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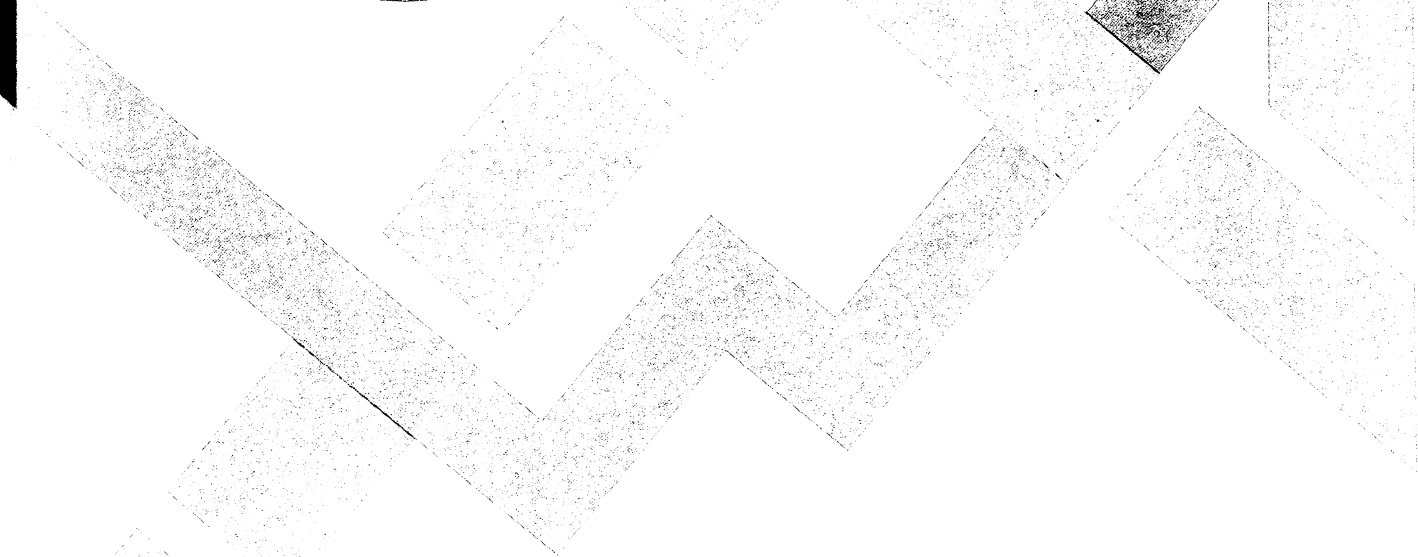
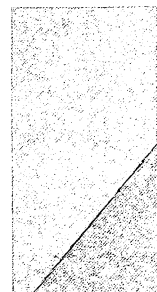
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Alternative Price Support Programs for Dairy Farmers

Boyd M. Buxton
and
Jerome W. Hammond*

Since 1949, the milk support price has been maintained when necessary by government purchases of butter, nonfat dry milk powder, and American cheese from processors at prices that permit them to pay support prices to producers. The Commodity Credit Corporation (CCC) has purchased dairy products equal to about 4 percent of total milk production. These purchases have removed as much as 10 percent of milkfat and 13 percent of solids-not-fat produced in a single year. Sometimes, more than half of the U.S. annual nonfat dry milk production was government purchased for price support.

The Secretary of Agriculture can set the dairy support price between 75 and 90 percent of parity. This usually has provided enough flexibility to avoid chronic surpluses. The 1977 farm bill raised the minimum support price from 75 to 80 percent of parity through March 31, 1979. It also requires mid-year adjustments in the support price to reflect current changes in the index of prices paid by farmers (the Parity Index).

The dairy support program is unique because supply control cannot be imposed as a condition for price support eligibility as with grains. At times, this has resulted in high government costs. For example, the direct government costs of the program were more than \$½ billion in 1976-77.

*Boyd M. Buxton is an agricultural economist, Economics, Statistics, and Cooperatives Service, USDA, stationed at the University of Minnesota. Jerome W. Hammond is a professor of Agricultural Economics, Department of Agricultural and Applied Economics, University of Minnesota.

