

Implications of a Target Price-Deficiency Payment Program for Supporting Milk Prices

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Many agricultural policy specialists think the current federal dairy price support program isn't working. In the last five years the program has proved very costly to taxpayers, and hasn't prevented the buildup of a substantial surplus of milk and dairy products. Also the program isn't the type of market-oriented approach favored by the Reagan administration.

The president's advisers have proposed replacing the current program with one involving target prices and deficiency payments—an approach that has been used in federal grain and cotton programs for the last ten years. However, because of certain characteristics of milk production and milk pricing, there would be some unusual problems in applying target price-deficiency payments to the dairy industry. This bulletin discusses some of the likely implications and challenges of such an approach.

What is a Target Price Program?

Since 1949, the federal government has supported milk prices to U.S. dairy farmers through the Commodity Credit Corporation (CCC), which buys butter, nonfat dry milk and American cheese. In effect the CCC sets a floor under the wholesale prices, because it stands ready to purchase unlimited quantities of these products as long as the products meet minimum quality standards. The CCC product purchase prices are set at levels that permit reasonably efficient manufacturers to return the milk support price to dairy farmers. But the program does not guarantee farmers the specified support price; the system works because manufacturers compete for available supplies of raw milk.

While the CCC only purchases selected manufactured dairy products, the program influences prices for other manufactured products because manufacturers compete for the same milk. Fluid milk prices are influenced by the support program because federal marketing orders use manufactured milk prices in establishing fluid (Class I) prices.

How much the CCC purchase and storage program costs taxpayers depends on how much the CCC buys and how it eventually disposes of these dairy products. The CCC will sell stored products into commercial channels at prices 110 percent above what it pays for them. So if CCC sells its inventory commercially the program costs very little; if market prices fail to reach CCC sell-back levels, then costs are high. From 1979 on, large U.S. milk surpluses and resulting large CCC product inventories have depressed market prices, essentially precluding commercial sales. Domestic cheese and butter giveaways—distribution to needy persons—have been used to dispose of some stocks, and some have been distributed through foreign aid programs. But these outlets have accounted for only a small portion of purchases, resulting in high net program costs.

Unlike the present program, a target price program would support milk prices directly, rather than by intervening in the markets for manufactured dairy products. A pure form of such a program would specify a target price for raw milk which would be the minimum return (price per hundredweight) to program participants. The procedure for setting the target price could be similar to that used to determine the support price under a CCC purchase program. Milk prices would seek market-clearing levels that would equate supply and commercial demand. There would be no CCC purchases. If the market price fell below the target price, the government would make up the difference in the form of deficiency payments directly to producers. Each dairy farmer would be dealt with individually, rather than through the marketplace as is the case under the current program.

Target price programs for grain have typically been accompanied by eligibility requirements in the form of acreage set-asides. There have also been limits on the total amount of deficiency payment any one farmer can receive. The maximum payment per bushel for grain programs has been constrained by simultaneously setting loan rates and target prices, where the difference between target prices and loan rates served as the maximum deficiency payment. A target price program for milk could include similar provisions.

Why Use Deficiency Payments?

For taxpayers, a major advantage of a deficiency payment program for milk is that it could more closely control program costs. Under the current price support program, once a support price has been set the government has uncertain and essentially unlimited liability. With deficiency payments, program costs would be more predictable given limits on the maximum deficiency payment per hundredweight and on per-farm payments.

By combining deficiency payments and payment limitations, it's also possible to target benefits to selected classes of dairy farmers—namely the so-called family dairy farms. Payment limitations cannot be imposed under the current price support program with CCC purchases.¹

A deficiency payment program would also get the government out of dairy product markets. This would encourage manufacturers to market their products more aggressively, and would eliminate distortion in production and prices brought on by CCC purchases. For example, the CCC has become the major U.S. buyer of nonfat dry milk, purchasing over 60 percent of production. As a result, whey proteins and other products are often substituted for nonfat dry milk in many uses. Consumption data from 1965 to 1983 shows per capita commercial nonfat dry milk sales dropping from 4.8 pounds to only 2.6 pounds, a 46 percent drop. Without the CCC serving as a ready buyer, the price of nonfat dry milk would drop, causing production to decline to conform more closely to current demand.

