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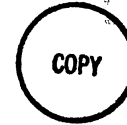
## Dairy Market and Policy Education Committee

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*Cornell Program on Dairy Markets and Policy  
National Institute for Livestock and Dairy Policy*

29 February 1992

The Honorable Edward Madigan  
Secretary of Agriculture  
c/o Milk Marketing Orders  
U.S. Department of Agriculture  
Washington, D.C. 20250



Dear Secretary Madigan:

Attached is a response to your invitation for comments regarding the future of the federal milk marketing order program. Our response represents the collective thinking of several Land-Grant university agricultural economists who have devoted substantial parts of their careers to research and education related to dairy markets and policy.

Although we come from locations around the United States and are familiar with the needs and concerns of the dairy industry in our states and regions, our purpose is not to advocate a particular position or reflect any regional constituencies; rather we hope to reflect a consensus of what dairy marketing economists from the academic community can say objectively about your questions.

We hope this is helpful as you and the Department review the performance of the federal milk marketing order system. If we, collectively or individually, can be of further assistance, please do not hesitate to call. Thank you.

Sincerely,

Andrew Novaković  
Cornell University

Robert Jacobson  
The Ohio State University

Robert Cropp  
University of Wisconsin

Harold Harris  
Clemson University

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## COMMENTS ON FEDERAL MILK MARKETING ORDERS

### A Response to the Secretary of Agriculture's Invitation for Public Comments

by

The Dairy Market and Policy Education Committee of the  
National Institute for Livestock and Dairy Policy

In a press release dated 15 November 1992, Secretary of Agriculture Edward Madigan invited comments on the future of federal milk marketing orders. A number of specific questions were raised, beginning with perhaps the most fundamental of all: "Would producers, processors, and consumers be better served with less regulation or strengthened regulation under federal milk orders?" The questions are challenging. They are also subject to a certain amount of subjective assessment. Nevertheless, some of the basic questions can be approached objectively by economic analysis. In other words, economists may not be able to broadly and generally state that federal orders should be strengthened or weakened in one fashion or another, but it is possible to discuss the probable implications of certain changes and the historic rationale that led to the development of federal order mechanisms and provisions.

The questions posed by the Secretary can be summarized as follows:

1. What are the implications of changing, or especially lowering, class I differentials.
2. What are the implications of setting the class III price equal to the support price, or of making the basic formula price equal to the support price?
3. In what ways do federal orders affect where a handler chooses to procure milk, e.g., in any given order area, what are the incentives for purchasing local milk vs. distant milk. Do orders cause purchasers to pay more for distant milk than would otherwise be necessary? To what extent do orders affect the allocation of milk between fluid and manufacturing uses.
4. What might occur in dairy markets in the absence of federal orders?
5. What alternative institutional arrangements or mechanisms might evolve in the absence of federal orders? For example, could some type of contracting mechanism between cooperatives and non-cooperative handlers replace some of the functions now performed by regulation.
6. Does the experience with policies or market institutions of other countries shed light on the U.S. system or any of the various options for the U.S.?

The remainder of the paper offers some answers and insights to these questions, based on an assessment of what prior research has shown or economic reasoning.

## **Class I Differentials**

Class I prices are the minimum prices regulated handlers must pay for milk used in class I. They are not paid directly to producers, as such, but clearly producers benefit in the form of minimum blend prices that increase as class I differentials and/or class I utilization (percentage of all milk used in class I) increases. In a sense, manufacturers of class II and class III products also benefit from the pooling of class I differentials; because they become able to offer their producers a higher, blended price while their direct cost of milk is the lower class price.

In the November 1991 invitation, the question of whether lowering minimum class I differentials would be appropriate was advanced. It is clear from the testimony presented at the 1990 hearing that interested parties are widely divided with 1) a few voices calling for higher differentials, 2) many voices calling for maintaining the status quo, 3) an important contingent calling for a very substantial realignment that would involve higher differentials in areas where they are presently low and lower differentials elsewhere, and 4) a few voices calling for eliminating differentials altogether. Although members of the committee individually differ in our assessment of what the optimal level of class I differentials is, we agree that insufficient consensus exists among researchers to unequivocally support one level or another. Given the level of concern about class I differentials, a thorough study, with broad participation by a cross-section of interested parties, might be very helpful and should be initiated with all due speed. Certainly, related studies have been done, but by the same token, a great deal of testimony at the 1990 hearing dealt with new ideas about which there was much debate. A hearing is not a forum for conducting new research. Work should be done to study the effects of various proposals; others can then judge their merits.

The federal milk marketing order program has utilized classified pricing as the focal point of pricing milk to handlers and for producers since its beginning. In fact, cooperatives had some success in implementing classified pricing in many markets beginning decades before federal orders came into being. The Agricultural Marketing Agreement Act of 1937 explicitly authorizes the practice, and U.S. Supreme Court decisions have affirmed the operation, of classified use price plans in fluid milk markets. Given a classified use price plan, by definition, there must be some type of a price difference or premium, termed a class I differential, for that portion of the milk supply utilized for fluid purposes.

Two fundamental and inter-related questions about class I differentials are implied or stated in the call for public comments. First, what is the reason for having class I differentials, i.e., what purposes do they serve?; and second, what is the appropriate level at which class I differentials should be established?

While history is not always the best teacher, neither should it be ignored. In their 1962 evaluation of the federal milk order program, the eighteen member committee chaired by E.G. Nourse offered the following rationale regarding the development of classified pricing prior to the start of the federal order program:

"In bargaining for prices for their members' milk, cooperatives immediately crashed head-on into the problem of the 'surplus' over fluid milk requirements.... Since milk qualified for distribution as fluid milk in any market must be available at all times in greater volume than what is actually sold as fluid

milk in that market, the problem was one of so segregating such surplus or reserve that it would not cause serious instability in the level... of fluid milk prices. This problem was attacked, and to a greater or lesser degree met, by establishing one price for milk entering fluid use, and another price or prices for milk going to other uses."

The price stabilizing purpose of classified pricing including the class I differential is emphasized in the Nourse Report comments. This should not be interpreted as cyclical instability in the sense of what the dairy price support program has tried to correct; rather this refers to stability across seasons of the year and between different product and geographic markets. In addition, the class I differential serves two price incentive purposes.

First, dairy farmers must receive a (blend) price higher than the reserve or manufacturing milk price to produce grade A milk because of higher costs of production incurred in producing grade A milk. This rationale derives directly from early difficulties with counter-seasonal variations in milk production and fluid milk demand. A substantial percentage of producers who supplied fluid milk markets in the fall were summarily dropped in the spring; yet they had the higher costs of maintaining grade A status all year round. This is an aspect of what are today referred to as the balancing problem and the class I reserve requirement. The class I price is the primary source of such additional money.