Whenever purchases of dairy products cause Treasury costs to rise, pressure develops to set support prices at the minimum specified by law. Such action is considered necessary to reduce government costs by bringing supply and demand into closer balance. However, other proposals are frequently considered by farm organizations and by Congress to achieve the same goals.

A number of programs could be used to reduce government costs. However, these alternatives involve many economic trade-offs. New programs affect money transfers among dairy farmers, consumers of dairy products, and taxpayers. No possible program exists that simultaneously benefits all three groups or meets all important policy objectives. The Congress, Secretary of Agriculture, and others must consider these trade-offs in formulating a specific dairy program.

Selecting a national dairy program also raises equity questions among dairy farmers in various regions of the U.S., between farmers who produce Grade A₂ milk and those who produce Grade B milk, and among farmers with different size dairy herds.

This article evaluates several alternative ways to reduce government costs and/or government purchases of dairy products.

These alternatives are:

1. lowering the level of price support under the existing program,
2. direct payments to farmers,
3. supply control, and
4. adjusting fluid-manufacturing price differentials.

To analyze the various policy alternatives, the 1976/77 marketing year was used as the comparison basis. During that year, the government purchased dairy products equal to 6.9 billion pounds of milk. Exact impacts will differ according to which year is selected for comparison, but conclusions are the same.

LOWERING THE LEVEL OF SUPPORT

Reducing the support price for milk would reduce government costs of the price support program. This analysis indicates that from the marketing year 1976/77 the price support would have needed to be lowered from \$8.57 to \$7.89 per hundredweight to reduce the government purchases from 6.9 billion to 3.0 billion pounds of milk (table 1¹). That would have (1) reduced government costs from \$699 million to \$270 million, (2) reduced consumer expenditures for all dairy products by \$317 million (the retail price per half gallon of milk would have been about 3.0 cents lower and the price per half pound of cheese about 3.1 cents lower than under the present program), and (3) reduced annual cash receipts to dairy farmers \$894 million (\$354 million less from taxpayers, \$316 million less from fluid milk consumers, and \$224 million less from consumers of manufactured dairy products).

These low milk prices could create over adjustment in supply and later lead to tight markets and high prices. Considerably more unstable prices would clearly result from support prices lower than have existed in the past.

¹The quantity adjustments estimated in this report are based on the following assumptions:

1. Fluid use will increase (decrease) 0.18 percent for each 1 percent decrease (increase) in the actual Class I price paid by fluid milk bottlers.
2. Milk used to manufacture dairy products, excluding government purchases, will increase (decrease) 0.45 percent for each 1 percent decrease (increase) in the manufacturing milk price received by farmers.
3. Milk produced by all dairy farmers will increase (decrease) 0.15 percent for each 1 percent increase (decrease) in the all wholesale milk price received by farmers.

Table 1. Impact of alternative policies to reduce government purchases of dairy products under the current price support program

Item	Unit	Present program	Lower support price	Payment	Supply control	Lower Class I differentials (same support price)	Higher Class I differentials (lower support price)
Class I differential	dol.	2.26	2.26	2.26	2.26	1.80	3.26
Production:	bil. lb.	122.50	121.27	122.54	118.60	122.12	122.50
Less farm use	"	2.90	2.90	2.90	2.90	2.90	2.90
Marketings	"	119.60	118.37	119.64	115.70	119.22	119.60
Payments	mil. dol.	—	—	1,196	—	—	—
Cash farm receipts	"	11,613	10,719	10,444	11,279	11,330	11,613
Milk prices:							
Manufacturing	dol.	8.57	7.89	7.57	8.57	8.57	8.11
All wholesale	"	9.63	8.98	8.65	9.67	9.42	9.63
Class I	"	10.83	10.15	9.83	10.83	10.37	11.37
Government purchases	mil. dol.	699	270	278	304	617	584
Government removals	bil. lb.	6.9	3.0	3.04	3.00	6.09	6.04
Government payments	mil. dol.	—	—	1,196	—	—	—
Consumption:							
Fluid	bil. lb.	56.20	56.84	57.13	56.20	56.63	55.70
Manufacturing	"	56.50	58.53	59.47	56.50	56.50	57.86
Consumer expenditures:							
Fluid	mil. dol.	10,488	10,221	10,090	10,488	10,308	10,695
Manufacturing	"	9,684	9,634	9,598	9,684	9,684	9,651
Total		20,172	19,855	19,688	20,172	19,992	20,346
Consumer prices:							
Half-gallon milk	cents	82.2	79.2	77.8	82.2	80.2	84.6
Half-pound cheese	"	86.1	82.6	81.0	86.1	86.1	83.5
— Change in present program —							
Money transfers: ^a							
Change in cash farm receipts	mil. dol.	—	-894	27	-334	-283	0
Change in source of farm revenue							
Taxpayers	"	—	-354	835	-334	-69	-101
Consumers							
Fluid milk	"	—	-316	-469	0	-214	248
Manufactured products	"	—	-224	-339	0	0	-147