The use of target prices and deficiency payments represents a market-oriented approach to price supports in the sense that producers' milk moves through commercial markets at market-clearing prices. This could encourage a higher level of commercial consumption of dairy products. Increased consumption could be substantial for butter and possibly for powder. So the public would likely favor a target price-deficiency payment program over an equally expensive program involving price supports via CCC purchases.

Finally, when CCC purchases of dairy products are used to achieve an established support price, actual milk prices received by producers often fall short of the support price. For example, from April of 1981 through 1983 the average price of manufacturing milk was about 30 to 40 cents per hundredweight below the established support level. Under a program of target prices and deficiency payments, producers not subject to payment limitations would have more assurance of receiving the target price.

What's Wrong With Deficiency Payments?

Moving to a system of direct deficiency payments to dairy farmers would likely cause several problems, due both to the fact that dairy price supports through CCC purchase and storage has been in use for so long, and to the chronic milk surplus. The industry has become accustomed to operating with a "focus price" in the form of the support price. It's highly uncertain what the level of milk price would be if the CCC weren't standing ready to purchase manufactured dairy products. If a deficiency payment system were implemented under the 1985 farm bill when milk surpluses are still relatively large, milk prices could fall to very low levels in the short run, especially if CCC stocks were also "dumped" in commercial trade channels.

The absence of the CCC as a major buyer would also cause considerable disruption in the markets for manufactured dairy products. Manufacturing schedules, inventory decisions and marketing practices are all partly a product of the current price support program. Substantial industry adjustment would be required if that system were terminated. This adjustment process would be eased if the target price-deficiency payment program were phased in gradually.

Another problem in implementing deficiency payments is related to establishing target prices on a regional basis. Milk prices vary substantially across the country according to differences in production costs, fluid utilization and relative supply and demand. Regional price differences are explicitly incorporated into the federal order pricing system through varying Class I differentials. Target prices would similarly need to account for differences among regions.

This might be accomplished within the federal order pricing system by specifying a target price for manufacturing milk. Support prices are set this way under the current price support system. Producers of manufacturing milk would receive deficiency payments based directly on the target price. Producers shipping to order-regulated fluid handlers would be paid a deficiency payment equal to the amount that an order's minimum blend price (calculated using present formulas) fell short of the minimum blend price as calculated on the basis of the upper Midwest target price.

A problem with this approach is that existing order Class I differentials, upon which minimum blend prices are calculated, are largely ineffective in establishing actual pay prices. Since actual class I differentials include over-order payments negotiated by dairy cooperatives, blend prices received by farmers

¹ Payment limitations could, however, be used with a milk diversion program such as the one in place January 1, 1984 through March 31, 1985.

exceed order minimum blend prices. Maintaining regional equity within the order system using a deficiency payment program might require a realignment of order minimum Class I differentials to conform more closely with actual differentials or actual costs of procuring Class I milk needs.

Finally, since under a deficiency payment program dairy products would sell at market-clearing levels, retail prices of dairy products would be more volatile. The volatility could have an adverse effect on sales that would offset some of the positive effects of lower prices. Using a lower support or loan rate in combination with the target price concept could lessen this price volatility.

How Much Would The Program Cost?

The answer to this question depends on three factors: (1) the level of farm milk prices in the absence of CCC purchases, (2) the target price level, and (3) the per-farm payment limitation.

As noted earlier, it is difficult to predict how far farm milk prices would drop from current levels in the absence of a government purchase program. Consequently, in order to bound the maximum per hundred-weight payment, a deficiency payment program would probably need to be combined with a minimum support level representing a "distress sale" price. The CCC would purchase manufactured products at prices to achieve this level, just as it does today. To avoid the need for CCC acquisitions, the support price could alternatively serve as a *loan rate*, as it does in price

support programs for grains. That is, the CCC would provide loans valued at the support price to manufacturers of dairy products, but would not take possession of the manufactured products offered as loan collateral.

