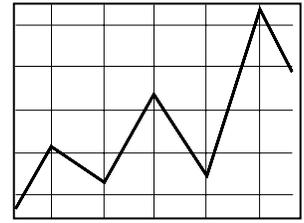


MARKETING AND POLICY BRIEFING PAPER



Department of Agricultural and Applied Economics, College of Agricultural and Life Sciences, University of Wisconsin-Madison
Cooperative Extension, University of Wisconsin-Extension

Paper No. 85
June 2004

Federal Milk Marketing Order Pooling, Depooling, and Distant Pooling: Issues and Impacts

Ed Jesse and Bob Cropp¹

Federal milk marketing order pooling issues have been frequent topics of discussion, especially since federal order reform was implemented in January 2000. Particularly controversial are *depooling* and *distant pooling*, both of which affect federal order producer prices. Numerous questions have been raised related to what is pooling, what producers are eligible to share in federal order pools, what is a pool milk plant, how do regulated manufacturing milk plants decide to pool or depool, and how does pooling affect producer pay prices, in particular the producer price differential (PPD) and the uniform producer price.

Two recent events focused increased attention on pooling issues. In April 2004, the PPD in many milk marketing orders was a record negative value — (\$4.11) per hundredweight in the Upper Midwest order. While the large negative difference between the April Class I and Class III prices (\$15.44 and \$19.66 per hundredweight, respectively) was the primary cause of negative PPDs, they were made even larger because many manufacturing plants and dairy cooperatives chose to depool, that is, disassociate milk from orders. The Upper Midwest market administrator estimated that 1.6 billion pounds of milk was depooled in April 2004.² Depooling resulted in April 2004 Class III utilization of only 11 million pounds (1.8 percent of total use) compared to 1.4 billion pounds (76.8 percent) in April 2003.

¹ The authors are Professor and Emeritus Professor, respectively, and Extension Dairy Marketing Specialists, Department of Agricultural and Applied Economics, University of Wisconsin-Madison/Extension. Clarifying comments on earlier drafts from Bob Wills, Cedar Grove Cheese, and Henry Schaefer, Upper Midwest Market Administrator's Office, are gratefully acknowledged.

² Federal Milk Market Administrator, U.S. Department of Agriculture. *Upper Midwest Dairy News*, Vol. 5, No. 5. May 2004.

The second event was the termination of the Western federal milk order on April 1, 2004. A significant volume of milk from Idaho producers was being pooled on the Upper Midwest order while the Western order was in effect. Termination of the order raises legitimate fears that even more Idaho milk will find a home on the Upper Midwest order, further diluting the PPD.

Two groups of dairy cooperatives operating in the Midwest have asked for a hearing to alter pooling rules in the Upper Midwest order. One group is asking for changes to limit both depooling and distant pooling. The other group is asking only for changes to restrict distant pooling. To date, the Secretary of Agriculture has not announced a hearing.

In this paper we explain the concept of pooling, why both local and distant milk is pooled, why milk is depooled and the implications of pooling and depooling on producer pay prices. The discussion pertains primarily to the Upper Midwest order; provisions of other orders may differ.

Pooling, the Producer Settlement Fund, and the PPD

The terms, *pool*, *pooled* and *pooling*, have several meanings within federal orders, which leads to some confusion. Pooling refers to both milk and money. A federal order *milk pool* refers to the amount of milk eligible to share in the federal order money pool. A federal order *money pool* is the amount of money generated by applying minimum federal order Class prices to the amount of milk used in each Class within an order.

The utilization of milk by Class for pooled handlers is monitored by the order market administrator, who (simplistically) calculates the per hundredweight value of pooled milk by dividing the money pool by the milk pool.³ Mathematically, this process involves calculating the weighted average value for milk, where the prices are minimum federal order prices by Class and the weights are the proportion of total milk pooled by regulated handlers that is utilized in each of four classes. Producers affiliated with pooled handlers indirectly receive this weighted average value (adjusted for milk composition and quality), regardless of how their handler uses the producers' milk (i.e., to which Class the milk is assigned).

A federal order's *marketing area* is defined as a geographical area where fluid milk plants compete for the sales of Class I or beverage milk.⁴ The marketing area is not where milk is produced; it is where fluid milk is sold. Pooling involves the association of both locally produced milk (milk produced within the market area) and more distant milk with

³ The process of calculating the pool value per hundredweight is considerably more complicated. Values and usage of milk components are used in the calculation rather than values and usage of standard composition milk. Several other adjustments to the weighted average value are made to derive the pool value per hundredweight, which is called the uniform price. The weighted average pool value defined here is not the same as the uniform price.

⁴ With modern transportation and packaging it is difficult to determine where one market ends and another starts. In general, a fluid milk plant is regulated by the order in which it has the largest percentage of its fluid milk sales

pool plants. For example, milk from Idaho is pooled on the Upper Midwest order, and plants located within the Upper Midwest marketing area pool milk on several other orders.