Second, there must be a price incentive 1) to move grade A milk from points of production to fluid milk processing plants, and 2) to "give up" milk at manufacturing plants and make it available to the fluid market. In the case of the former, it has generally been assumed that it would be rational to move milk the least distance necessary; hence federal orders have assumed a preference for "local" milk. However, fairness and economic logic dictates that local milk prices should not exceed the cost of available "distant" milk plus transportation to the "local" market. Particularly as pooling requirements became less strict over time, allowing more producers access to federal orders, the second purpose of freeing milk from manufacturers has become more important. Today, this is not always achieved effectively, and new ideas in terms of transportation pools, freight credits, location differentials, and balancing payments need to be carefully evaluated.

It has been suggested by some that class I differentials contributed to the creation of milk surpluses in the 1980s. On a national basis, it is erroneous to conclude that existing class I differentials played a significant role for two reasons. First, the class I differential is fairly small portion of the average price received by dairy farmers. Second, for many years prior to 1986, the average class I differential was basically constant across all federal orders from one year to the next.

In 1990, the average blend price established in federal order markets was \$13.78 per cwt. The approximate simple average of class I differentials in the federal order program is \$2.40 per cwt. Given the fact that the Minnesota-Wisconsin price across the forty federal order markets explains 100 percent of the class III price, approximately 98 percent of the class II price, and approximately 84 percent of the class I price, average market utilization dictates that over 92 percent of the blend price generated in the federal milk order program each month are associated with the basic manufacturing price. Furthermore, for the period up to 1986, when class I differentials were constant, any statistical analysis of milk production would conclude that the increases in prices which prompted production growth were the result of increasing support prices and their effect on the M-W price, which drove

all class prices up equally. The average increase in class I differentials in 1986 was 38¢, which yields about 17¢ on the blend price to farmers; hence, though it was a positive factor, its stimulative effect on national milk production cannot be considered large. It is however true that there was substantial regional variation in the change in differentials. In some areas there was no change; in others the higher differentials added 60¢ or more to the blend price. After 1986, the increase in class I differential was a factor in some regions. We agree with the 1984 ERS-USDA report that noted "...the root cause of the grade A surplus is support prices that were set too high..." (AGES840121, p. 48).

Another criticism has been that class I differentials have created the situation where 92 percent of the milk in the United States is now grade A while only 40 percent of the milk is utilized for fluid purposes. These selected facts are true, but pooling policies have had much more to do with this than the size of class I differentials *per se*. In their early years, federal orders covered only a small fraction of total milk production and class I utilization was high in every order. Many producers were attracted to the benefits of being associated with a fluid market, in fact this was the cause of tough competition and serious disputes between producers located very near large cities and producers located in rural areas more distant from the large fluid milk markets. As a result, strict pooling requirements were relaxed over time so that, generally speaking, as many producers can become affiliated with a federal order as want to. It is equally important to also recognize that many voices in the dairy production sector have been encouraging the switch to grade A production for general milk quality reasons that have little or nothing to do with price. Given current concerns for food safety issues, it would be rather strange to argue for lowering class I differentials in order to discourage the production of higher quality milk.

Yet another criticism of the size of class I differentials has been associated with the reconstituted milk issue. As was suggested above, it may well be that other provisions of federal orders have been a larger issue here than class I differentials *per se*. Reconstituted milk has more to do with allocation and compensatory payment rules. Indeed, this is essentially the conclusion of the recommended decision on the 1990 hearing. This decision moves the pricing of reconstituted milk in the right direction. Assuming the recommended decision is adopted, the new allocation rules and the provisions for concentrated milks and nonfat dry milk may generate intermarket milk movements and put pressures on class I differentials that do not now exist. What will happen is hard to predict, but it would be prudent to wait and see before pre-judging a need for more radical change. There is no pressing need or reason at this point to tie the reconstituted milk issue to the issue of class I differentials.

The federal milk marketing order program has brought a degree of order and stability to the fluid milk industry that was sorely needed in the past and is still desirable today. The program was established in an environment of market failure for hundreds of thousands of milk producers and thousands of handlers. This failure may have contributed to the unnecessary demise of certain farms and firms, but the issue here is market failure, not the failure of a business. Market failure refers to the imbalance of market power which exists in the dairy industry and the inherent conditions for anti-competitive behavior. A half century plus later, we have a dairy industry that continues to be one of the most de-centralized of the leading agricultural enterprises in the United States. The rush to industrialize agriculture in the United States has been rapid, but family farms continue to be the virtually exclusive means for producing milk in the U.S. The federal order program, with its pooling arrangements that permit every grade A producer in a milkshed to share

equally in the class I differential and share equally in the responsibility for carrying reserve milk in the market, has been the key factor in providing this stability, and it has not seriously inhibited progressive performance in the milk producer sector.

Deregulation, or more specifically lowering class I differentials, has little appeal when the motive is strictly deregulation for its own sake. Unregulated markets failed in the milk industry in the past, and conditions conducive to market failure still exist. The consequences of deregulation in the airline, finance, and other industries indicate that too often the total set of consequences from a radical change cannot be identified or measured.

It is just as unclear what the total effects of substantially lowering class I differentials would be. The one obvious effect is that minimum blend prices in federal order markets would drop, but only modestly as previously noted. Would cooperatives step into the breach, as some would contend? In some cases yes--in many cases no. Cooperatives have supported federal orders because they know that they face formidable powers when negotiating prices. Maintaining discipline in supply, holding on to members, is by no means assured. Without marketwide pooling, substantial inequities can occur between farms, or for that matter between cooperatives, pushing the milk producer sector in the direction of disorder and instability.

The market bargaining power of cooperatives is discussed in a later section of this report, but let us make a couple of particular points here. A cooperative that runs a 50 percent class I utilization is handicapped severely when one or more fluid processors in a market run 85 percent class I and procures milk independently. If dairy cooperatives did have sufficient market power to maintain or increase class I differentials, would they simply become the next point of attack for the deregulators? It is widely known that the Capper-Volstead Act is an antitrust exemption that has frustrated the Federal Trade Commission and the Justice Department over the years. In the somewhat less than likely situation where lower class I differentials were a factor in enhancing the strength of dairy cooperatives, would this simply fuel new assertions that cooperatives should not have the right to collectively bargain for milk prices or that they abuse the rights they have?

Lowering class I differentials may change the effects of regulation, but it does not reduce the amount of regulatory activity. The pricing, verification, and equalization functions of the federal order program would continue at exactly the same degree of regulation. Impacts in the markets would be different for different people and would differ across markets. On balance, we would expect less price stability and more market disorder with lower class I differentials. Given that the move toward a more minimal price support program has already created more volatile markets, the milk producer sector would be stressed; without knowing what the appropriate change might be, this stress could well be unnecessary and counter-productive. Class I differentials need to be examined and changed, when and where appropriate. A start has been made with the different ideas that were advanced at the national hearing. Careful studies should be conducted to determine what changes should be made.