^aEstimated money transfers between farmers, taxpayers, consumers of fluid milk and manufactured dairy products at the *farm level*. Increase or decrease in transfers from taxpayers and consumers are net of margin costs and represent the farm share of consumer expenditures and taxpayers cost.

PAYMENTS TO FARMERS

Under a payment program, the government would make payments to dairy farmers when market prices fall below the desired support price. Payments could be made directly to individual farmers or indirectly through processors or dealers. A payment program would require new legislation.

Many variations are possible. For example, payments might be calculated on a farmer's historical base production, on marketings, or only on Grade B milk production.

Payments per producer might be limited (as under present direct payment programs for crops) to a specified maximum per farm. Some of these variations would be less costly for the government than others, but they would also reduce the level of support for dairy farmers.

Table 1 tabulations, from this analysis of a payment-type program, are only intended to suggest direction and relative size of adjustment.

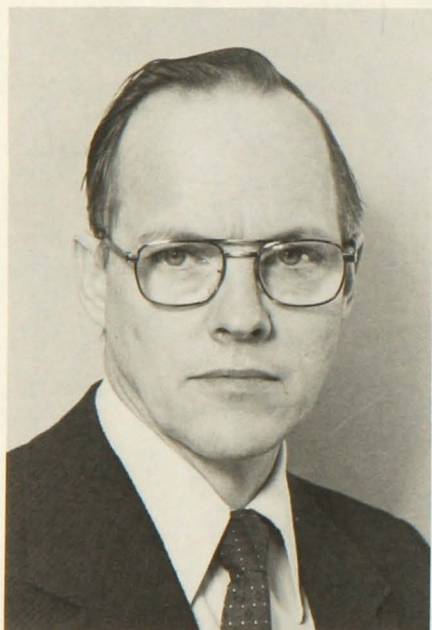
For analysis, a payment-type program is combined with the pres-

ent purchase program. To reduce government purchases from 6.9 billion to 3.04 billion pounds of milk equivalent, while still supporting the manufacturing milk price at \$8.57 (\$7.57 plus a \$1.00 payment), would have cost the government an estimated \$1,474 million: \$278 million for purchases of dairy products and \$1,196 million for payments directly to farmers (table 1).

The analysis implies that the payment program would lower consumers' milk prices about 4.4 cents per half gallon of milk, and cheese



Boyd M. Buxton



Jerome W. Hammond

prices about 5.1 cents per half pound. Total annual consumer expenditures for fluid and manufactured products would be about \$484 million less than under the present program.

Cash farm receipts would be higher (\$27 million) as dairy farmers would have received a slightly higher effective price (market price plus payment) due to a larger proportion of total milk being used for higher valued fluid sales. The annu-

al cost of maintaining the manufacturing milk support price at \$8.57 would tend to shift from consumers to taxpayers: \$469 million less from fluid milk consumers, \$339 million less from consumers of manufactured dairy products, and \$835 million more from taxpayers. These changes reflect the net increase in cash farm receipts of \$27 million.

Lower consumer prices under a payment program would encourage consumption of dairy products, which in turn would help reduce government purchases. Shifting the burden of the support program to high income bracket taxpayers would tend to help low-income consumers relative to high-income consumers.