The four Classes of milk are:

- Class I – Milk used for beverage products.
- Class II – Milk used for soft manufacturing products like ice cream, cottage cheese, sour cream, whipping cream and yogurt.
- Class III – Milk used to manufacture cream cheese and hard cheese.
- Class IV – Milk used to make butter and dry milk products and evaporated and condensed milk in consumer packages.

Class II, III, and IV prices are the same across all federal orders. Class I prices vary across orders, depending on the order's Class I differential. The Class I price in any month is usually higher than the announced prices for the other classes. Accordingly, the weighted average value of milk in a market will usually vary directly with the percentage of milk used in Class I. For a given level of Class I sales, the weighted average value will usually vary inversely with the amount of milk associated with the market (the milk pool). So normally, the more milk used in Class I and the smaller producer deliveries to pool plants, the higher will be the weighted average value of milk in the pool.

The federal order money pool is divided up (on paper) among pooled federal order plants according to the plants' utilization of milk by class. This dividing up is done through the order *producer settlement fund*. The order market administrator calculates the weighted average value of milk for each pooled plant, applying the announced Class prices to the volume of milk used by the plant in each class. If a plant's weighted average milk value is greater than the weighted average value of milk for the entire market pool, then the plant will be billed for the difference multiplied by the plant's producer deliveries for the month. If the plant's weighted average milk value is less than the market value, then the plant receives a check for the difference times producer deliveries.⁵

Through these producer settlement fund pay-ins and take-outs, each pooled plant has the same amount of money per hundredweight to pay producers, regardless of what products the plant makes. With normal Class price relationships (Class I price highest), fluid milk processors pay into the producer settlement fund and manufacturing plants draw from it. Cheese plants who use all or most of their milk as Class III, will normally receive a payment from the producer settlement fund. This is called a pool draw. Eligibility to receive this pool draw is the primary reason that Wisconsin cheese plants seek pool status

⁵ For simplicity, the calculations noted here are based on standard milk composition. Producer settlement fund payments and receipts are actually based on usage of milk *components* by class, which varies significantly across classes and across handlers. Fund obligations also account for the SCC of the plants' milk and involve several other possible adjustments.

under the order. These plants are interested in making cheese, not supplying milk for fluid use. But their limited commitment to service the fluid market and the associated pool draw provides them with revenue to pay their producers beyond what they receive from selling cheese and whey.

Producers in orders where multiple component pricing is used (six of the ten orders currently in effect, including the Upper Midwest) do not receive the weighted average value directly. Rather, their federal order payment is based on pounds of butterfat, (true) protein, and other milk solids shipped during the month *plus* a producer price differential (PPD) per hundredweight of milk shipped.⁶

On a per hundredweight basis, producers with high-testing herds receive a higher value for their milk components than producers with low-testing herds. The Class III price is for milk with a specific composition: 3.50 percent butterfat, 2.99 percent protein, and 5.69 percent other solids. So only a producer with milk composition exactly matching this composition would receive the Class III price as the component value per hundredweight.

The PPD accounts for the differences between Class I, II, and IV prices and the Class III price for the month. Simplistically, it is the weighted average pool value per hundredweight minus the Class III price. While the actual calculation is complex and involves several additions and deductions⁷, the PPD in any month is roughly equivalent to:

$$\begin{aligned} & \text{Percent Class I utilization} \times (\text{Class I price} - \text{Class III price}) \\ + & \text{Percent Class II utilization} \times (\text{Class II price} - \text{Class III price}) \\ + & \text{Percent Class IV utilization} \times (\text{Class IV price} - \text{Class III price}) \end{aligned}$$

Producers, Pool Plants and Performance Requirements

Producers under federal milk marketing orders are dairy farmers who are eligible to share in the federal order money pool. To be designated a producer under the Upper Midwest order, one day's milk production must be delivered to an order **pool plant**. This is often called "touching base;" the producer demonstrates the one-time ability to make delivery to a pool plant.⁸ After touching base, the pool plant may thereafter divert the producer's milk to a non-pool plant (i.e., a milk plant that is not regulated by the order) and the producer continues to remain eligible to share in the money pool.

⁶ Note that the PPD is not the same as the pool draw except in the case of a plant that accounts for 100 percent of its milk as Class III.

⁷ Monthly calculation of the PPD for the Upper Midwest order is shown at the following web site: http://www.fmms30.com/Homepage/FO30_Prices.HTML#PPD. Note that the PPD is "zoned out" in 5-cent per hundredweight increments from Chicago in the same way that the Class I differential is zoned out from \$1.80 to \$1.60 per hundredweight.

⁸ In some orders, the touch base producer eligibility requirement applies monthly or several times per month.

The non-pool plant to which the producer's milk is diverted may be the same plant as the pool plant. Under the Upper Midwest order, plants may be authorized by the market administrator to operate both a pool plant and a non-pool plant on the same premises. This is called split plant status. For example, a dairy cooperative making cheese could designate some milk storage silos as its pool plant and some as its non-pool plant. Producer milk, once it has touched base, could be diverted to the non-pool silos.