### **Using the Support Price to Set Federal Order Class Prices**

The Secretary asked whether the lowest class price should be set equal to the support price (instead of the M-W price). Because the M-W price is the basic formula price

undergirding and moving all class prices, we would add to this question a closely related one: should federal orders use the support price as the basic formula price, affecting all class prices? Current federal order provisions state that the class III price shall equal the basic formula price, the class I price shall equal the basic formula price plus a constant differential, and the class II price shall equal the basic formula price with monthly adjustments based primarily on the wholesale prices of basic manufactured dairy commodities (over time the adjustment on the class II price will be about 10¢).

One of the most important objectives of federal milk marketing orders is to create equity in the pricing of milk among producers and processors. In this case equity is taken to mean charging all processors reasonable and comparable prices for milk used to make the same or similar products and paying all producers reasonable and comparable prices, with appropriate adjustments for milkfat content and transportation. Without such equity, the clear potential exists for disorderliness and exploitation of some producers. These prospects are enhanced by the perishability of milk and the resulting necessity of an outlet. Setting the class III price to reflect the forces of supply and demand for milk used for manufacturing is critically important.

As illustrated in Table 1, the M-W has seldom equaled the support price, and it has ranged from being almost 50% higher to being 5% below. In fact, in the last 37 years, it has been below support more than one out of every five months.

Table 1. Relationships Between Monthly M-W and Support Prices for 3.5% Test Milk.

M-W as a % Over Support (3.5% fat test)	Months from 1955 to 1991		Months from 1980 to 1991	
	#	%	#	%
40.0% - 49.9%	7	1.6	3	2.1
30.0% - 39.9%	6	1.4	4	2.8
20.0% - 29.9%	12	2.7	10	6.9
10.0% - 19.9%	38	8.6	9	6.3
5.0% - 9.9%	93	20.9	9	6.3
1.0% - 4.9%	165	37.2	29	20.1
.1% - .9%	18	4.1	2	1.4
.1%	4	.9	3	2.1
0.0%	3	.7	2	1.4
-.1%	1	.2	1	.7
-.1% - -.9%	13	2.9	5	3.5
-1.0% - -4.9%	83	18.7	66	45.8
-5.2%	1	.2	1	.7

Many things could be said about Table 1. Some important insights can be learned from focusing just on the period since January 1980.

The last time period when the M-W price was 1% or more below the support price was the first half of 1986. In addition, prior to then, no month before that ranks higher than 3.3% over the support price. This was November 1984, which gained a high price due to the effects of the Milk Diversion Program.

In sharp contrast, the first time that the M-W price ranked 5% or more above the support price was three months in winter, 1986-1987, which were 5.0 to 5.8% above the support price due to the effects of the Dairy Termination Program. Since then, almost all of the months above 5% came during the peaks of 1988 (6 months), 1989 (9 months), 1990 (10 months), and 1991 (7 months). The time periods when the M-W was 20% or more above the support price were September 1989 to September 1990 and September 1991 to December 1991.

In other words, when the support price was set at levels that pushed market prices up and resulted in large surpluses, the M-W ran at or below the support price. Since the support price has been reduced, the M-W has frequently run well above the support price. There is nothing mysterious about this result; however it does strongly suggest that a policy of minimal price supports coupled with a federal order provision to set the class III price or the basic formula price equal to the support price would result in substantially lower minimum federal order blend prices and, given the limited bargaining power of farmers, probably substantially lower average farm prices actually received.

The foregoing also illustrates the importance of distinguishing between using the support price to set the class III price vs. using it to set the basic formula price. If the basic formula price is made equal to the support price, at least all class prices will be held in the same relationship. If only the class III price is set equal to the support price, while class I and II prices are set relative to the M-W or some similar price mover, then there would likely be substantial and wild distortions between the minimum prices handlers would have to pay for the different classes of milk. This would create another whole set of problems.

One counter argument is that cooperatives and other handlers would have the opportunity to pay higher prices if market conditions warranted. While this is true in theory, in practice it is a long leap to assume that the kind of monthly price movements which have taken place historically could have just as easily occurred through frequent competitive price negotiations. A major presumption of federal orders is that handlers have the market power to bargain prices down to a lower common denominator but will acquiesce to higher prices if they are in line with supply and demand and all handlers are treated relatively equally. If USDA ties federal order prices to the support price, it runs the risk of 1) occasionally setting a minimum price that is considerably higher than market conditions warrant and 2) frequently setting a price that guarantees farmers will get a lower price than that which they would obtain in a market which is regulated so as to neutralize the bargaining advantage of milk handlers. It should also be noted that federal order minimum prices help processors in their negotiations with their customers, most of whom have considerable bargaining advantages themselves. Retail and wholesale buyers of dairy products know about federal order prices. They are much more willing to accept



increases in the wholesale prices they pay to processors for dairy products when minimum prices rise than they are when processors tell them that farm prices are up due to competitive premiums. Obviously, if a processor has a hard time passing along a higher farm price, he will not be able to pay farmers as much, even if he is otherwise willing to do so.

A basic formula or class III price that is below the market price would create the potential for market disorderliness and exploitation because:

- Producers of the same product (3.5% butterfat milk) could be paid substantially different prices, creating the opportunity for processors to choose to pay those individual producers in the most favored market position higher prices. The difference between the true market price and the support price would provide the margin for such differential pricing. The differentials in prices may mean the difference between profit and loss. It creates the potential for disruptive competition for market outlets.
- The opportunity for exploitation is created in those markets where a single processor dominates the market. While in competitive markets, premiums over federal order class III prices set at the support level may be paid, there is no assurance that such premiums will be paid.

Historically, substantial controversy has arisen over USDA policies which set different class III prices regionally. This is the case because the class III product markets (primarily butter, nonfat dry milk and cheese) are national in scope. This reality is reflected in the uniform CCC purchase price for these products. Setting different class III prices regionally or in different markets became an item of intense controversy in the 1960s, after which a standard class III (and class II) price was adopted. When lower prices are charged regionally for class III milk, plants in those regions have the potential for receiving a windfall profit compared to other plants.

This is precisely the contemporary argument regarding the pricing of milk in California, where the lowest price class is set on the basis of a wholesale product price formula. The California formula uses a make allowance that is lower than that utilized by USDA under the dairy price support program. The result is an advantage to those plants who buy milk from producers when the California price is below the class III price elsewhere and sell products to the CCC for the same price anyone else gets. In addition, profits made on class III products reduce processor incentives to supply higher priced class I and class II markets. A similar argument has recently surfaced in response to the Department's recommended decision regarding a class IIIa price for three federal milk marketing orders in the Northwest and Northeast.