Where target prices and support or loan rates would be set and how they would be moved would be political decisions, conceptually similar to those made about support prices under the current program. The difference between the support and target prices would determine the maximum deficiency payment. Payment limitations per individual farm would, in turn, dictate total program costs and average payments to producers.

Payment limitations have critical implications for the regional distribution of benefits under a deficiency payment program. Herd sizes differ substantially across the country, as shown in Tables 1 and 2. The smallest herds are located in the upper Midwest. In 1982 there were only eight herds in Minnesota and Wisconsin with more than 500 dairy cows. Fewer than 200 herds in these two states had more than 200 cows. The largest U.S. dairy herds are in the southeast and southwest. In Florida and California, more than half of the dairy farms in 1982 had more than 200 cows, and more than half of the dairy cows in these states were in herds with more than 500 cows. Given this diversity in herd size, payment limitations, regardless of size, would be clearly more restrictive in the southeast and southwest.

Herd sizes eligible for full benefits and program cost estimates over a range of maximum per-hundredweight payments and payment limitations are shown in Table 3. These estimates are based on 1982 Census of Agriculture commercial dairy farm and cow

Table 1. Distribution of Commercial Dairy Farms by Size Category, U.S. and U.S. and Selected States, 1982.¹

State	Size Class—No. of Cows ²									Total dairy farms
	1-4	5-9	10-19	20-29	30-49	50-99	100-199	200-499	500+	
 percent									
Wis.	.7	1.9	9.6	16.8	39.4	27.4	3.8	.4	— ³	42,496
Minn.	1.7	3.6	14.8	21.4	36.5	19.5	2.3	.1	—	22,848
N.Y.	1.6	.9	3.9	9.8	33.1	39.5	9.5	1.6	1	14,790
Pa.	3.2	1.9	8.9	15.1	37.7	27.3	4.2	.6	—	15,051
Fla.	6.1	—	5.4	2.7	3.2	10.0	19.7	24.0	28.8	441
N.M.	26.6	3.9	6.1	5.7	5.2	10.0	11.4	17.0	14.0	229
Calif.	6.0	.6	2.0	1.6	3.3	10.0	20.0	36.1	20.5	2,919
U.S.	3.9	2.9	11.3	14.8	30.1	27.0	7.4	2.0	.5	197,269

¹ A commercial dairy farm is any census farm reporting dairy cows and milk sales. Excluded by this definition are most farms reporting fewer than 10 dairy cows.

² Dairy cows and heifers 2 years old and older that have calved.

³ — indicates less than 0.5 percent.

Source: 1982 Census of Agriculture.

Table 2. Distribution of Dairy Cows on Commercial Dairy Farms by Herd Size Category, 1982.¹

State	Size Class—No. of Cows ²									Total cows
	1-4	5-9	10-19	20-29	30-49	50-99	100-199	200-499	500+	
	Percent									1,000
Wisc.	— ³	.3	3.3	9.4	34.6	39.5	10.6	2.1	.2	1,847.9
Minn.	.1	.7	5.9	14.0	37.2	33.3	7.6	1.0	.2	835.0
N.Y.	—	.1	1.0	4.1	22.0	44.0	20.6	7.0	1.2	868.6
Pa.	.1	.3	2.9	8.1	31.4	39.0	14.3	3.4	.5	683.8
Fla.	—	—	.2	.1	.3	1.6	6.4	17.2	74.2	192.7
N.M.	.2	.1	.3	.6	.9	3.4	7.2	20.2	67.2	51.8
Calif.	—	—	.1	.1	.4	2.2	8.8	34.7	53.7	942.8
U.S.	.1	.4	3.0	6.5	21.1	32.5	17.3	10.4	8.6	10,678.2

¹ A commercial dairy farm is any census farm reporting dairy cows and milk sales. Excluded by this definition are most farms reporting fewer than 10 dairy cows.