There are three types of milk handlers that can be designated *pool plants* under the Upper Midwest federal milk order.

- 1) Distributing plants: Plants that process, package and sell beverage milk products within designated marketing areas. Distributing plants may procure milk directly from producers or obtain milk from supply plants and cooperatives.
- 2) Supply plants: Plants that supply raw Grade A milk to distributing plants. These are manufacturing milk plants, like cheese plants, that procure milk directly from producers or obtain milk from cooperatives. While engaged primarily in manufacturing, supply plants help assure an adequate supply of milk for fluid purposes by carrying fluid milk reserves. Supply plants also provide a balancing service by manufacturing milk that is not needed for fluid purposes on days when bottling plants are not operating and handling seasonal surpluses.
- 3) Dairy cooperatives: Some dairy cooperatives bottle milk and others have manufacturing facilities. Other cooperatives are involved exclusively in representing their members in negotiations with proprietary firms. Dairy cooperatives, like other handlers are obligated to the federal order pool for the established minimum prices. But cooperatives are not obligated to pay their member-producers the order minimum producer prices. They often "re-blend" the proceeds from milk sales across federal order markets and pay their members prices in different regions that reflect different competitive conditions.

Whether or not a milk plant or dairy cooperative is a *pool plant*, i.e., a regulated handler under a specific federal milk order, hinges on whether the plant meets the order's *performance requirements*. Performance requirements for distributing plants are different from those applying to supply plants and cooperatives.

For distributing plants, performance requirements pertain to the percentage of the plant's packaged milk that is distributed within the marketing area. If a distributing plant meets the required minimum distribution percentage under an order, it is pooled — there is no choice in the matter. Pooling is required because federal milk orders assure that all fluid milk handlers have the same minimum cost of raw Grade A milk to prevent one handler from gaining a competitive advantage over another in processing and selling packaged milk within the market area.

For supply plants and dairy cooperatives, performance requirements are called *shipping requirements*, and relate to the percentage of their milk receipts that must be shipped to a distributing plant. But, unlike distributing plants, supply plants and dairy cooperatives can decide whether they wish to meet the shipping requirements or not. These decisions can be made on a monthly basis — pooled in some months and not pooled in others.

The minimum shipping percentages required of a supply plant or dairy cooperative vary by federal milk order. Shipping requirements depend upon the local supply of milk in relation to Class I milk (beverage milk) needs. In federal milk orders with relatively high Class I use, like the Southeast, Appalachian and Florida orders, the shipping requirements are higher than the orders with relatively low Class I use, like the Upper Midwest order.

Shipping requirements also may vary by months of the year. In the South and Southeast milk production is very seasonal, with production dropping off substantially during summer and fall to the point that locally produced milk is short of meeting Class I needs and some distant milk must be purchased. Shipping requirements are higher during these short months.

The seven orders other than the Southeast, Appalachian and Florida have far more than an adequate supply of local milk for Class I needs during any month of the year. Consequently, they have minimal shipping requirements. The Upper Midwest order has a shipping requirement of 10 percent, meaning that to qualify as a pool plant, supply plants and cooperatives need to ship 10 percent of their monthly milk receipts to distributing plants.⁹

Each Upper Midwest supply plant and cooperative does not have to meet this requirement individually. Supply plants and cooperatives are allowed to form *systems* for purposes of collectively meeting the shipping requirement. The system must adhere to the 10 percent fluid shipment rule, but some members of the system can use all of their milk all of the time for manufacturing.¹⁰

This relatively small shipping requirement in the Upper Midwest order exists because most of the time the bulk of producer milk delivered to supply plants is not needed to supply Class I needs. Pooled manufacturing plants hold a reserve Grade A milk supply for Class I use if and when needed, and are allowed to share in the federal pool to compensate them for this service. This makes sense. To require regular shipments from all supply plants and cooperatives would be both unnecessary and wasteful in terms of elevated hauling costs.

⁹ However, the order's market administrator may alter shipping requirements for supply plants and cooperatives if distributing plants have difficulty acquiring enough milk to meet their needs.

¹⁰ Such plants would typically compensate other members of the unit for their increased cost of "giving up" milk for fluid use.

Distant Pooling

Because of the Upper Midwest order's one-time touch base producer qualification provision and liberal non-pool diversion provisions, it can be economically advantageous for cooperatives and other plants located quite distant from the order marketing area to affiliate producers and their milk with the Upper Midwest order — that is, to pool milk on the Upper Midwest order.

For example, a cooperative operating a cheese plant in Idaho might identify several Idaho producers to affiliate with the Upper Midwest order. The cooperative would ship the milk of those producers to a pooled plant in the Upper Midwest to meet the Upper Midwest order's "touch base" requirement for being designated a producer. All of the subsequent milk deliveries of the designated producers would then be priced under the Upper Midwest order even though only one day's production was actually shipped to an Upper Midwest pool plant. After touching base, all other deliveries would stay in Idaho for use in manufacturing.

