were exported through a subsidy program.

RELAXING GOVERNMENT INTERVENTION

Immediate and complete decontrol of dairy product pricing by the Government appears unlikely. Given the current oversupply situation, dairy farmers would certainly be severely affected by such a change in policy. And, the current situation is more a reflection of past misjudgements regarding the level of price supports needed to generate an adequate supply of milk, rather than an indication of any long-term problems with the dairy price support program.

A gradual reduction in the level of Government intervention in the dairy industry would have less severe effects on dairy producers. Below, we analyze two gradual dairy price decontrol alternatives. In each alternative, the basic price support system is assumed to remain in place but support prices remain below current levels throughout the remainder of this decade. These alternatives are:

- o price supports lowered to $12.60 on October 1, 1983, then lowered to $12.10 on October 1, 1984, and held at $12.10 per hundredweight thereafter

- o price supports lowered by 25 percent on October 1, 1983, and held at that level

Support price gradually reduced to $12.10 per hundredweight--Milk production peaks in 1983/84 under this option at 139.6 billion pounds and gradually declines to 136.0 billion pounds in 1988/89. Throughout the period, consumption of dairy products outpaces changes in milk production. CCC net removals decline from 11.6 billion pounds in 1983/84 to below 2.5 billion pounds after 1985/86 and CCC net removal costs decline from $1.7 billion to less than $200 million over the same period. After 1986/87, dairy product prices would move above sellback prices and the CCC could release past accumulations of dairy products. Dairy producers' receipts would remain in the $17.4 to $18.6 billion range throughout the period. Consumer expenditures for dairy products would increase from their current level of $41.7 billion to $53.1 billion in 1988/89, with the increase largely reflecting increases in consumption and rising marketing costs.

Commercial use of dairy products exceed milk production beginning in 1987/88 with the difference being accounted for by CCC sellback of previously accumulated stocks of dairy products. CCC sellback of dairy products would total 0.9 and 4.5 billion pounds, respectively, in 1987/88 and 1988/89. The sellback of CCC stocks moderates substantially the increase in milk prices in 1988/89. After 1988/89, CCC stocks would become negligible

and milk prices would increase sharply in order to balance supply and demand. Milk prices would remain quite high until milk production became more aligned with consumption. Thus, after 1988/89, milk prices would exhibit considerably more variability both seasonally, as well as yearly.

Current support price reduced by 25 percent--A lowering of the current support price by 25 percent would lower milk prices in 1983/84 by $3.00 per hundredweight below current levels. Milk production would fall from its current level of 138.1 billion pounds to 137.4 billion pounds and CCC removal costs would decline to about $0.5 billion in 1983/84. Dairy producers' receipts would decline by over $4.0 billion while consumer expenditures on dairy products would fall by $2.7 billion below current levels in 1983/84.

After 1983/84, the CCC could reduce existing stocks through sellback onto commercial markets. This would tend to stabilize milk prices through the 1985/86 marketing year at about $11.00 per hundredweight. Dairy cash receipts likewise stabilize during this period at about $14.9 billion. However, milk production declines considerably during this period reflecting the over $2.50 per hundredweight drop in milk prices from current levels.

Milk prices would increase rapidly after 1985/86 despite substantial sellback of previously accumulated CCC stocks. These upward price movements occur as CCC stocks of some dairy products are completely exhausted while relatively large CCC stocks of other dairy products would remain until 1988/89. By 1988/89, all CCC stocks of all dairy products would be exhausted.

Milk production would remain below commercial use after 1983/84. By 1988/89, commercial use would exceed production by 3.8 billion pounds. This large discrepancy between production and use would lead to substantially higher milk prices after 1988/89 until production became more aligned with commercial use. Milk prices would exhibit considerable variability under this option. This is in contrast to the relatively stable yearly movements in milk prices occurring when milk prices are supported at higher levels.

CONCLUSIONS

The United States has about 10 percent more milk being produced than is needed to balance supply and demand. It also appears that a without a change in legislation, Government outlays will remain high for the next several years.

Five basic policy approaches exist for reducing current milk surpluses and minimizing the probability of recurrences. Options include reducing the level of price supports, imposing supply control restrictions, changing the mechanism used to determine the level of support for dairy products, expanding dairy product exports, or completely eliminating the dairy price support program.

All of the above options would have different impacts on farmers, consumers, and Federal budget outlays. And, no one policy option is clearly superior. For example, a policy option that maintains milk prices above market-clearing levels enhances farmers' incomes, but will also result in higher consumer prices for dairy products. In addition, if that option includes direct Government purchasing, the cost of such purchases imply some level of Government costs. Programs which maintain farmers' incomes through direct payments would result in lower consumer prices for dairy products, but could also lead to larger Government outlays.