An answer to these issues that is frequently used asserts that federal milk orders were established for the purpose of only setting minimum prices. For example, in the past, the USDA has refused to raise the class I differentials despite an acknowledged increase in transportation costs, the theory being that the competitive market would provide the incentives for attracting class I milk to distant markets through over-order premiums. Such a theory applied to class III would make milk pricing largely a function of the relative bargaining position of producers and processors, which is highly uneven across the United States. In other words, it is not necessary for the government to set prices for

purposes such as causing milk to move from one market to another--a primary function of over-order premiums. Likewise, premiums may be paid on class III milk for differences in product quality (protein, bacteria count, etc.). However, price differences unrelated to such functional purposes create the potential for serious inequities.

These types of inequities provide strong economic justifications for a policy of setting a class III price that:

- Is uniform throughout the federal order system.
- Reasonably reflects market conditions, such as the prices received for the products made from class III milk.

Neither of these criteria are satisfied by a more abstract price support target that, in any given month may deviate substantially from a market value.

Setting a low price support is the current government policy. Even if the price support is raised, seasonally high market prices would create similar inequities and a potential for exploitation, and further aggravate the problems of securing milk for class I and class II needs during the fall months.

#### **Milk Procurement Incentives Under Federal Orders**

The Secretary posed a specific question which can be paraphrased as follows: Assuming policy-makers wish to impose less regulations, should they remove pricing regulations that cause purchasers to pay more under the order for milk brought into a market than would otherwise be necessary to attract milk to that market? A narrow interpretation of this question would focus on the issue of pricing reconstituted milk. As has been stated earlier, we believe the USDA decision with respect to pricing reconstituted milk is essentially sound and well grounded. At least in terms of setting a logical principle for pricing, we believe the decision puts this specific issue to rest.

A broader interpretation of this question suggests several related questions or issues. Well accepted bases for class I differentials were discussed earlier, i.e. to provide appropriate incentives for 1), producing grade A milk and 2), shipping milk to fluid plants. Many years ago, when the class I price was 40% or more above the lowest use class price, adequate incentives were provided for both purposes. As more and more milk has been pooled on federal order markets, class I and class III prices have moved closer together. Today, there are adequate incentives for producers to maintain or convert to grade A status, although it bears noting that the incentive has not been and is not so great that everyone has converted. In addition, because of marketwide pooling and a higher class III price, the difference between class III and class I prices is not so high as to ensure that each class I handler can always get milk at the minimum class I price. Hence, it cannot be said that current class I differentials guarantee a supply to fluid markets. Nor is the answer to raise class I differentials to generate 1950s type price relationships. Rather, more subtle provisions of federal orders can affect incentives to transport milk.

A guiding rationale in establishing class I prices and other provisions related to serving class I markets has been as follows. It has been taken for granted that class I

handlers would underpay for milk if left to their own devices; hence some sort of reasonable minimum price was deemed desirable. Yet, what constitutes a reasonable minimum? The logic has been that it is rational to move milk no farther than is necessary given the volumes of milk demanded and produced in given locations. Thus, local milk is preferable to distant milk, other things being equal. Following this logic, the price of local milk should not be less than the price of the next cheapest source of milk, plus the cost of moving the milk from that distant location. To set a minimum price for local milk any lower than that defeats the purpose of obtaining the best possible price for farmers; to set it any higher forces handlers to pay an unreasonable price from the buyer's perspective.

In fact, USDA's actual decisions have been to price local milk at slightly less than the cost of distant milk plus transportation. In this way they hoped to err on the side of not setting the minimum price higher than necessary. In practice, the system evolved to assume that the relevant distant supply was located in the Upper Midwest region, such that all federal order prices east of the Rocky Mountains increase with distance from the Upper Midwest. The so-called "transportation differential" component is more approximate than it is deliberate, but it has been a basic guiding principle. This particular implementation has come under sharp attack by Midwesterners who argue that the single base-point concept is no longer valid. Whether it is or not does not invalidate the notion of some kind of base point pricing, wherein local milk is preferred to distant milk, so long as the distant milk is not cheaper when both are valued as delivered to the receiving plant. Federal orders want to prevent handlers from getting cheaper milk if the reason for that lower price is an unfair bargaining edge; they don't want to prevent handlers from getting milk that is cheaper on the basis of justifiable production and marketing costs.

The logic of this rationale is fine, but in recent years things have happened that lead many industry participants to wonder if specific order provisions need to be updated to carry out this logic. In their 1990 leaflet, Hammond and Harris provide a review of existing and alternative federal order provisions related to the orderly movement of milk to fluid markets.<sup>1</sup> Additional studies could be done to delve more deeply into how a specific alternative might work or how it might best be structured or implemented.

### **Implications of Eliminating Federal Orders**

In his request for comments, the Secretary explicitly referred to terminating federal orders. The impacts on producers, processors and consumers of eliminating the entire federal order system are by no means obvious or clear; yet there are lessons to be learned from the period before marketing orders and when individual orders have been terminated.

Prior to federal orders, the market environment was characterized by a major variation in seasonal milk production, unequal market power between producers (and even

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<sup>1</sup> Jerome Hammond and Hal Harris, "Alternative Order Provisions to Facilitate the Orderly Movement of Milk to Fluid Markets," Leaflet 22, Dairy Policy Issues and Options, Dept. of Agr. Econ., Cornell University, 1990.

their dairy cooperatives) and the buyers of milk for fluid purposes, major milk price wars and disorderly marketing. Under these market conditions:

- Producers experienced inequities in prices paid between those who had access to fluid markets and those who did not, this includes producers who had only seasonal access to fluid markets as well as those who never had such access,
- Processors paid different prices for milk resulting in persistent downward pressure on milk prices, and
- Consumers faced extreme volatility in prices with reduced assurance of supply and quality.

Federal order legislation was enacted to alleviate this market disorder. Legislation was strongly supported by producers, processors and even consumers. The appropriate question is, have market conditions since changed where federal orders are no longer needed to assure orderly marketing and a supply of wholesome milk at reasonable prices?

There is limited experience where an existing federal order has been eliminated. Dobson and Salathe studied the elimination of the Chicago and the Mississippi federal milk orders.<sup>2</sup> The Chicago order was voted out by producers during May 1966-June 1968. During this period conditions remained relatively stable because many former Chicago order plants pooled under the Milwaukee order, and a very strong group of dairy cooperatives operated a "quasi-order" which performed many classified pricing, pooling and auditing functions previously carried out under the federal order. Even so, conditions deteriorated over time and these same dairy cooperatives found it preferable to create a new Chicago Regional federal order, encompassing the former order and existing neighboring orders.