The pool qualification of the distant milk could be through an Upper Midwest distributing plant. It could also be through a supply plant or dairy cooperative that had sufficient "cushion" in meeting the shipping requirement of the Upper Midwest order — that is, a pool plant that individually or through a system shipped more than 10 percent of its milk to a distributing plant. The plant that qualified the distant milk would receive a fee for providing qualification.

Distant pooling is advantageous to the cooperative if the difference in the PPDs between the order regulating the Idaho cooperative and Upper Midwest order is more than enough to offset the one-time hauling costs necessary to meet the Upper Midwest order's touch base producer qualification standard. The distant pooled milk may also come from producers whose milk is not pooled on any order; i.e., the milk is unregulated. In that case, distant pooling is economically advantageous if the Upper Midwest order PPD applied to all of the pooled milk more than offsets the cost of hauling enough milk to meet the order's touch base requirement.

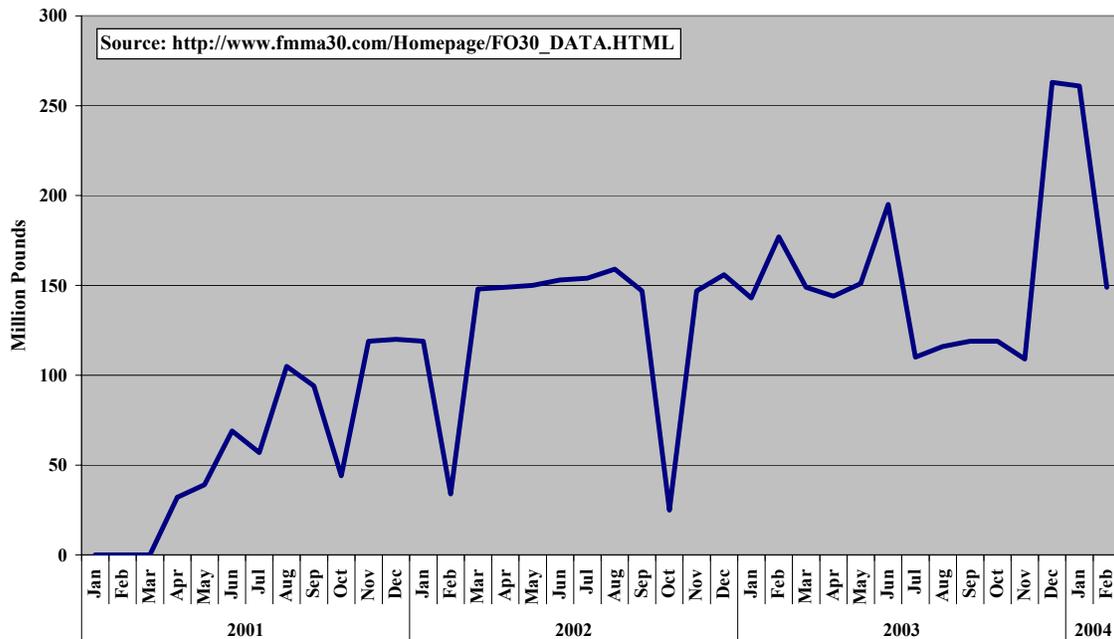
Substantial volumes of milk from Idaho have recently been pooled on the Upper Midwest order. Except for the required touch base shipments to an Upper Midwest pool plant, this pooled milk is used primarily by Idaho plants to make cheese in Idaho.

Milk sourced in Idaho accounted for 1.8 billion pounds of producer milk on the Upper Midwest order in 2003, 10.6 percent of total producer receipts. Pooled milk from Idaho exceeded the combined pooled milk from the states of Illinois, Iowa, Michigan, North Dakota and South Dakota — parts of which are within the Upper Midwest marketing area.

The effect of distant pooling is to reduce the value of the PPD in the receiving market. This occurs because the milk pool is increased more than the money pool. With more

milk pooled and constant higher-valued Class I and Class II sales in the marketing area, the weighted average value of pooled milk decreases.