Reducing the level of parity at which milk prices are supported would help to reduce Government costs of the dairy price support program. The level of parity that would balance supply and demand in the long term is estimated to be in the 50- to 55-percent range. This implies a reduction in current milk prices of about 15 percent compared to a continuation of current legislation (excluding any deductions). However, the precise level of parity that will balance milk supplies is very dependent on cattle and crop prices. This strong interdependence between milk supplies and cattle and crop prices reflects the influence of cattle and grain prices on dairy farmers' milk production response. In addition, cattle and grain prices affect the level of support prices for milk through the parity index. For example, if future cattle and grain prices exhibit considerable strength (relative to movements in the prices paid index), year-to-year movements in the parity price for manufacturing milk will be much smaller than if cattle and grain prices exhibit little strength.

A change in the formula used to adjust the support price for manufacturing milk merits consideration. The current parity formula does not adequately account for changes in productivity, production costs, or demand for dairy products. Price support formulas which account, at least partially, for such factors will tend to keep production more in balance with demand.

Price support formulas which adjust the support price for (1) changes in productivity or milk production per cow, (2) changes in dairy input prices or costs of production, and/or (3) changes in CCC net removals would improve upon the current method of setting the support price. The first two formulas would provide producers with price signals that are more in tune with dairy production costs and the latter would provide incentives to producers to adjust production in response to changes in prices resulting from changes in demand for dairy products.

The current surplus situation has also led to proposals that would limit milk marketings. Paying farmers to cull dairy cows would be a simple but relatively ineffective means of reducing current surpluses. A large portion of the payment would likely be paid for cows that would be culled anyway. However, culling payments might be used to partially compensate farmers for losses experienced with a lowering of supports.

Programs that would provide incentives for reducing marketings below or discentives for expanding production above a historical base would be an effective means of reducing the current surplus. Compared to reducing the surplus by reducing the level of price supports, such programs would have less of an effect on producers in general. But, such programs would be difficult to administer. Bases would have to be determined for individual farms and rules for establishing bases for new entrants and transfer of bases would need to be developed. In addition, such programs would tend not to treat individual farmers equally. For example, if bases are determined using historical marketing information, farmers who have expanded recently will be treated less equitably than farmers who have not expanded. However, if bases are determined from current marketing information, farmers who have recently expanded would be treated more favorably than dairy farmers who have reduced production.

Policymakers could support and/or stabilize dairy farmers' incomes through direct payments. This policy alternative could lead to increased instability (seasonal and annual) in milk prices, especially if the CCC purchase program was eliminated. Such a program would tend to reduce consumer expenditures for dairy products in comparison to a continuation of the current support program. It would also reduce CCC removal costs, but total CCC outlays would be larger, as direct payments to farmers would more than offset the reduction in CCC removal costs, assuming dairy farmers' incomes were maintained at the same level as under the current price support system. However, the CCC would not incur the costs of transporting, storing, and handling excess production of dairy products.

A program to expand U.S. exports of dairy products could reduce net CCC costs of the price support program. However, such a program would necessitate the use of export subsidies as internal U.S. prices for dairy products exceed by a considerable margin world dairy product prices. Over time, the level of the export subsidy would likely have to increase as other dairy exporters competed for a declining share of the world market. But, as long as the subsidy is less than the domestic CCC purchase price and the probability of CCC sellback is low, a dairy export subsidy program will reduce the costs of the price support program. A major negative aspect of such a program is its adverse impacts on major dairy product exporting countries. Such countries as France, the Netherlands, and New Zealand would be adversely affected by such a program. It would likely lead to a further straining of the U.S.- EC relationship. In addition, it could also lead the EC to retaliate with higher subsidies on their agricultural exports or the closing of EC markets to U.S. agricultural products altogether. Thus, such a program has numerous potential negative aspects.

A program to gradually eliminate the price support program would not lead to a substantial increase in price instability immediately. But, after the current surplus situation corrected itself and the CCC released its existing stocks of dairy products, milk prices would exhibit increases in both seasonal and annual fluctuations. This instability in milk prices could lead to very tight supplies in certain years and yet, very low farm-level milk prices in other years.