A major obvious disadvantage of the payment alternative would be the higher U.S. Treasury cost. This makes the cost of the dairy program more visible than if consumers pay higher prices. Other disadvantages include more government organization and staff to administer the program and very large payments to large producers unless some effective payment limitation is imposed.

SUPPLY CONTROL

A supply control program could be implemented using sales quotas, cow number limitation, and/or restrictions on feed inputs. The government also could make payments to farmers for culling milk cows. This type of program would require new legislation.²

Controlling supply with a sales quota to farmers is the approach considered most often. A national milk quota could be allocated to individual producers as a percentage of the herd's historical production. This quota would limit the amount of milk that each producer could sell during an arbitrary time period.

Over-quota milk would either have to be dumped by the farmer or the support payment for it would have to be less than the additional cost to produce it. Otherwise farm-

ers still would have incentive to produce milk in excess of quotas.

A mandatory quota would offer the most effective means of supporting milk prices while, at the same time, cutting government costs and purchases of dairy products. A voluntary supply control program would be less effective in reducing supplies and thus supporting milk prices, but it would not require as much sacrifice of farmers' freedom to make production decisions. To encourage participation, voluntary control could be coupled with an incentive — probably a direct payment. Under any quota scheme there is the question of how new farmers could get established in dairy farming.

Quotas would tend to freeze existing patterns of production unless they were transferable among farms. Transferable quotas would quickly become valuable after being assigned. Their value would represent windfall gains to the original holders. Quotas become an additional cost for farmers entering dairying or existing dairy farmers desiring expansion. This has occurred under the tobacco program where quotas are rented to other producers. Thus the quota is a direct cost of production. This added cost detracts from a major purpose of the supply control program — to increase net farm income.

The easier a quota is to obtain, the less value it would have and the less effective the program would be to control supply over time.

To avoid windfall gains, the government could sell quota certificates to dairy farmers annually. The value of the quota, then, could be retained by society. Again, however, quota purchases add to the cost of production and may result in only small or no increased net farm income.

For analysis of the supply control option, this study assumed that supply control is combined with product purchases to support milk prices. It would also be possible to combine supply control with direct payments. Support, then, could be directed only to those who limit production.

To reduce government purchases under the existing program to 3 billion pounds of milk equivalent

²Some federal order fluid milk markets currently have base excess plans. Though often advocated as supply control, they are also devices to reserve fluid milk sales in given markets to local supplies rather than to affect the national milk supply.

would have required cutting back milk production about 3.2 percent (table 1).

The supply control alternative reduces government program costs and purchases of dairy products. Consumer expenditures would be unaffected while the all wholesale milk price would increase slightly due to a high proportion of milk being used in the higher valued fluid market. Cash farm receipts would decline since there would be less volume of milk produced. Estimated U.S. Treasury cost would have dropped from \$699 to \$304 million, or \$395 million. This saving would have resulted from a reduction in total cash farm receipts from taxpayers of \$334 million plus about \$61 million less in processing costs on fewer products purchased by the government. Net farm income would not decline the full \$334 million decrease in cash farm receipts because farmers would save the variable expenses associated with the 3.9 billion pounds of milk that herds would have produced.

By maintaining the current support price by controlling supply, the higher milk prices would tend to capitalize part of the support price into the value of the quota. An important advantage of this alternative is fewer government purchases of dairy products and fewer of the associated disposal problems than under the present purchase-type program.

Some measure of supply control could also be achieved through subsidies for selling dairy cows for slaughter. The subsidy would raise the effective cull cow price above market price for slaughter cows and would encourage additional culling. The study estimated that a \$15 per hundredweight subsidy on slaughter cows would have lowered 1976/77 marketing year milk production by 3.5 percent.

ADJUSTMENTS IN THE CLASSIFIED PRICING

Federal and state milk marketing orders use a classified pricing scheme in setting prices for Grade A milk in most parts of the country. Grade A milk as an ingredient of manufactured dairy products throughout the U.S. is priced at the

manufacturing milk price in the Minnesota-Wisconsin area.³ The dairy price support program sets a floor under this price. The Grade A milk used as a fluid beverage is priced at fixed differentials above this manufacturing milk price. The amount of the Class I differential generally increases the greater the distance from Eau Claire, Wisconsin. Total returns to dairy farmers can be increased by increasing the Class I differentials as long as the demand for fluid milk is less responsive to a change in the Class I price than manufacturing demand is to a change in the manufacturing milk price.

