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Ronald W. Cotterill

University of Connecticut Department of Agricultural and Resource Economics

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in the Northeast Fluid Milk Industry

by Ronald W. Cotterill*

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*Professor of Agricultural Economics, Economics, and Director of the
Food Marketing Policy Center
Department of Agricultural and Resource Economics
1376 Storrs Road, Unit 4021
University of Connecticut
Storrs, CT 06269-4021

Email: Ronald.Cotterill@uconn.edu
Website: <http://www.fmpc.uconn.edu>
Tel: (860) 486-2742
Fax: (860) 486-2461

Pricing and Policy Problems in the Northeast Fluid Milk Industry

Abstract:

This article documents the need for reform of milk pricing in the Northeast. The New York price gouging law can be recast as a fair share law. This new milk policy “kills two birds with one stone.” It corrects regional inequities in raw milk pricing by reforming the pricing of milk at retail by limiting and redistributing excessive retail margins to farmers and consumers. The fair share policy relieves allocative price inefficiency, improves the performance of the federal milk market order pool, and the general performance of the Northeast dairy farming and fluid milk industries.

Key Words: market power, bargaining, over-order premiums, fair share pricing

I. Introduction

For dairy farming in any region of the U.S., and especially the Northeast, the core of the sustainability issue is regional differences in cost of production and prices received for raw milk. Consumers are always going to drink milk and consume manufactured dairy products. A critical question is where will that milk be produced? This paper will not address regional cost of production differences.¹ Rather it focuses on regional price differences, which have been ignored since the demise of the Northeast Dairy Compact in 2001. Moreover, the regional impacts of federal, regional, and state policies, and the performance of the Northeast fluid milk marketing channel are critical determinants of the prices that Northeast farmers receive. I will critique the operation of federal milk market orders, document the demise of competition in fluid milk pricing among supermarket chains in the Northeast, and analyze two state level fluid channel pricing policies that can improve price performance. The first is the New York price gouging law that primarily benefits consumers. The second is a new and as yet untried policy, a fair share approach that appropriates part of retailer's margins for payment back to farmers. This second policy can be fine tuned to reduce retail milk prices as well. It also reinvigorates federal milk market classified pricing which has been weakened by the increasing market power of supermarket chains in the Northeast.

II. Regional Farm Milk Price Differences

Let's start with the issue of farm level milk prices in different parts of the U.S. As part of the federal market order consolidation process that culminated with the establishment of eleven market orders in January of 2000, Cornell University researchers analyzed the location of milk production and milk processing plants for cheese, butter,

cultured products and fluid products throughout the United States (Pratt, et al. 1998).

Their basic result imitates work done by milk marketing economists on pricing in milk sheds before the advent of federal milk market orders (e.g., Cassels, 1937). If there were no federal milk marketing policies and milk were allowed to move in an “open market” throughout the country, farmers would have different prices for raw milk throughout the United States.

This basic result comes from the fact that fluid milk, when compared to cream, butter, and cheese, is bulky and therefore there is an economic advantage to producing it close to its consumption point. Working in 1934, Cassels explained the pricing and location of the production of milk for use as fluid, cream, or butter.

“The cost of shipping a given quantity of milk in fluid form being greater than the cost of shipping its equivalent in the form of cream, it will naturally be shipped from points nearer to the market than those from which cream is shipped. Similarly, since the cost of shipping cream is greater than the cost of shipping its equivalent in the form of butter (or some other manufactured product), it will tend to come from a zone nearer the market than that from which the butter comes. Suppose that the cost per mile of shipping 100 pounds of milk is one cent and the cost of shipping its equivalent in the form of cream is 1/10 of a cent and its equivalent in the form of butter is 1/40 of a cent....If the prices for the three commodities (in this sense) f.o.b. city were the same, then at all points in the surrounding territory the farmers would obtain their best returns from milk used in the manufacture of butter and none would be available for shipment as either fluid milk or cream. In order that cream may be obtained, its city price must be higher than that being paid for butter, and in order that fluid milk may be obtained, its price must be higher than the price being paid for cream. The differences in the transportation rates will determine the distances from the market at which it will become more profitable to ship cream than milk and at which it will become more profitable to ship butter than cream.” (Cassels, M., pgs. 20-21.)

Note that the technical properties of different dairy products and transportation cost differences dictate that fluid milk will be highest priced and produced closest to the

consumption point. This result is not the product of federal milk market orders. What federal orders do is pool proceeds from the sale of all types of products and pay a blended price to farmers. The blend price paid to a particular farm depends on its distance from a consumption point, e.g., Boston. Orders insure equitable treatment for farmers, i.e., their mailbox price does not depend on how their milk is used (fluid, cream, cheese, butter). Pooling removes the opportunity for milk assemblers/processors to chisel down higher value product prices by threatening to switch to farmers who sell at lower prices for cheese or butter.²

In 1996 Pratt et al., in their base scenario for the U.S. dairy industry, (no market orders) found that milk at the farm gate would be of most value near locations such as Miami and Boston, and it would have lesser value in places such as central Wisconsin and New Mexico. Such low value areas would be the reserve supply areas for fluid milk and primarily focus on the production of butter and cheese. In this spatial competitive market scenario farmers located in the Northeast in fact receive a higher price at the farm gate than farmers in the upper Midwest. This is because farmers in the Northeast would be producing more of the higher value fluid product because they are close to major consumption points. Now not all of the Northeast milk in the competitive scenario would go to fluid. Today approximately 60% goes to cheese, butter, and soft dairy products such as yogurt. However, more milk in the Northeast than in the areas of reserve supply goes to fluid.