Appendix table 1--Price supported at 75 percent of parity

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	11,041	11,100	11,235	11,410	11,588	11,753
Yield (Pounds of Milk Per Cow)	12,512	12,860	13,158	13,445	13,708	13,929	14,130
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	142,000	146,100	151,100	156,400	161,400	166,100
Farm Use	-2,200	-2,300	-2,400	-2,500	-2,600	-2,700	-2,800
Beginning Commercial Stocks, October 1	4,500	5,000	6,100	6,400	6,200	6,700	7,300
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Comercial Supply	142,800	147,100	152,200	157,400	162,400	167,800	173,000
Commercial Domestic Use	123,900	121,000	123,300	123,700	124,200	125,100	126,400
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	6,100	6,400	6,200	6,700	7,300	7,600
Total Utilization	128,900	127,200	129,700	129,900	130,900	132,400	134,000
CCC Net Removals	13,900	19,900	22,500	27,500	31,500	35,400	39,000
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	3,420	4,180	5,400	6,650	7,970	9,280
Export Subsidies							
Net Producer Payments							
Total	2,170	3,420	4,180	5,400	6,650	7,970	9,280
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	15.36	16.73	17.96	19.36	20.68	21.97
Manufacturing Grade Milk, Season Avg.	12.68	14.94	16.32	17.55	18.95	20.27	21.56
All Milk, Wholesale, Season Avg.	13.65	15.88	17.24	18.44	19.82	21.11	22.38
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	22,195	24,768	27,389	30,471	33,477	36,507
Net Payments							
Total	18,602	22,195	24,768	27,389	30,471	33,477	36,507
Consumer Expenditures (Millions of Dollars)	41,700	45,690	49,950	53,440	57,260	61,050	65,180

Appendix table 2--Price supported at 60 percent of parity

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,946	10,793	10,702	10,665	10,633	10,594
Yield (Pounds of Milk Per Cow)	12,512	12,727	12,962	13,224	13,478	13,695	13,903
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	139,300	139,900	141,500	143,700	145,600	147,300
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	6,000	6,100	6,000	6,400	6,500
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	144,500	146,200	148,000	150,100	152,500	154,300
Commercial Domestic Use	123,900	127,700	130,200	130,700	131,400	132,800	133,900
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	6,000	6,100	6,000	6,400	6,500	6,700
Total Utilization	128,900	133,700	136,300	136,700	137,800	139,300	140,600
CCC Net Removals	13,900	10,800	9,900	11,300	12,300	13,200	13,700
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	1,540	1,510	1,790	2,060	2,320	2,520
Export Subsidies							
Net Producer Payments							
Total	2,170	1,540	1,510	1,790	2,060	2,320	2,520
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	12.29	13.39	14.37	15.49	16.54	17.57
Manufacturing Grade Milk, Season Avg.	12.68	11.87	12.97	13.92	15.08	16.13	17.16
All Milk, Wholesale, Season Avg.	13.65	12.84	13.95	14.88	16.03	17.07	18.09
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	17,678	19,268	20,781	22,716	24,491	26,240
Net Payments							
Total	18,602	17,678	19,268	20,781	22,716	24,491	26,240
Consumer Expenditures (Millions of Dollars)	41,700	41,990	45,880	48,960	52,440	56,140	59,750

Appendix table 3--Price supported at 50 percent of parity

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,885	10,609	10,403	10,263	10,137	10,014
Yield (Pounds of Milk Per Cow)	12,512	12,642	12,860	13,109	13,362	13,583	13,802
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	137,600	136,400	136,400	137,100	137,700	138,200
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	5,900	5,900	5,700	6,000	6,200
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	142,800	142,600	142,700	143,200	144,200	144,900
Commercial Domestic Use	123,900	131,900	133,800	134,300	134,900	135,900	137,000
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	5,900	5,900	5,700	6,000	6,200	6,300
Total Utilization	128,900	137,800	139,700	140,000	140,900	142,100	143,300
CCC Net Removals	13,900	5,000	2,900	2,700	2,300	2,100	1,600
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	630	350	300	220	170	130
Export Subsidies							
Net Producer Payments							
Total	2,170	630	350	300	220	170	130
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	10.24	11.16	11.98	12.91	13.79	14.65
Manufacturing Grade Milk, Season Avg.	12.68	9.89	11.19	12.04	13.10	14.15	15.26
All Milk, Wholesale, Season Avg.	13.65	10.89	12.28	13.13	14.21	15.28	16.38
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	14,873	16,591	17,718	19,265	20,781	22,339
Net Payments							
Total	18,602	14,873	16,591	17,718	19,265	20,781	22,339
Consumer Expenditures (Millions of Dollars)	41,700	39,270	43,560	46,520	49,960	53,450	57,160

Appendix table 4--Set minimum Class I price at current levels and support manufacturing milk at 50 percent of parity