Upper Midwest Federal Order: Producer Milk from Idaho

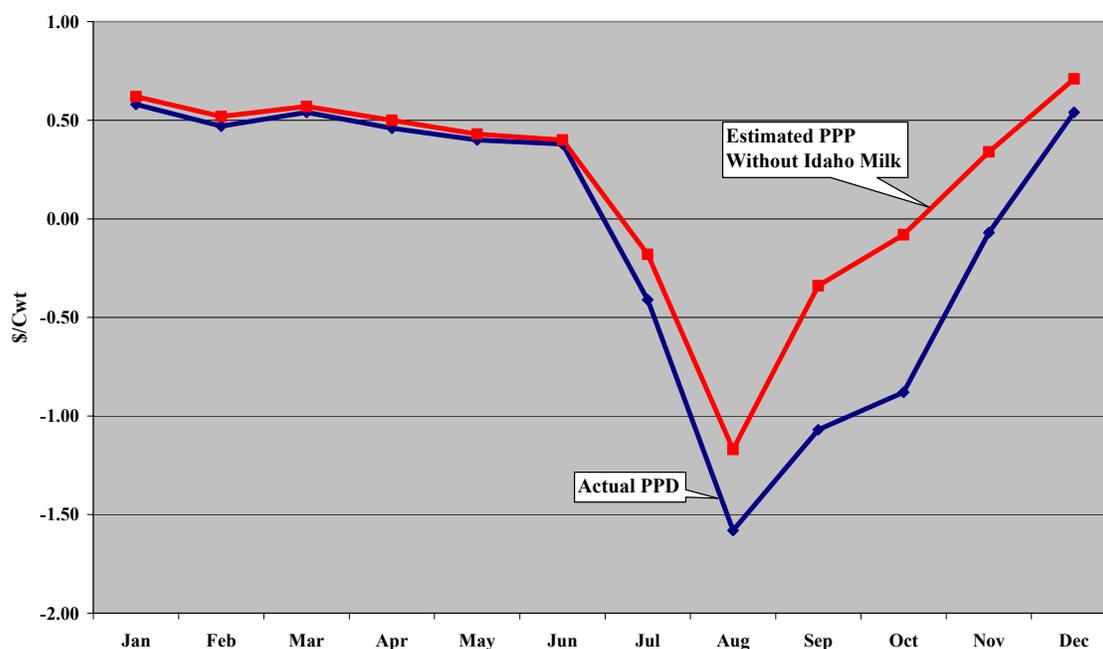


An estimate of the effect of pooling Idaho milk on the Upper Midwest PPD in 2003 was made by the order market administrator at the request of one of the groups of cooperatives seeking a hearing on distant pooling.¹¹ The results are shown below. On average for the year, the Upper Midwest monthly PPD was reduced by 25 cents per hundredweight.

The Western order was terminated effective April 1, 2004. Consequently, Idaho cheese plants are no longer regulated by a federal order. This has raised the concern that even more Idaho milk will be pooled on the Upper Midwest order. To evaluate the potential impact of more Idaho milk finding a home on the Upper Midwest order, the Upper Midwest order administrator estimated what the order monthly PPD would have been if 50 percent of the Class III and Class IV producer milk pooled on the Western order in 2003 would have been pooled on the Upper Midwest order. These larger shipments would have reduced the Upper Midwest PPD from actual by an estimated 5 cents per hundredweight; that is, by five cents more than the reduction already associated with Idaho milk pooled on the Upper Midwest order.

¹¹ See http://www.ams.usda.gov/dairy/upper_midwest/MIDWESTHearingRequest.pdf (attachment 2).

Upper Midwest Producer Price Differential, 2003: Actual and Imputed



At the time order “reform” was implemented in January 2000, several other orders had pooling requirements similar to those applying in the Upper Midwest order. Since then, the Central and Mideast orders have tightened their pooling requirements. This was in response to large quantities of milk from Minnesota and Wisconsin being pooled on these orders, reducing the orders’ Class I utilization and their PPDs. These order changes have significantly reduced the incentive for distant pooling on these orders.

Now it’s the Upper Midwest’s turn to seek restrictions on pooling milk from areas well outside the order’s marketing area. The restriction that cooperatives submitting proposals to date are asking for would prevent producer milk from outside the states included within the Upper Midwest marketing area from being diverted to non-pool plants outside the marketing area. While this would not prohibit the pooling of distant milk on the order, it would substantially weaken the incentive to do so because more milk would incur transportation costs.

Depooling

To understand why manufacturing plants and dairy cooperatives decide to pool with or depool from an order we need to understand the relationship among class prices, the timing of federal order price announcements, and the obligation of pooled handlers to the order’s producer settlement fund.

All federal order prices are based on National Agricultural Statistics Service (NASS) average prices for four manufactured dairy products: Grade AA butter, Cheddar cheese (in 40-pound blocks and 500-pound barrels), nonfat dry milk, and dry whey. NASS surveys plants selling these products and reports weekly average prices each Friday for the week ending the previous Saturday.¹²

Class I milk (and Class II skim milk) are advanced priced. These advanced prices are announced on the Friday on or before the 23rd of the month *preceding* the month to which they apply. For example, the Class I price for April 2004 was announced on Friday, March 19th. Advanced prices are based on the last two weeks of average butter, cheese, whey and nonfat dry milk prices reported by NASS on the Friday of the advanced price announcement. Normally, because of the one-week lag in NASS reporting (the Friday report covers sales for the week ending the previous Saturday), the advanced prices are based on the NASS commodity prices for the first two weeks of the month. For example, the April advanced prices were based on the average commodity prices for the weeks ending March 6th and March 13th.