Conditions were less stable when the Mississippi order was voted out by producers for the period May 1973-March 1976. In the absence of the order, "flat" pricing replaced classified pricing. Sharp variations in prices paid to producers by individual handlers developed as fluid milk sales shifted from handler to handler within the market, milk producers shifted from handler to handler, and milk that would otherwise be used for manufacturing purposes was brought in from outside of Mississippi at lower prices to displace the class I sales of local producers.

From this limited experience, it appears that classified pricing and pooling provisions are useful, if not necessary, for elimination of the type of market disorder that developed in Mississippi. To the extent that dairy cooperatives can control the grade A milk supply and engage in successful bargaining, they may be able to preserve classified pricing and pooling mechanisms similar to those under federal orders. However, questions exist regarding the ability of cooperatives to maintain these conditions over extended periods. Prior to federal orders, dairy cooperatives were not overly successful in implementing and maintaining classified pricing and pooling. Have conditions since changed?

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<sup>2</sup>Dobson, W.D., and Salathe, L.E., "The Effects of Federal Milk Orders on the Economic Performance of U.S. Milk Markets," American Journal of Agricultural Economics, Vol. 61, No. 2, May 1979, pp 213-227.

Milk production has certainly become less seasonal in recent years. Yet seasonal variations in demand for both fluid milk and manufacturing dairy products still create surplus conditions in the spring, with milk prices falling dramatically toward support levels, and deficit conditions in the fall, with prices rising to much above support. The current low support level permits, and thereby reveals, this underlying instability in dairy markets.

Fluid milk processors are fewer in number and relatively large in size and market fluid milk products in relatively large geographic areas. In 1960, there were 2,259 handlers regulated under federal orders, with a ratio of 84 producers per handler. Even with a larger share of the national market, in 1990, there are only 753 regulated handlers, with a ratio of 133 producers per handler. Thus, buyers have become more concentrated relative to sellers.

Dairy cooperatives have also become fewer in number, larger in size and market a larger share of producer milk today than prior to federal orders. About 390 dairy cooperatives market about 76 percent of all producer milk. About 200 cooperatives market more than 80 percent of the milk regulated under federal orders. While a number of larger, regional dairy cooperatives exist, their ability to organize marketing agencies-in-common for a given federal order and regional milk bargaining agencies for the purpose of negotiating over-order premiums is spotty. These premiums, where they exist, are largely undergirded and enabled by the fact that the federal order system provides a structure and base upon which to build. Without orders, the cooperative premium system would weaken.

Thus, despite this structural change in dairy cooperatives, it is highly questionable whether cooperatives would be able to maintain effective classified pricing and pooling arrangements. Classified pricing rather than complete flat pricing would likely still exist but not to the extent that currently prevails. There are costs to transferring grade A milk from manufacturing areas to fluid markets. Although minimal, production costs are higher for grade A than manufacturing milk. The price elasticities of demand between fluid milk products and manufacturing products differ, allowing for price discrimination. However, the differences in elasticities have narrowed considerably, lessening the ability to place higher values on grade A milk for fluid versus manufacturing uses for purely price discrimination purposes.<sup>3</sup> Other rationale for a difference between the price of class I milk and class III milk are not affected by this change in elasticities, in particular the location value of milk.

Without federal orders, fluid milk prices would likely become much more variable and market "disorder," similar to what emerged in the Mississippi when the order was voted out, might surface. Dairy cooperatives, by themselves or through the formation of marketing agencies-in-common, would face two major problems in price negotiations with fluid milk processors. First, handlers with a larger proportion of their milk used for fluid milk sales than the market average may be in a position to stay outside of the bargaining agreement. They could pay producers who are not members of the cooperative the same or even a higher price for grade A milk while actually incurring a lower cost for class I milk needs. Cooperatives would find it difficult to maintain higher prices for grade A sales to

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<sup>3</sup>Haidacher, R.C., Blaylock, J.R. and Lester, H.M., report in "Consumer Demand for Dairy Products," USDA-ERS, Agriculture Information Bulletin No. 537, March 1988, p 7, price elasticities of -0.26 for fluid milk, -0.33 for cheese, and -0.17 for butter.

their fluid milk handler customers. These customers would find themselves at a competitive disadvantage in competing with the handler outside of the bargaining agreement for fluid sales in the same market. This type of bargaining problem currently exists even with federal orders in place. Unless most producers join a cooperative for the purpose of marketing their milk and bargaining for a price, this situation would not improve in the absence of federal orders and could, in fact, intensify.

The second problem stems from the problem of procuring for fluid purposes lower cost grade A milk from outside the market, that might otherwise have been used for lower value manufacturing purposes. Establishing a fair value for local milk versus distant milk was an item of contention in the 1990 hearing. Regardless of the outcome of these deliberations, an order system provides protection against continued deterioration of milk prices, which would probably result if federal orders were eliminated.

In the absence of federal orders, some states would no doubt attempt to establish state orders. The effectiveness of state orders in milk pricing is severely limited by their legal ability to restrict or price milk and milk products entering from other states. Lack of uniform state regulations and pricing provisions would add to disorderly marketing. One of the appealing reasons for federal orders was to eliminate the confusion of multiple and different forms of state regulation.

Assuming dairy cooperatives or other bargaining organizations were able to maintain effective classified pricing and pooling arrangements, federal orders without pricing provisions would still provide a valuable service to the industry. Market administrators collect marketing data from regulated handlers who account for almost 80 percent of the grade A milk marketings and about 71 percent of total milk marketings in the country. From these reports, data are compiled and totaled for each market and for all markets under the program. Reported data are audited to ensure accuracy and proper payment. In a sense, audits are the primary tool for enforcing adherence to the rules of the order. A very valuable side-benefit of these statistics is that they provide reliable information that is helpful in current buying and selling, in future planning, and to basic research undertakings by universities, the government and others. The statistical information collected under federal orders is probably the most comprehensive body of marketing information available on any agricultural commodity.

### Impact on Producers

The impact of unregulated markets on producers would vary by region. In regions having a relatively small share of milk supply utilized for fluid purposes, primarily the Upper Midwest, producers may experience less reduction in income than producers in regions where fluid sales are a much larger share of total milk supply, such as the South and Northeast. Nonetheless, all producers regardless of region stand to lose substantially with no federal orders.