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,914	10,678	10,481	10,331	10,192	10,058
Yield (Pounds of Milk Per Cow)	12,512	12,658	12,886	13,119	13,359	13,576	13,794
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	138,400	137,600	137,500	138,000	138,400	138,700
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	6,000	6,000	5,900	6,100	6,200
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	143,600	143,900	143,900	144,300	145,000	145,400
Commercial Domestic Use	123,900	129,500	133,000	134,000	135,300	136,300	137,200
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	6,000	6,000	5,900	6,100	6,200	6,300
Total Utilization	128,900	135,500	139,000	139,900	141,400	142,500	143,500
CCC Net Removals	13,900	8,100	4,900	4,000	2,900	2,500	1,900
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	880	560	470	320	240	160
Export Subsidies							
Net Producer Payments							
Total	2,170	880	560	470	320	240	160
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	10.24	11.16	11.98	12.91	13.79	14.65
Manufacturing Grade Milk, Season Avg.	12.68	9.82	10.80	11.77	12.96	13.99	15.10
All Milk, Wholesale, Season Avg.	13.65	11.82	12.50	13.13	14.06	15.11	16.22
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	16,204	17,035	17,868	19,187	20,657	22,214
Net Payments							
Total	18,602	16,204	17,035	17,868	19,187	20,657	22,214
Consumer Expenditures (Millions of Dollars)	41,700	42,110	44,830	46,880	49,770	53,260	56,930

Appendix table 5--Adjusting support prices by changes in dairy input prices

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,936	10,745	10,593	10,478	10,354	10,217
Yield (Pounds of Milk Per Cow)	12,512	12,713	12,924	13,164	13,395	13,597	13,799
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	139,000	138,900	139,400	140,300	140,800	141,000
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	6,000	6,000	5,800	6,300	6,300
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	144,200	145,200	145,800	146,500	147,600	147,800
Commercial Domestic Use	123,900	128,400	132,000	132,700	134,000	135,800	137,200
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	6,000	6,000	5,800	6,200	6,300	6,300
Total Utilization	128,900	134,400	138,000	138,500	140,200	142,100	143,500
CCC Net Removals	13,900	9,800	7,200	7,300	6,300	5,500	4,300
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	1,380	1,050	1,070	930	810	610
Export Subsidies							
Net Producer Payments							
Total	2,170	1,380	1,050	1,070	930	810	610
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	11.96	12.55	13.30	13.97	14.75	15.49
Manufacturing Grade Milk, Season Avg.	12.68	11.54	12.13	12.88	13.55	14.33	15.14
All Milk, Wholesale, Season Avg.	13.65	12.52	13.12	13.86	14.53	15.31	16.12
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	17,205	18,010	19,102	20,147	21,281	22,442
Net Payments							
Total	18,602	17,205	18,010	19,102	20,147	21,281	22,442
Consumer Expenditures (Millions of Dollars)	41,700	41,540	44,770	47,560	50,360	53,560	56,890

Appendix table 6--Adjusting support prices by milk production per cow

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,937	10,757	10,627	10,534	10,432	10,307
Yield (Pounds of Milk Per Cow)	12,512	12,715	12,941	13,184	13,420	13,619	13,814
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	139,100	139,200	140,100	141,400	142,100	142,400
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	6,000	6,000	5,900	6,200	6,300
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	144,300	145,500	146,500	147,700	148,800	149,200
Commercial Domestic Use	123,900	128,400	131,300	132,100	133,500	135,200	136,800
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	6,000	6,000	5,900	6,200	6,300	6,400
Total Utilization	128,900	134,400	137,300	138,000	139,700	141,500	143,200
CCC Net Removals	13,900	9,900	8,200	8,500	8,000	7,300	6,000
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	1,390	1,220	1,280	1,240	1,120	940
Export Subsidies							
Net Producer Payments							
Total	2,170	1,390	1,220	1,280	1,240	1,120	940
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	12.00	12.86	13.56	14.35	15.05	15.75
Manufacturing Grade Milk, Season Avg.	12.68	11.57	12.47	13.18	13.97	14.66	15.35
All Milk, Wholesale, Season Avg.	13.65	12.55	13.46	14.16	14.94	15.63	16.31
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	17,256	18,511	19,597	20,854	21,912	22,917
Net Payments							
Total	18,602	17,256	18,511	19,597	20,854	21,912	22,917
Consumer Expenditures (Millions of Dollars)	41,700	41,630	45,250	47,970	51,050	54,020	57,130

Appendix table 7--Adjusting support prices by changes in input prices and milk production per cow