The Class I price in the Upper Midwest order is built from the *advanced* Class III or Class IV price, whichever is higher. The Class I skim milk price is the “higher of” the advanced Class III or Class IV skim milk price plus a Class I differential of \$1.80 per hundredweight. The Class I butterfat price is the advanced Class III and Class IV butterfat price (the butterfat price is the same for both classes) plus \$0.018 per pound (the Class I differential divided by 100). The announced Class I price is 3.5 times the Class I butterfat price plus 0.965 times the Class I skim milk price.

Monthly Class III and Class IV prices (and the butterfat price per pound for Class II) are not announced until the Friday on or before the 5th of the month *following* the month to which they apply. For April milk, these prices were announced on Friday, April 30th. They were based on the weekly NASS commodity prices for the month available at the time of the price announcement. For April 2004, the Class III, Class IV, and the Class II butterfat prices were based on weighted average NASS commodity prices for the four weeks ending April 3rd, 10th, 17th, and 24th.

It is this difference in timing of the price announcements that gives rise to incentives to depool. The Class III price for any month is announced 6 weeks after the Class I price. If the price of cheese increases rapidly between the announcement dates, then the monthly Class III price can end up higher than the Class I price.¹³ This “price inversion” reverses the normal obligation of pooled handlers to the producer settlement fund. Fluid processors draw from the fund and cheese plants are required to pay into the fund. To avoid this payment, cheese plants depool.

¹² For a comprehensive explanation of how Federal order Class prices are derived, see Jesse and Cropp, *Basic Milk Pricing Concepts for Dairy Farmers*, Bulletin No. A3379, University of Wisconsin Extension, Cooperative Extension, July 2004. This publication is available electronically at: <http://www.aae.wisc.edu/future/> in the publications section of the web site.

¹³ Stated differently, price inversion occurs if the monthly Class III price is higher than the advanced Class III price by more than the Class I differential (\$1.80 per hundredweight). Rapidly rising nonfat dry milk prices could also cause price inversion, but that is a remote possibility at this time.

The two-week average cheese price used in deriving the April 2004 Class I skim milk price was \$1.4582 per pound. The four-week average cheese price used in deriving the Class III price was \$2.0520 per pound. So between the times of the two price announcements, the cheese price increased \$0.5938 per pound. This resulted in an Upper Midwest April Class I price (announced on March 19) of \$15.44 per hundredweight and an April Class III price (announced on April 30) of \$19.66 per hundredweight. Because of this price inversion, most of the Class III milk on the Upper Midwest order was depooled to avoid a producer settlement fund payment.

Let's look at three cases to evaluate the incentives to pool and depool and the impact of depooling on the PPD. First, let's look at the situation in April 2003, when class price relationships were more or less normal; that is, when the Class I price exceeded the Class III by approximately the Class I differential. The weighted average value of milk pooled on the Upper Midwest order in April 2003 is calculated as follows:

April 2003 Upper Midwest Pool Value				
<i>Class</i>	<i>April 2003 Announced Price (\$/Cwt)</i>	<i>April 2003 Market-Wide Utilization</i>		<i>Imputed Pool Value (\$/Cwt)</i>
		<i>%</i>	<i>Mil. Lbs</i>	
I	11.44	18.2	338.1	2.08
II	10.44	2.8	52.8	0.29
III	9.41	76.8	1,430.9	7.23
IV	9.73	2.2	41.0	0.21
Weighted Average Pool Value				9.81

Distributing plants who used all their milk for Class I would **pay** \$1.63 per hundredweight (\$11.44 - \$9.81) into the producer settlement fund in this example. Class II users would **pay** \$0.63 (\$10.44 - \$9.81). Plants using all their milk for cheese (Class III) would **draw** \$0.40 per hundredweight from the pool (\$9.41 - \$9.81) and Class IV plants would **draw** \$0.08 (\$9.73 - \$9.81). The imputed PPD is \$0.40 per hundredweight.

Because of the positive pool draw, cheese plants remained pooled in April 2003. Let's move to April 2004, when the Class III price was \$4.22 per hundredweight higher than the Class I price. First, let's look at what would have happened if the market milk utilization by class had been the same as April 2003:

April 2004 Upper Midwest Pool Value Using April 2003 Market-Wide Utilization				
<i>Class</i>	<i>April 2004 Announced Price (\$/Cwt)</i>	<i>April 2003 Market-Wide Utilization</i>		<i>Imputed Pool Value (\$/Cwt)</i>
		<i>%</i>	<i>Mil. Lbs</i>	
I	15.44	18.2	338.1	2.81
II	15.21	2.8	52.8	0.43
III	19.66	76.8	1,430.9	15.10
IV	14.57	2.2	41.0	0.32
Weighted Average Pool Value				18.66

In this scenario, the pool draws are flip-flopped. Class I plants would have *drawn* \$3.22 per hundredweight from the producer settlement fund. Class III plants would have *paid* \$1.00 per hundredweight into the producer settlement fund. The PPD would have been -\$1.00.