² Dairy cows and heifers 2 years old and older that have calved.

³ — indicates less than 0.5 percent.

Source: 1982 Census of Agriculture.

numbers by size class, and assume 13,000 pounds of milk per cow annually. Total U.S. milk production using these values is about 139 billion pounds, slightly higher than the current USDA forecast of 136 to 139 billion pounds for 1985.

Herds eligible for maximum benefits range in size from 31 cows (\$10,000 payment limitation, \$2.50 payment per hundredweight) to 385 cows (\$50,000 payment limitation, \$1.00 payment per hundredweight). A dairy farmer with 500 cows would receive approximately \$.15 per hundredweight in the first case, or 6 percent of the maximum unit payment. In the latter combination, the same farmer would receive \$.77, or 77 percent of the maximum payment. These figures suggest that there would be substantial incentives to split up large enterprises if payment limitations were kept at low levels.

Program costs are sensitive to both maximum unit payments and payment limitations. However, doubling the maximum unit payment would have a substantially larger effect on program costs than would doubling the payment limitation. Total payments would be less than \$1.5 billion regardless of payment limitations if unit payments could be kept at or below \$1.00 per hundredweight, but could exceed \$3 billion with a \$50,000 payment limitation and a \$2.50 per hundredweight unit payment.² This emphasizes the need for a minimum support price or loan rate in conjunction with target prices in order to limit the maximum unit deficiency payment.

Would a Deficiency Payment Program be in the Best Interest of the Dairy Industry?

Different groups both inside and outside the dairy industry would answer this question quite differently. Consumers of milk and dairy products could be expected to answer affirmatively, since, at least in the short run, milk prices would be lower than under the current system of price supports through CCC purchases. Manufacturers of products now being purchased by the CCC would likely oppose deficiency payments because of the possible painful adjustments they would have to make in their operating practices. Dairy farmers eligible for maximum benefits would likely fare as well or better than under a continuation of the present system. Large dairymen would clearly not fare as well.

A deficiency payment program could serve effectively as a transition program from more or less continuous government involvement in the dairy industry to a market-oriented policy. The desirability of a deficiency payment program in that role depends on who Congress believes should bear the major share of adjustment costs. If it is deemed appropriate to impose these costs equally across all milk production, then support price cuts within the current program would be an appropriate strategy. If smaller producers are to be protected in this adjustment process, deficiency payments with payment limitations can effectively achieve that goal.

² These cost calculations do not include any CCC outlays for purchases or loans at the support price. They also exclude administrative costs.

Table 3. Government Costs for Direct Deficiency Payments with Alternative Combinations of Payment Limitations and Maximum Payment per Cwt.¹

Payment Limitation	Max. Payment per cwt.	Prod. Eligible for full payment (1,000 cwt.)	Equiv. Cows (@13,000# /cow)	Estimated Govt. Cost (\$mil.)
\$10,000	\$1.00	10.0	77	1,117
	1.50	6.7	51	1,379
	2.00	5.0	38	1,597
	2.50	4.0	31	1,676
\$20,000	\$1.00	20.0	154	1,294
	1.50	13.3	103	1,720
	2.00	10.0	77	2,137
	2.50	8.0	62	2,553
\$30,000	\$1.00	30.0	231	1,278
	1.50	20.0	154	1,872
	2.00	15.0	115	2,361
	2.50	12.0	92	2,872
\$40,000	\$1.00	40.0	308	1,321
	1.50	26.7	205	1,891
	2.00	20.0	154	2,497
	2.50	16.0	123	2,997
\$50,000	\$1.00	50.0	385	1,342
	1.50	33.3	356	1,947
	2.00	25.0	192	2,519
	2.50	20.0	154	3,120

¹ Based on 1982 Census of Agriculture dairy cow numbers on farms reporting milk sales.