Item	Marketing Years 82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,933	10,732	10,554	10,406	10,258	10,106
Yield (Pounds of Milk Per Cow)	12,512	12,711	12,914	13,135	13,367	13,571	13,780
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	139,000	138,600	138,600	139,100	139,200	139,300
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	6,000	6,000	5,900	6,100	6,200
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	144,200	144,900	145,000	145,400	145,800	146,000
Commercial Domestic Use	123,900	128,600	132,400	133,600	135,200	136,600	137,800
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	6,000	6,000	5,900	6,100	6,200	6,300
Total Utilization	128,900	134,600	138,400	139,500	141,300	142,800	144,100
CCC Net Removals	13,900	9,600	6,500	5,500	4,100	3,000	1,900
Net CCC Removal Costs (Millions of Dollars)							
Net Removals	2,170	1,340	930	770	550	320	150
Export Subsidies							
Net Producer Payments							
Total	2,170	1,340	930	770	550	320	150
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	11.89	12.32	12.72	13.27	13.73	14.27
Manufacturing Grade Milk, Season Avg.	12.68	11.47	11.90	12.30	13.05	13.82	14.76
All Milk, Wholesale, Season Avg.	13.65	12.45	12.89	13.29	14.08	14.90	15.87
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	17,105	17,667	18,223	19,361	20,492	21,822
Net Payments							
Total	18,602	17,105	17,667	18,223	19,361	20,492	21,822
Consumer Expenditures (Million of Dollars)	41,700	41,460	44,420	46,640	49,810	52,940	56,440

Appendix table 8--Adjusting support price by CCC net removals

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,950	10,752	10,543	10,368	10,212	10,068
Yield (Pounds of Milk Per Cow)	12,512	12,732	12,901	13,111	13,348	13,561	13,788
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	139,400	138,700	138,200	138,400	138,500	138,800
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	6,000	6,000	6,000	6,200	6,000
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	144,600	145,000	144,600	144,800	145,200	145,300
Commercial Domestic Use	123,900	127,500	132,900	134,500	135,700	136,700	137,300
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	6,000	6,000	6,000	6,200	6,000	6,100
Total Utilization	128,900	133,500	138,900	140,500	141,900	142,700	143,900
CCC Net Removals	13,900	11,100	6,100	4,100	2,900	2,500	1,800
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	1,600	800	540	320	200	200
Export Subsidies							
Net Producer Payments							
Total	2,170	1,600	800	540	320	200	200
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	12.40	11.87	12.00	12.68	13.31	14.68
Manufacturing Grade Milk, Season Avg.	12.68	11.98	11.45	11.80	12.75	13.70	15.08
All Milk, Wholesale, Season Avg.	13.65	12.95	12.44	12.83	13.84	14.82	16.18
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	17,845	17,083	17,554	18,938	20,284	22,175
Net Payments							
Total	18,602	17,845	17,083	17,554	18,938	20,284	22,175
Consumer Expenditures (Millions of Dollars)	41,700	42,150	43,640	45,970	49,470	52,790	56,950

Appendix table 9--Direct payment based on current marketings

Item	Marketing Years 82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,946	10,793	10,702	10,665	10,633	10,594
Yield (Pounds of Milk Per Cow)	12,512	12,727	12,962	13,224	13,478	13,695	13,903
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	139,300	139,900	141,500	143,700	145,600	147,300
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	6,000	6,100	6,100	6,300	6,500
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	144,500	146,200	148,000	150,200	152,400	154,300
Commercial Domestic Use	123,900	135,500	137,100	138,900	140,900	142,900	144,600
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	6,000	6,100	6,100	6,300	6,500	6,700
Total Utilization	128,900	141,500	143,200	145,000	147,200	149,400	151,300
CCC Net Removals	13,900	3,000	3,000	3,000	3,000	3,000	3,000
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	290	330	340	350	360	370
Export Subsidies							
Net Producer Payments		4,853	4,423	5,678	6,830	7,990	9,105
Total	2,170	5,143	4,753	6,018	7,180	8,350	9,475
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10						
Manufacturing Grade Milk, Season Avg.	12.68	8.19	9.63	9.71	10.12	10.42	10.82
All Milk, Wholesale, Season Avg.	13.65	9.30	10.74	10.81	11.21	11.51	11.89
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	12,825	14,845	15,103	15,886	16,501	17,140
Net Payments		4,853	4,423	5,678	6,830	7,990	9,105
Total	18,602	17,678	19,268	20,781	22,716	24,491	26,240
Consumer Expenditures (Millions of Dollars)	41,700	36,890	41,250	42,900	45,320	47,470	49,950