To avoid this pool payment, most of the Class III milk normally pooled on the Upper Midwest order was depooled by supply plants and dairy cooperatives. The actual utilization and weighted average pool value of what milk remained in the pool was:

April 2004 Upper Midwest Pool Value Using Actual Market-Wide Utilization				
<i>Class</i>	<i>April 2004 Announced Price (\$/Cwt)</i>	<i>April 2004 Market-Wide Utilization</i>		<i>Imputed Pool Value (\$/Cwt)</i>
		<i>%</i>	<i>Mil. Lbs</i>	
I	15.44	62.8	381.8	9.70
II	15.21	15.8	96.3	2.40
III	19.66	1.8	11.0	.35
IV	14.57	19.6	119.0	2.86
Weighted Average Pool Value				15.31

This calculation shows an imputed PPD of -\$4.35 per hundredweight compared to the actual PPD of -\$4.11. The difference is due to other factors that make up the PPD and accounting separately for skim milk and butterfat. The point is that depooling reduced the PPD by about \$3.00 per hundredweight. Taking the higher-priced Class III milk out of the milk pool substantially reduced the money pool and the weighted average value of the milk that remained pooled.

Depooled plants that normally pooled under the Upper Midwest order made no producer settlement fund payments in April 2004. Consequently, their producer milk checks likely showed a zero (or near-zero) PPD.

Plants that remained pooled under the order in April 2004 included distributing plants (who cannot depool), plants making Class II and Class IV products (who enjoyed a pool draw), and some supply plants and cooperatives with significant Class I sales commitments either independently or as part of a shipping unit. Producers affiliated with some of these pooled plants may have seen a large negative PPD on their May milk checks for April milk, possibly approaching the announced -\$4.11. For example, smaller distributing plants that procured milk directly from producers rather than through dairy cooperatives could not depool and may have been obligated to make producer settlement fund payments.

But very little milk was subject to the very large Class III producer settlement fund payment. And that payment was likely spread across a much larger volume of milk, some of which received a pool draw. Note from the table above that the imputed Class III producer settlement fund payment of -\$4.35 per hundredweight applied to April 2004 Class III volume of 11 million pounds (110,000 hundredweight). So the implied total producer settlement fund obligation on Class III milk was only about \$480,000. The imputed pool draw on Class IV milk was \$0.74 per hundredweight applied to 119 million pounds (1.2 million hundredweight) for an implied total draw of \$880,000. Because of these offsetting producer settlement fund payments and receipts, multi-plant/multi-product cooperatives likely experienced a net producer settlement fund draw. Accordingly, their producer milk checks did not likely reflect the announced negative April 2004 PPD.

The ability of manufacturing plants to minimize their producer settlement fund obligation varies among plants. Split status plants affiliated with shipping system units likely had, at worst, a very small obligation per hundredweight of milk receipts. Other plants may have had difficulty depooling, possibly because of Class I sales commitments larger than the 10 percent shipping requirement and the related need to keep some Class III milk pooled. These plants incurred a proportionally larger producer settlement fund payment and had limited ability to internally absorb the payment.

Producer milk checks for April 2004 milk were much less dependent on the announced PPD than on other factors. These included plant returns on sales of manufactured products, how plants handled their producer settlement fund obligation, and the ability of plants to absorb any required order payments in their operating margins. However,

producer settlement fund payments were avoided by some plants and incurred by others, which contributed to differences among plants in their ability to pay for milk. And depooling substantially reduced the PPD, increasing interplant differences in the ability to pay for milk. This represents a serious equity issue and is inconsistent with the concept of orderly marketing.

Between January 2000, when federal milk order reform was implemented, and June 2003, the Upper Midwest PPD was positive in every month. Recent increased volatility in commodity prices have made negative PPDs and depooling more common. In 2003, cheese prices increased rapidly beginning in June. Negative PPDs were experienced for the months of July through November. Even though the Class I price had caught up and surpassed the Class III price by September (\$15.51 Class I and \$14.30 Class III), the PPD remained negative because of extensive depooling of Class III milk under the order (5.7 percent Class III) combined with low Class II and Class IV prices (\$10.76 and \$10.05, respectively). These low Class II and Class IV prices relative to Class III provided an incentive for Class II and Class IV handlers to pool abnormally large volumes of milk because they were eligible for pool draws. It was not until December 2003 that utilization by class returned to more normal and the PPD become positive again.