Producers would experience more variable fluid milk prices. In the absence of marketwide pooling, some producers may actually experience higher prices. This may occur if a fluid handler procures directly from a select group of producers the quantity of grade A milk required for its fluid needs, operates that fluid plant at capacity but provides no balancing functions or other marketwide services. Any milk in excess of fluid needs would be the responsibility of someone else. In this situation, those producers not

associated with this fluid handler are likely to receive lower prices because of a larger share of milk being utilized for manufacturing purposes and the costs being born for marketwide balancing functions. If milk supplies become burdensome at times for a given market, some independent producers could actually lose their market access. With federal orders having marketwide pooling, there is not the incentive on the part of handlers to restrict milk intake. Producers are more assured of a market for their grade A milk.

Highly variable milk prices are more than just a simple nuisance for producers. The uncertainty created in this sort of market means there are greater price and income risks faced by producers. These risks are a cost of production which in effect means that producers, in total, will not be as willing to produce the same amount of milk for a given price. Economists say that the supply curve shifts to the left when risks increase, i.e. it will take a higher price to get the same amount of milk. Dahlgran estimated that a small risk shift would more than offset the price benefit of deregulation presumed to exist for consumers when risk is ignored.<sup>4</sup>

#### Impact on Processors

As previously mentioned, handlers are most fearful of unequal milk costs among competitors. Without established minimum federal order prices for fluid milk and regulations on the procurement of cheaper source milk from outside a given market, competing handlers would likely face unequal milk costs. Even if cooperatives negotiate with all handlers in a market for the same fluid milk price, there are economic advantages for some handlers to remain outside the negotiations and make special deals with producers who are not cooperative members. In most markets, there are sufficient quantities of grade A milk not under the control of the cooperatives to erode or partially erode their bargaining efforts. Generally, it is believed that cooperatives cannot gain control of price negotiations unless they control 90% or more of the milk supply.

#### Impact on Consumers

Consumers would also experience more variable fluid milk product prices. In markets having high class I prices now, consumers may experience lower fluid milk prices. To the extent reconstituted milk is utilized, some consumers could see relatively substantial drops in fluid milk product prices. However, with these potentially lower milk prices comes a potential problem. The assurance of an adequate supply of fluid milk products in the stores daily on a year-round basis may be lessened without federal orders in the case of some primarily fluid markets. As was common prior to federal orders, handlers may engage in milk price wars. Milk price wars could force some handlers out of a market and eventually lessen competition. In this situation, it may even be possible that for some markets consumers would actually end up paying more for fluid milk over the long run.

More variable, and potentially lower producer milk prices in some regions, would reduce total milk supplies. Manufacturing milk and milk product prices, as a result, would increase. In the absence of federal orders consumers would pay more for manufactured milk products.

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<sup>4</sup> Roger A. Dahlgran, "Welfare Costs and Interregional Income Transfers Due to Regulation of Dairy Markets," American Journal of Agricultural Economics, Vol. 62, no. 2, May 1990, pp. 288-296.

## **Alternative Mechanisms to Replace Federal Orders**

The Secretary posed the question: "Could contractual arrangements between cooperatives and handlers replace some of the functions now performed by the federal order system?" Of course, in theory the answer is yes. In practice, the answer is more like maybe and several possibilities exist. More generally, the question refers to the potential for alternative new or existing institutions, private or public, that might take the place of federal orders and their functions in the event orders were terminated or their authority pared back.

The functions of the order system, according to USDA, are "to assist farmers in developing steady, dependable markets by providing prices for their milk which are reasonable in relation to economic conditions" and "to assure consumers of adequate supplies of pure and wholesome (fluid) milk at reasonable prices." The basic tools that orders use to achieve these objectives are classified pricing (minimum prices based on use) and pooling (rules for dividing the proceeds equitably among dairy farmers). To facilitate the specific and most desirable application of pricing and pooling, orders also rely on ancillary rules and regulations that specify who, how, and under what circumstances producers and milk buyers pay certain prices and/or participate in the pool of revenues generated. Orders also audit buyers to assure that the milk is paid for properly.

Federal orders do not absolutely dictate prices for buyers or sellers. It is not impossible for producers to receive less than the federal order minimum blend price for milk, and they certainly can receive more. Likewise, processors may have to pay more than the appropriate class price for milk, and occasionally they will be able to buy some milk for less. Nevertheless, the practical outcome of federal minimum pricing is that all producers have a reasonable sense that they are being paid equitably and similarly for their milk, and all processors can be reasonably assured that their competitors are paying comparable prices for milk; this minimizes many incentives for market disrupting behavior. Given the primary importance of the pricing and pooling functions of marketing orders, the discussion below focuses on alternative mechanisms for pricing milk between and across buyers and sellers.

### **Contractual Arrangements With Cooperatives**

Contractual arrangements with cooperatives, the alternative specifically mentioned by the Secretary, might take over some of the pricing functions and, perhaps, the pooling functions of a marketing order. About 75 percent of milk under federal orders today is sold through cooperatives to plants and dealers under formal or informal contractual arrangements. Needless to say, however, the price and quantity basis underlying these contracts are the classified prices and verified sales by class announced in the various orders. Whether such contracts would gain in use under discontinued or modified orders is conjectural. Given the declining influence of cooperatives in many orders in recent years, and the possibility of greater defections in an unregulated or less regulated market, reasons exist to doubt this possibility.

Without question, cooperatives would attempt to perform the pricing and at least some of the pooling function that orders now fulfill. In the event pricing was dropped, individual cooperatives and, more particularly, cooperative federations would attempt to play the pricing and/or pooling role by means of contract. Without the auditing and



information-providing functions provided by orders, chances for long term success are poor. If orders continue to provide these functions, the possibility is improved that such cooperative contracting would succeed with little market disruption or price erosion. Even greater odds of success would result if orders, in the absence of minimum price regulation, were given the task of approving contracts, reporting contract terms, and enforcing contracts between cooperatives and processors. This is not unlike the marketing agreement option that existed prior to federal orders and which is still available today. This option proved unsatisfactory when it was first tried.

If some overt assistance to cooperatives such as the alternative above is not given, and particularly if auditing and information functions are dropped, the prospects for long term success of such a strategy is poor. Experiences in Chicago, Mississippi, and most recently in the Carolinas, all showed a gradual deterioration of cooperative coordination, which resulted in efforts to reestablish or promulgate an order.

Cooperatives, or cooperative federations, would have to represent virtually all of the producers in an area to have much chance of success. As in the past, there would be incentives without orders for processors to pick up non-member suppliers in the fall and to cut off some of these suppliers during the spring flush season. Because the opportunity cost of this "homeless" milk is nearly zero, producers who lost their market would sell at extremely low prices, thus eroding the ability of cooperative to effectively price milk.