This section shows two ways of implementing a classified pricing program to maintain returns to manufacturing milk producers while simultaneously lowering government costs. First, Class I differentials under federal milk marketing orders are reduced while maintaining the same support prices for manufacturing milk. Second, the classified pricing program could be applied to all milk (Grade A and B) with increased differentials. This would increase fluid milk prices and allow the manufacturing milk prices to drop below current levels but still leave total cash receipts to dairy farmers unchanged.

Lower Class I Differentials

The analysis of lowering Class I (fluid) differentials was based on several assumptions. First, the drop in the minimum Class I price differential of 46 cents per hundredweight is directly reflected in retail milk prices; that is, the average differential falls from \$2.26 to \$1.80 per hundredweight. This study also assumed that Class I differentials in state milk control programs were dropped by a similar amount. The support price for manufacturing milk remained at \$8.57. Under these assumptions, annual government purchases would have been reduced from 6.9 billion to 6.09 billion pounds (table 1). This decline occurs because lower fluid

milk prices raise fluid milk consumption and reduce production slightly.

Consumer expenditures for fluid milk would have decreased from \$10,488 million to \$10,308 million, or less than 2 percent. Consumer expenditures for manufactured products would have been unchanged.

Lowering the Class I differential cuts dairy cash farm receipts \$283 million compared to continuing the present program: \$69 million less from taxpayers and \$214 million less from fluid milk consumers. Returns to Grade A dairy farmers would be lower in all regions, but the largest decreases would occur in regions that used the highest proportion of milk as fluid — primarily the southeast and south central regions of the U.S. Prices received by Grade B milk producers would not be affected.

Higher Differentials and Lower Support Prices

Because price changes usually affect fluid milk consumption less than consumption of manufactured dairy products, it may also be possible to lower the manufacturing support price if the Class I (fluid) price is simultaneously increased. For this alternative the study calculated fluid and manufacturing price changes so that the average all wholesale milk price received by farmers in the present program is maintained, but government purchases are reduced from 6.9 billion to 6.04 billion pounds (table 1).

To implement this alternative some redistribution of proceeds from sales through a single national pool or several regional pools would be required. Both Grade A and B milk sales in the U.S. would be pooled to assure that Grade B manufacturing farmers would share in the higher priced fluid sales. The current federal milk marketing order program is similar in concept to this program except that it regulates only 65 percent of all milk produced, and only Grade A dairy farmers share in the higher Class I fluid sales.

To analyze this alternative, this study assumes that the average all wholesale milk price received by all

³This price is called the M-W price and is approximately the same as the all U.S. manufacturing milk price, under the price support program.

farmers would remain at \$9.63, the present program level.

Dairy farmers receiving the same average milk price would be expected to produce the same total quantity of milk. Additional consumption of manufactured dairy products due to lower prices would more than offset the drop in fluid consumption due to higher Class I prices. The result would be fewer government purchases, 6.04 billion pounds instead of 6.9 billion pounds of milk equivalent. Government cost would be about \$584 million — \$115 million less than the \$699 million under the present program.

Consumer expenditures would have increased \$207 million for fluid milk and about \$33 million for manufactured dairy products. The retail price of a half gallon of milk would have increased about 2.4 cents, while the retail price of a half pound of cheese would have dropped about 2.6 cents.

Total cash farm receipts would have remained unchanged. The

burden of the price support program would shift from consumers of manufactured dairy products (\$147 million) and taxpayers (\$101 million) to fluid milk consumers (\$248 million).

SUMMARY OF TRADE-OFFS WITH RESPECT TO THE CURRENT PROGRAM

Table 2 shows a summary of the major trade-offs between policy objectives in implementing an alternative dairy support program in comparison with the present program. A plus (+) in the column indicates an improvement, a minus (–) indicates a deterioration, and a zero (0) implies no major impact on the particular policy objective listed. Some of the significant trade-offs indicated in the table follow:

With lower support price, consumers also pay less for dairy products. The benefits to taxpayers and consumers are reflected in lower cash farm receipts.