Upper Midwest Pooling percentages and PPDs 2003-2004									
<i>Month</i>	<i>Class I %</i>		<i>Class II %</i>		<i>Class III %</i>		<i>Class IV %</i>		<i>PPD</i>
	<i>\$/Cwt</i>	<i>%</i>	<i>\$/Cwt</i>	<i>%</i>	<i>\$/Cwt</i>	<i>%</i>	<i>\$/Cwt</i>	<i>%</i>	<i>\$/Cwt</i>
Jan '03	12.36	19.7	11.29	2.3	9.78	76.0	10.07	2.0	\$0.58
Feb	12.03	18.5	10.66	2.4	9.66	74.2	9.81	4.9	\$0.47
Mar.	11.61	17.5	10.54	2.7	9.11	77.3	9.79	2.5	\$0.54
Apr.	11.44	18.2	10.44	2.8	9.41	76.8	9.73	2.2	\$0.46
May	11.51	17.9	10.43	2.5	9.71	77.9	9.74	1.7	\$0.40
Jun.	11.54	15.6	10.46	2.7	9.75	77.4	9.76	4.3	\$0.38
Jul.	11.57	49.7	10.63	15.9	11.78	11.6	9.95	22.8	(\$0.41)
Aug.	12.77	50.6	10.81	18.4	13.8	8.4	10.14	22.6	(\$1.58)
Sept.	15.51	54.0	10.76	17.6	14.3	5.7	10.05	22.7	(\$1.07)
Oct.	16.07	55.2	10.84	17.0	14.39	4.8	10.16	23.0	(\$0.88)
Nov.	16.17	35.6	10.99	11.0	13.47	36.2	10.30	17.2	(\$0.07)
Dec.	15.64	18.1	11.30	5.2	11.87	68.5	10.52	8.2	\$0.54
Jan '04	13.65	17.8	11.67	5.5	11.61	68.9	10.97	7.8	\$0.37
Feb.	13.39	18.3	12.90	4.3	11.89	74.4	12.21	3.0	\$0.47
Mar.	13.74	58.7	14.79	11.2	14.49	12.3	14.10	17.8	\$0.21
Apr.	15.44	62.8	15.21	15.8	19.66	1.8	14.57	19.6	(\$4.11)

Depooling is constrained in some orders by preventing repooling for a specified time after depooling. The proposal for the Upper Midwest hearing takes a different approach. It would limit pooled milk in any month to a specified percentage of pooled milk in the previous month. So if a plant depooled in one month, it could only partially repool in the subsequent months.

Regardless of how it is accomplished, restricting depooling deals with the symptom of a problem rather than the problem itself. The problem is price inversion caused by the combination of volatile cheese prices and advanced Class I pricing. Federal orders cannot address volatile cheese prices. But it may be time to seriously consider eliminating advanced pricing for fluid milk.

This would raise strong objections from fluid milk processors, who, unlike manufacturing plants, enjoy the benefits of knowing their raw product cost in advance. Fluid processors would legitimately argue that eliminating advanced pricing would make it difficult for them to establish list prices for retailers and other outlets and lead to unpredictable and unstable operating margins.

However, there are ways to deal with this instability. For example, if Class I prices were tied to monthly instead of advanced Class III prices, fluid processors could engage in hedging to lock in minimum prices. This would require elimination of the “higher of” Class I pricing concept — Class I prices would need to be linked exclusively to the Class III price.¹⁴

Over-order bargaining cooperatives could also serve to help stabilize processor milk costs in the absence of advanced Class I pricing. For example, over-order premiums could be adjusted to accommodate large month-to-month changes in federal order Class I prices.

Depooling results in non-uniform producer pay prices. Restricting depooling could conceivably make this problem even worse if it encouraged regulated handlers to permanently disaffiliate from the order. In that case, the reserve supply of fluid milk would shrink and shipping requirements would need to be increased for remaining pooled supply plants and dairy cooperatives.

Conclusions:

Distant pooling and depooling are distinctly different issues from the perspective of producers. Distant pooling has an unambiguous negative effect on producer pay prices by reducing the PPD for all producers. In contrast, depooling allows some handlers to protect their producers from a negative PPD while making the negative PPD even more

¹⁴ In our judgment, eliminating the higher of mover has substantial benefits besides those associated with preventing price inversion. See, for example, Jesse and Cropp, *Order Reform and Reforming Order Reform*, Marketing and Policy Briefing Paper No. 71, December 2000.

negative for producers affiliated with handlers that cannot fully depool. Distant pooling is an economic issue. Depooling is an equity issue.

Both issues should be addressed through order amendments. The termination of the Western order raises the prospect that even larger volumes of unregulated milk will become associated with the Upper Midwest order. Such association would be appropriate and consistent with federal order objectives if the distant milk was necessary to provide a reserve supply for Class I needs in the Upper Midwest marketing area. That is clearly not the case given the huge volume of Grade A milk produced in the Upper Midwest marketing area that is in excess of fluid needs. Distant milk is pooled on the Upper Midwest order for one purpose: to take advantage of the Upper Midwest PPD, which is intended to compensate producers for legitimately servicing the fluid market.

A major objective of federal milk orders is to assure orderly marketing. The unrestricted ability to pool and depool milk on a monthly basis, causing wildly fluctuating PPDs, does not fit any definition of orderly marketing. Handlers are not treated equally. Producers do not receive uniform prices.

With the relatively low support price for milk, cheese and butter prices will continue to be volatile, leading to volatile federal order prices. With advanced Class I pricing provisions coupled with liberal pooling standards, incentives to depool can be expected to be commonplace. Order changes need to address not only the incentive to depool, but also the order-related conditions that underlie that incentive.