#### Another Contractual Alternative

In the absence of orders or under orders with a diminished role, another form of contracting is a likely successor to current institutions. Processors will contract directly with producers. The exact form of such contracts is hard to predict, and we have different opinions as to how far it might go. It could be that buyers would contract with producers without changing substantially the role of the producer as an independent business. It is possible that these contracts could evolve into a system that more closely resembles arrangements that have existed in the poultry industry for decades, and which are rapidly transforming the pork industry. For example, as in the case of poultry and hogs, the integrator may own the cows and supply the feed, with the farmer supplying facilities and labor. By means of such contracts, processors, and perhaps some feed manufacturers, could internalize the open market instability that is likely to appear. Large producers located in close proximity to processors may benefit.

Regardless of changes in these market mechanisms, rapid changes in industry structure, even compared to trends in recent years, will occur. There will be far fewer farms and fewer plants. The dairy industry that emerges will perhaps be technically more efficient than is the current structure, but market signals in the form of openly quoted prices, etc. will eventually be difficult to find. Cooperatives may continue to play a role under such a structure, but a diminished one. Major companies may effectively control the industry. Dairy farmers may lose management control, but many might prosper economically as sellers of their labor, and for the use of assets in the form of production facilities.

Whether this sort of structure, particularly at the more extreme end, is desirable, depends on the eye of the beholder. It boils down to a question of philosophy, and perhaps politics, as much as economics.

### Futures Market--Another Private Possibility

A futures market is really only a standardized system of forward contracts. There is a possibility of the development of a futures market for American cheese and perhaps powder, irrespective of the future of federal orders. The price volatility that has existed for the past few years may create the opportunity for such a mechanism that the industry can use as a hedging tool. Price fluctuations also attract the speculators needed to ensure adequate volume for a viable futures market.

Futures contracts are contracts for a delivery of a specified volume of a standardized commodity at some future date. A futures contract could provide opportunities for hedging by taking a futures market position as a temporary substitute for a position in the cash market for the commodity: For example, a cheese manufacturer, anticipating the sale of cheese in six months, could sell (short) futures contracts for delivery over the same time period at some specified price. Six months later if the cheese price is below the price locked in earlier, the manufacturer could deliver the contract. However, the manufacturer would likely sell the cheese at a lower price and offset the futures contract sale with an offsetting purchase contract. Adding the profit from the futures market transaction to the lower cash market price would yield about the same price that was locked in the original contract.

A futures market could be effective in protecting a manufacturer's inventory positions and/or his forward sales of dairy products. Product users could benefit by fixing ingredient costs. Producers would be able to benefit because their cooperative or plants they deal with could lock in a price for cheese, and forward contract for milk at a price consistent with the futures price.

Some other agricultural industries with active futures markets (cotton, corn, wheat, soybeans, feeder cattle) have retained an open market, dispersed, production sector. In other cases (hogs, fed cattle) the existence of an active futures market has not prevented dramatic structural change. Government programs affecting cotton, grains and oilseeds have had more impact on industry structure than the futures markets. Futures markets have some potential for the U.S. dairy industry, regardless of the ultimate fate of federal milk orders. They offer some intermediate term price protection, but in no way can they take over the functions of orders. Farmers themselves would be unlikely to use futures directly. Moreover, any connection between fluid milk prices and hard product prices under this arrangement is speculative at best and very tenuous in the short run.

### Quasi-Public Institutions

Another possibility for assuming the functions played by the order system is to turn over these functions to an industry operated, but closely government supervised agency to price producer milk and set the rules for other important terms of trade. A marketing board or an exclusive bargaining agency could fill this role. Both would require new federal legislation. Both would imply a major departure from what is basically an open market, free enterprise system. Both amount to a government sanctioned monopoly operating under tight public restrictions. Both would probably result in assured healthy producer incomes, stable prices, and a continuation of a relatively dispersed system of family farms for the intermediate future. Congress and USDA have shown little interest in granting producers this much authority, although there has been some interest in the concepts in

the U.S. in the fairly recent past and other countries have employed similar institutions. (For a detailed description of how these institutions would operate, refer to "Who Will Market Your Milk," Texas A & M University, D-1058, 1978.)

### Public Alternatives

The fact that government institutions are dismantled or stripped of some of their influence does not necessarily ensure that those functions will pass to the private sector forever. Witness the hue and cry to re-regulate some industries that have been freed of government influence in recent years. Rest assured that in the absence of orders or under orders with little power, conditions of disorderly marketing will arise.

This disorder is probably required to force institutional adaptation to the changed regulatory environment. The first step, however, when such conditions arise will be powerful pressure on Congress to raise the support price, as an alternative to order pricing. Whether such an attempt would be successful is unknown, but lobbying efforts would probably dwarf the massive attempt to raise prices in 1991.

There would also be efforts to reinvigorate state milk control, as still practiced by California and parts of several other states. During the milk price crisis last year emergency legislation in several states helped prop up the industry, and other states have begun to explore this option.

One of the problems with state regulation, which led to federal orders replacing most such agencies in the past, was the inability of states to effectively regulate interstate dairy trade. As more milk and dairy products moved in interstate commerce, this constraint proved often to be fatal. It will likely do so again and create a lot of turmoil in the meantime.

If disruptive marketing conditions arise, affected parties, who in the past gave legal challenge to state orders, might view such problems as less serious than an unregulated industry. Or states might form multi-state compacts--legal under the constitution--to get around this constraint. An effort was made in recent years to create such a dairy compact in the Northeast. While such state mechanism could theoretically achieve the same ends as federal orders, it is doubtful that they would be achieved as efficiently if applied on a wide scale.

### Summary of Alternative Mechanisms

Nobody knows what type of institutional structure would spring up if federal milk orders were eliminated or imposed less regulation. The alternatives discussed above probably do not constitute a complete listing. The institutional environment might change quickly, but it would more likely evolve gradually. It is possible that institutional change might eventually mean increased government involvement instead of less. The industry and institutional structure that ultimately emerges may not be greatly different from the current one in terms of technical and economic efficiency, even if it is radically different. Finally, the costs of transition to a new institutional environment cannot be ignored.

## Lessons From Other Countries

Two questions were posed by the Secretary. What institutions have other countries used in milk marketing that shed light on our own system? Are there particular aspects of milk marketing that are carried out more equitably or efficiently in other countries than in the United States? In general, it can be observed that most countries which have a prominent dairy sector have found it desirable to create government policies to support and regulate it. However, we know more about how these policies relate to our price support program and its objectives than we do about regulations directed more toward fluid milk markets. In fact, few countries have beverage milk markets that compare to the U.S. A recent book by Wyn Grant provides a survey of what is known about the policies and politics of the dairy sectors in North America, Europe, and New Zealand.<sup>5</sup>

In most countries, dairy industries are important for economic, sociological and political reasons. As a result, virtually all foreign dairy industries receive some degree of national sponsorship. Generally speaking, other dairy industries are managed for domestic goals such as income maintenance, food security and rural economic development purposes. To achieve these societal goals, domestic dairy prices are generally higher than those that would otherwise occur or those that occur in international trade.