A payment program would reduce the quantity of dairy products purchased by the government, but taxpayer cost would be much higher. Consumers of both fluid milk and manufactured dairy products would pay less for dairy products. Gross income for dairy farmers would be slightly higher if the program maintained the existing manufacturing support price. Market prices could become less stable.

A supply control program would reduce both program costs and purchases while maintaining milk prices (table 3). Consumer expenditures for dairy products would be unaffected as long as total supply is not reduced by more than the amount of surpluses generated by the support price. Cash farm receipts would decline since there would be less volume of milk produced. The impact on net farm income would depend on how costs are affected by reduced production.

Lower Class I differentials, while maintaining the present manufacturing milk support price, benefit taxpayers and fluid milk consumers but reduce cash receipts for all dairy farmers. Consumers of manufactured dairy products would pay the same price since the manufacturing support price is unchanged.

Higher Class I differentials, by raising fluid prices and lowering manufacturing milk prices, would decrease government costs. It would benefit taxpayers and consumers of manufactured dairy products but increase prices for fluid milk consumers.

For this alternative, Class I differentials were assumed to be raised and manufacturing support price lowered so that dairy farmers' total cash farm receipts remain unchanged. However, Grade A milk producers would generally receive greater incomes while Grade B milk producers would receive lower incomes unless adjustments were provided. This would require a transfer of funds from fluid markets to manufacturing milk markets.

Each alternative, except for lower Class I differentials or lowering support, would require new legislation.

Table 2. Summary of trade-offs between selected dairy policy objectives in implementing a payment or supply control program in combination with the present purchase program^a

Possible policy objectives	Payment program	Supply control program
<i>Farmers</i>		
Increased farm income	+	–
Increased milk price stability	0	0
Freedom of production decisions	0	–
Discourage adoption of more substitutes for manufactured dairy products	+	0
<i>Consumers</i>		
Decrease consumer prices for fluid milk	+	0
Decrease consumer prices for manufactured dairy products	+	0
<i>Government</i>		
Less control of producers' decisions	0	–
Less control of industry decisions	0	–
Lower government cost for programs	–	+
Lower quantity of government purchases	+	+
<i>Money transfers</i>		
Less money from taxpayers	–	+
Less money from fluid milk consumers	+	0
Less money from consumers of manufactured dairy products	+	0
More money to dairy farmers (cash farm receipts)	+	–

^aThe respective program, relative to the present program, would be expected to improve (+), detract from (–), or have no impact (0) on possible policy objectives listed.

Table 3. Summary of trade-offs between dairy policy objectives in implementing alternative programs to reduce government purchases of dairy products^a

Objectives in selecting a dairy program	Lower support price	Lower Class I differentials (same support price)	Higher Class I differentials (lower support price)
<i>Farmers</i>			
Increased farm income	-	-	0
Increased milk price stability	-	0	0
Better resource efficiency and adjustment	+	+	-
More equal prices for Grade A and Grade B producers	0	+	0 ^b
More equal prices for producers in various regions	0	+	-
Freedom of production decisions	0	+	0
Discourages adoption of more substitutes for manufactured products	+	0	+
<i>Consumers</i>			
Decrease consumer prices for fluid milk	+	+	-
Decrease consumer prices for manufactured dairy products	+	0	+
Less differential between fluid and manufactured dairy product prices	0	+	-
<i>Government</i>			
Less control of producers' decisions	0	+	0
Less control of industry decisions	0	0	0
Lower government cost for programs	+	+	+
Lower government purchases	+	+	+
<i>Money transfers</i>			
Less money from taxpayers	+	+	+
Less money from fluid milk consumers	+	+	-
Less money from consumers of manufactured dairy products	+	0	+
More money to dairy farmers (cash farm receipts)	-	-	0

^aThe respective program, relative to the present program, would be expected to improve, (+), detract from (-), or have no impact (0) on possible policy objectives listed.

^bAssumes that Grade B milk producers will share in the higher value of Class I sales along with Grade A milk producers.

Jerome W. Hammond Editor
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