Appendix table 10--Direct payment based on 85 percent of historical marketings

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,868	10,582	10,399	10,285	10,181	10,080
Yield (Pounds of Milk Per Cow)	12,512	12,617	12,867	13,125	13,385	13,608	13,826
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	137,100	136,200	136,500	137,700	138,500	139,400
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	5,900	5,800	5,700	6,100	6,200
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	142,300	142,400	142,700	143,800	145,100	146,100
Commercial Domestic Use	123,900	133,400	133,600	134,000	134,700	135,900	136,800
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	5,900	5,800	5,700	6,100	6,200	6,300
Total Utilization	128,900	139,300	139,400	139,700	140,800	142,100	143,100
CCC Net Removals	13,900	3,000	3,000	3,000	3,000	3,000	3,000
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	390	330	340	350	360	370
Export Subsidies		2,850	1,528	1,619	1,744	1,596	1,459
Net Producer Payments							
Total	2,170	3,240	1,858	1,959	2,094	1,956	1,829
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10						
Manufacturing Grade Milk, Season Avg.	12.68	9.22	11.47	12.33	13.48	14.56	15.72
All Milk, Wholesale, Season Avg.	13.65	10.34	12.61	13.46	14.50	15.67	16.81
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	14,091	16,991	18,164	19,860	21,429	23,106
Net Payments		2,850	1,528	1,619	1,744	1,596	1,459
Total	18,602	16,941	18,519	19,783	21,604	23,025	24,565
Consumer Expenditures (Millions of Dollars)	41,700	38,500	44,070	46,880	50,420	53,890	57,690

Appendix table 11--One dollar per hundredweight deduction

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,919	10,697	10,540	10,444	10,360	10,273
Yield (Pounds of Milk Per Cow)	12,512	12,682	12,907	13,159	13,413	13,633	13,847
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	138,000	138,100	138,700	140,100	141,200	142,200
Farm Use	-2,200	-2,100	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	6,000	6,100	5,900	6,200	6,200
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	143,700	144,400	145,200	146,400	147,900	148,900
Commercial Domestic Use	123,900	127,700	130,200	130,700	131,400	132,800	133,900
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	6,000	6,100	5,900	6,200	6,200	6,100
Total Utilization	128,900	133,700	136,300	136,600	137,600	138,000	140,000
CCC Net Removals	13,900	10,000	8,100	8,600	8,800	8,900	8,900
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	1,450	1,260	1,370	1,460	1,550	1,590
Export Subsidies							
Net Producer Payments		-1,360	-1,360	-1,370	-1,380	-1,390	-1,400
Total	2,170	90	-100	0	80	160	190
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	12.29	13.39	14.37	15.49	16.54	17.57
Manufacturing Grade Milk, Season Avg.	12.68	11.87	12.97	13.92	15.08	16.13	17.16
All Milk, Wholesale, Season Avg.	13.65	12.84	13.95	14.89	16.04	17.08	18.11
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	17,598	19,047	20,415	22,190	23,808	25,403
Net Payments		-1,360	-1,360	-1,370	-1,380	-1,390	-1,400
Total	18,602	16,238	17,687	19,045	20,810	22,418	24,003
Consumer Expenditures (Million of Dollars)	41,700	41,990	45,880	48,960	52,440	56,140	59,750

Appendix table 12--Dairy cow culling payments

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,919	10,713	10,576	10,494	10,421	10,338
Yield (Pounds of Milk Per Cow)	12,512	12,727	12,961	13,224	13,478	13,695	13,903
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	139,000	138,900	139,900	141,400	142,700	143,800
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	6,000	6,100	5,900	6,200	6,300
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	144,200	145,200	146,400	147,900	149,400	150,600
Commercial Domestic Use	123,900	127,700	130,200	130,700	131,400	132,800	133,900
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	6,000	6,100	5,900	6,200	6,300	6,400
Total Utilization	128,900	133,700	136,500	136,600	137,600	139,100	140,300
CCC Net Removals	13,900	10,500	8,900	9,800	10,100	10,300	10,300
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	1,500	1,370	1,540	1,670	1,790	1,860
Export Subsidies		554	515	507	497	498	494
Net Producer Payments							
Total	2,170	2,054	1,885	2,047	2,167	2,288	2,354
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	12.29	13.39	14.37	15.49	16.54	17.57
Manufacturing Grade Milk, Season Avg.	12.68	11.87	12.97	13.92	15.08	16.13	17.16
All Milk, Wholesale, Season Avg.	13.65	12.84	13.95	14.89	16.04	17.08	18.11
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	17,639	19,138	20,551	22,375	24,020	25,636
Net Payments		554	575	507	497	498	494
Total	18,602	18,193	19,713	21,058	22,872	24,518	26,130
Consumer Expenditures (Millions of Dollars)	41,700	40,990	45,880	48,960	52,440	56,140	59,750