To accomplish their domestic policy goals, nations institute various forms of border protection. Popular border protection measures include variable levies or tariffs, import quotas and/or various licensing and phytosanitary regulations. If domestic price levels are high enough to create surplus milk production, domestic dairy policies generate burdensome milk surpluses. Generally, excess surplus problems are handled through subsidized export sales in world markets and/or the imposition of supply management or supply control procedures within respective dairy countries.

Consequently, world dairy trade comprises only approximately 5 percent of world production. World dairy trade prices reflect the mix of policies implemented to deal with domestic dairy industries and the surpluses generated by those policies. Current world prices do not reflect what prices would be in the absence of national support of domestic dairy industries. One must also be careful to distinguish between the average prices of products sold between countries and the average prices for dairy products or farm milk including domestic prices. The latter is higher and both are subject to distortions.

Most of the analyses of world dairy policies concentrate on the aspects of those policies that produce manufactured dairy products which are used for world trade. Available information as to how individual countries operate their domestic fluid milk marketing programs is limited. This, of course, is especially relevant because the federal order program is first and foremost a fluid milk program. The following general observations can be made.

Domestic fluid milk markets generally sell either fresh fluid milk, UHT (ultra high temperature pasteurized) milk and/or milk reconstituted from whole milk powder. Generally speaking, fresh fluid milk markets, because of their perishability, are more expensive to operate and the most complex fluid milk marketing systems. In 1991, it was estimated

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<sup>5</sup> Wyn Grant, The Dairy Industry--An International Comparison, Aldershot, England, Dartmouth Publishing Co., Ltd., 1991.

that only about 35 percent of world dairy production was consumed as fluid products.<sup>6</sup> In the United States, approximately 39 percent of our production is consumed in fluid form, almost entirely as a beverage. This compares to about 28 percent in the EC; 35 percent in Canada, 63 percent in Japan, 69 percent in China, and 93 percent in India. In quite a few of these countries, a major use, even a majority use, of fluid milk is as a lightener for tea. New Zealand consumes only about 5 percent of its annual production as fluid product.

In nearly all cases, fluid milk used in domestic consumption is priced higher than comparable milk used for the manufacturing of dairy products. Prices generally are specified by formulas, usually economic formulas, or provisions for classified pricing schemes. For example, the United States generally runs a three-class fluid milk pricing system (California uses a five-class system). In Ontario, milk is classified into 10 classes and sub-classes of milk product utilization. The U.S. developed a fresh fluid milk market and the federal order system very early. As a result, most other milk markets used classified pricing after having studied and copied parts of the U.S. federal order program.

Most fluid milk market industries in domestic countries have location specific regulation. In Canada, fluid milk markets are regulated by each province. Likewise, in Australia individual states establish fresh milk quota, and there is little interstate fresh milk trade. The United Kingdom has five national/regional milk marketing boards linked by a federation. Distinct milk marketing regions specified by either political boundaries or milk marketing patterns are common in world domestic fluid milk systems.

Fluid milk receipts are pooled on a marketwide basis throughout virtually all of the federal order system and some state orders, in the U.K., and in most provinces of Canada. Under two very small federal orders and a couple of small state orders, milk is pooled on an individual plant basis. The other common way to distribute Class I receipts is to allocate them to holders of fluid milk supply contracts or quotas. Under many of these plans, elaborate rules have developed to allocate fluid milk quotas in ways deemed socially desirable. An example in the U.S. is the class I base plan, which was used for a time in a few federal orders and is used under state orders in California and parts of Virginia.

While U.S. federal order prices are directly linked to the manufactured milk market through the Minnesota-Wisconsin price, the linking of domestic fluid milk markets to their manufactured milk markets varies across countries. Some countries use economic price formulas or cost of production formulas to set fluid milk prices, as is done in California and a few other less significant states. Others prescribe fluid milk prices by component values generated from their manufacturing milk markets. These patterns are influenced by whether the fluid milk market is fresh, UHT or reconstituted.

There is a lack of generalized information about the operation of fluid milk markets in other countries. In general, in all countries with fresh milk market industries prices vary by location and region. Generally, domestic fluid milk prices will be higher and different from those for manufacturing milk in the same country and location. The domestic fluid milk markets and manufacturing milk markets are linked in each country by the supply of milk

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<sup>6</sup>Carley, Dale H. "Overview of World Dairy Programs, Policies, and Situation," mimeo Department of Agricultural Economics, University of Georgia, College of Agriculture and Environmental Services, Georgia Experiment Station, Griffin, GA 30223-1797, February 1992.

available to both fluid milk and manufacturing milk processors within a given country. Linkages of the two sectors generally come through supply pressures and not necessarily through price linkage. There is a great variety in the use of differential pricing, economic formula pricing, product price formula pricing, and fluid milk quota allocation schemes in many countries around the world.

## Summary

In this paper, we have used objective economic rationale and our knowledge of the dairy industry and dairy policy to address questions about the federal milk marketing order program. It is obvious that many questions have arisen in the last few years. Available information and studies provide some answers and insights.

Determining the optimal level of class I differentials is certainly the most contentious issue. History and economic logic indicate that a sound basis exists for some difference between the values of milk used in manufacturing and milk used for fluid purposes, whether or not this is formalized in a system of classified pricing. The primary purpose of federal orders is to ameliorate the market failures and instabilities that result from the lack of market bargaining power among producers. Classified pricing is a tool to achieve this purpose. Its purpose is not to create regional price differences *per se*; yet the fact that it is a part of regional price differences cannot be denied. Methods of addressing fundamental problems of market failure in the dairy industry merit serious study.

The notion of giving government a less intrusive role and assuming that cooperatives can bargain effectively for producer prices has some popular appeal, but we are skeptical. Despite the fact that many years have passed since orders were first authorized, and many structural and technological changes have occurred, the economic conditions that gave rise to federal orders still exist. No doubt, various alternative institutions and mechanisms would evolve if federal orders were eliminated or seriously weakened, but the hardship on U.S. dairy farmers would be serious and widespread. The disorder that would result would prove difficult for processors as well. We doubt that there would be any net benefit to society from this disruption, short term or long term.

Of course, none of us would argue that current provisions of federal orders could not be improved. Moreover, each of us have different ideas about what would constitute an improvement. Policy-makers and interested parties must work to establish a clear set of goals and constraints for federal orders. Economic analysis can shed light on the extent of certain problems, their nature and cause, and the likely outcomes of corrective measures. Economic sciences can not establish social priorities. Given a set of objectives, economists can apply their knowledge and skills to determine efficient methods for achieving these goals.

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