Appendix table 13--Two-tier price plan with excess marketings supported at GATT minimum

Item	Marketing Years 82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,223	10,166	9,980	9,859	9,797	9,731
Yield (Pounds of Milk Per Cow)	12,512	12,746	12,985	13,247	13,501	13,718	13,925
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	130,300	132,000	132,200	133,100	134,400	135,500
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	5,700	5,800	5,700	5,800	5,900
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	135,500	138,000	138,400	139,200	140,700	141,900
Commercial Domestic Use	123,900	126,800	129,200	129,700	130,400	131,800	132,900
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	5,700	5,800	5,700	5,800	5,900	6,000
Total Utilization	128,900	135,000	135,400	136,200	136,200	137,700	138,900
CCC Net Removals	13,900	3,000	3,000	3,000	3,000	3,000	3,000
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	410	440	470	510	540	570
Export Subsidies							
Net Producer Payments							
Total	2,170	410	440	470	510	540	570
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	12.29	13.39	14.37	15.49	16.54	17.57
Manufacturing Grade Milk, Season Avg.	12.68	12.16	13.27	14.22	15.38	16.43	17.46
All Milk, Wholesale, Season Avg.	13.65	13.25	14.35	15.28	16.43	17.47	18.49
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	17,052	18,703	19,930	21,567	23,138	24,671
Net Payments							
Total	18,602	17,052	18,703	19,939	21,567	23,138	24,671
Consumer Expenditures (Millions of Dollars)	41,700	42,420	46,240	49,330	52,990	56,420	60,170

Appendix table 14--Using a revolving fund to control excess marketings

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,199	10,142	9,957	9,836	9,776	9,709
Yield (Pounds of Milk Per Cow)	12,512	12,756	12,995	13,257	13,511	13,728	13,935
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	130,100	131,800	132,000	132,900	134,200	135,300
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	5,700	5,800	5,700	5,800	5,900
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	143,900	135,300	137,800	138,200	139,000	140,500	141,700
Commercial Domestic Use	132,900	126,600	129,000	129,500	130,200	131,600	132,700
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	5,700	5,800	5,700	5,800	5,900	6,000
Total Utilization	128,900	132,300	134,800	135,200	136,000	137,500	138,700
CCC Net Removals	13,900	3,000	3,000	3,000	3,000	3,000	3,000
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	410	440	470	510	540	570
Export Subsidies							
Net Producer Payments		-205	-50	-50	-60	-60	-60
Total	2,170	205	390	420	450	480	510
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	12.29	13.39	14.37	15.49	16.54	17.57
Manufacturing Grade Milk, Season Avg.	12.68	12.31	13.41	14.39	15.50	16.55	17.60
All Milk, Wholesale, Season Avg.	13.65	13.40	14.50	15.43	16.55	17.60	18.60
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	17,218	18,869	20,104	21,691	23,275	24,781
Net Payments		-205	-50	-50	-60	-60	-60
Total	18,602	17,013	18,819	20,054	21,631	23,215	24,721
Consumer Expenditures (Millions of Dollars)	41,700	42,660	46,480	49,560	53,180	56,620	60,350

Appendix table 15--Dairy product export subsidy program

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,946	10,793	10,702	10,665	10,633	10,594
Yield (Pounds of Milk Per Cow)	12,512	12,727	12,962	13,224	13,478	13,695	13,903
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	139,300	139,900	141,500	143,700	145,600	147,300
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	6,000	6,100	6,000	6,400	6,500
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	144,500	146,200	148,000	150,100	152,500	154,300
Commercial Domestic Use	123,900	127,700	130,200	130,700	131,400	132,800	133,900
Commercial Exports		1,000	1,000	1,000	1,000	1,000	1,000
Ending Commercial Stocks, September 30	5,000	6,000	6,100	6,000	6,400	6,500	6,700
Total Utilization	128,900	134,700	137,300	137,700	138,800	140,300	141,600
CCC Net Removals	13,900	9,800	8,900	10,300	11,300	12,200	12,700
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	1,440	1,400	1,675	1,940	2,190	2,385
Export Subsidies		50	60	65	70	75	80
Net Producer Payments							
Total	2,170	1,490	1,460	1,740	2,010	2,265	2,465
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	12.29	13.39	14.37	15.49	16.54	17.57
Manufacturing Grade Milk, Season Avg.	12.68	11.87	12.97	13.92	15.08	16.13	17.16
All Milk, Wholesale, Season Avg.	13.65	12.84	13.95	14.88	16.03	17.07	18.09
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	17,678	19,268	20,781	22,716	24,491	26,240
Net Payments							
Total	18,602	17,678	19,268	20,781	22,716	24,491	26,240
Consumer Expenditures (Millions of Dollars)	41,700	41,990	45,880	48,960	52,440	56,140	59,750

Appendix table 16--Support price gradually reduced to $12.10 per hundredweight

Item	Marketing Years						
	82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,956	10,773	10,571	10,383	10,180	9,938
Yield (Pounds of Milk Per Cow)	12,512	12,740	12,914	13,115	13,332	13,512	13,685
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	139,600	139,100	138,600	138,400	137,600	136,000
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	6,000	6,000	6,000	6,100	6,200
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	144,800	145,400	145,000	144,800	144,200	142,700
Commercial Domestic Use	123,900	127,200	132,900	134,500	136,500	138,900	141,000
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	6,000	6,000	6,000	6,100	6,200	6,200
Total Utilization	128,900	133,200	138,900	140,500	142,600	145,100	147,200
CCC Net Removals	13,900	11,600	6,500	4,500	2,200	-900	-4,500
Net CCC Costs (Millions of Dollars)							
Net Removals	2,170	1,700	930	590	190	-140	-770
Export Subsidies							
Net Producer Payments							
Total	2,170	1,700	930	590	190	-140	-770
Prices (Dollars Per Cwt.)							
Support Price, Manufacturing Milk	13.10	12.60	12.10	12.10	12.10	12.10	12.10
Manufacturing Grade Milk, Season Avg.	12.68	12.18	11.68	11.80	12.32	12.59	12.73
All Milk, Wholesale, Season Avg.	13.65	13.15	12.67	12.81	13.43	13.68	13.80
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	18,130	17,438	17,587	18,411	18,627	18,587
Net Payments							
Total	18,602	18,130	17,438	17,587	18,411	18,627	18,587
Consumer Expenditures (Millions of Dollars)	41,700	42,440	44,130	45,950	48,900	51,000	53,100

Appendix table 17--Lower current support price by 25 percent

Item	Marketing Years 82/83	83/84	84/85	85/86	86/87	87/88	88/89
Number of Cows (Thous.)	11,041	10,878	10,554	10,245	10,002	9,819	9,685
Yield (Pounds of Milk Per Cow)	12,512	12,630	12,804	13,003	13,274	13,516	13,783
Supply & Utilization (Millions of Pounds of Milk Equivalent)							
Production	138,100	137,400	135,100	133,200	132,800	132,700	133,500
Farm Use	-2,200	-2,200	-2,100	-2,000	-2,000	-1,900	-1,900
Beginning Commercial Stocks, October 1	4,500	5,000	5,900	5,900	5,800	6,000	6,100
Imports	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Total Commercial Supply	142,800	142,600	141,300	139,500	139,000	139,200	140,100
Commercial Domestic Use	123,900	132,500	136,100	137,600	137,200	137,400	137,300
Commercial Exports							
Ending Commercial Stocks, September 30	5,000	5,900	5,900	5,800	6,000	6,100	6,200
Total Utilization	128,900	138,400	142,000	143,400	143,200	143,500	143,500
CCC Net Removals	13,900	4,200	-700	-3,900	-4,200	-4,300	-3,400
Net CCC Removal Costs (Millions of Dollars)							
Net Removals	2,170	530	-90	-450	-690	-760	-270
Export Subsidies							
Net Producer Payments							
Total	2,170	530	-90	-450	-690	-760	-270
Prices (Dollars Per cwt.)							
Support Price, Manufacturing Milk	13.10	9.83	9.83	9.83	9.83	9.83	9.83
Manufacturing Grade Milk, Season Avg.	12.68	9.62	9.97	10.15	11.73	12.84	15.17
All Milk, Wholesale, Season Avg.	13.65	10.65	11.10	11.25	13.02	14.33	16.50
Income Factors (Millions of Dollars)							
Cash Receipts	18,602	14,532	14,886	14,886	17,122	18,814	21,733
Net Payments							
Total	18,602	14,532	14,886	14,886	17,122	18,814	21,733
Consumer Expenditures (Millions of Dollars)	41,700	38,940	41,730	43,410	48,140	51,920	56,470

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