Today, of course, we do not have open, competitive raw milk markets. However, Cassels' classic analyses and the more recent Cornell study serves as a benchmark for measuring the efficiency and regional equity of our public dairy policies. The basic point

on regional equity is farmers in different parts of the country should receive different prices, i.e., farmers in the Northeast and Southeast should receive higher prices than farmers in areas of reserve supply, i.e., the upper Midwest and West.

But this is not the case. If one examines the mailbox prices received by dairy farmers in the Northeast and compares those to prices received in Wisconsin, for example, during 2002 and 2003 Wisconsin farmers received about the same or ten or fifteen cents per hundredweight more than Northeast dairy farmers.³ Thus during the 2002-3 low raw milk price era when New England farmers were suffering with milk prices at the farm level around \$11 a hundredweight, roughly \$4 below the region's cost of production for a mid-sized farm (Sciabarassi, 2003), farmers in the upper Midwest who have a lower cost of production were getting the same or a higher price. An important conclusion follows: The decline in dairy farming in New England and more generally the Northeast is due to price inequities as well as the commonly acknowledged higher production costs.

In 2004 the situation was different. Raw milk prices peaked at an all time high, but the regional imbalance continued. For example, dairy farmers in New England received a mailbox price in April 2004 of roughly \$17.11 a hundredweight, but Wisconsin dairy farmers received a mailbox price of \$19.89 for a hundred pounds, \$2.78 per hundredweight more than Northeast dairy farmers. In conclusion, cheese producing areas do better at both high and low stages of the pricing cycle.⁴

Historically, at least since the 1960s, the upper Midwest has argued that the fluid milk marketing orders kept prices high in the Northeast and Southeast regions thereby encouraging an excess supply of milk, which depressed upper Midwest cheese markets

(see, for example, Cropp and Jesse, 2003). However, over the past four years inefficiency and inequity in the opposite direction has occurred.⁵ Today, we have cheese market orders, not fluid milk market orders.

Why is this the case? Federal milk market orders, in the first instance, are not the cause of this change in milk pricing. If one examines Jesse et al. one will see that agricultural economists in the Midwest as well as in the Northeast and elsewhere pretty much agree that federal milk marketing orders have been relaxed to the point that they do not price discriminate on a regional basis to benefit areas with higher Class 1 fluid use. In fact federal market orders no longer are the primary or binding factor that determine fluid milk prices (Novakovic, 2004a, 2004b).

Although the Federal Milk Market Orders do enhance the orderly marketing of milk by monitoring processor payments and by operating the federal order pool payment system, the very concentrated raw milk assembly, processing, and retailing segments of the milk-marketing channel have replaced the federal orders as the governor of raw fluid milk prices. In the current relaxed regulatory environment fluid milk prices are determined by over-order premiums that cooperatives negotiate and the handler premiums paid to independent producers. The bargaining power of large supermarket chains and processors drives these premiums more than the power of milk assembly cooperatives. Cooperatives in various parts of the country on certain occasions extract premiums on both fluid and cheese market milk. However, today cooperative power and premiums are limited by the free rider problem just as they were during the 1920's. Processors can make it attractive for farms to defect from a bargaining unit.

As I testified before the U.S. Senate Judiciary Committee (October 2003) in this relaxed regulatory environment the major determinants of the documented regional inefficiency and inequity in milk pricing has to be the differential power of cooperatives, processors, and retailers in different regions of the country (Cotterill, et al., 2003). Consequently, the bargaining for milk prices has taken the path that we've observed with inverted regional price differences or price differences below the cost of transportation between reserve supply areas such as the upper Midwest and the Northeast. As shown above inverted farm level milk prices that existed at both the recent low and high points of the price cycle would not exist in this relaxed federal order market era if regional markets were competitive and all states had uniform policies towards the dairy industry.

When cheese milk prices increase, one would think that over-order premiums for fluid milk would also increase thereby preserving the normal pricing relationship, i.e., higher prices for milk used as fluid. Alternatively, farmers or their cooperatives would divert fluid milk to the cheese market until processors and retailers paid a higher price for fluid. The fact that this has not happened indicates the bargaining power that retailers and fluid processors have in the current market channel structure.

During 2004 and 2005, dairy farmers in the Northeast and elsewhere in the United States enjoyed very high prices and nearly all earned a positive return on their investment. Nonetheless, regional pricing imbalances that are caused by differential bargaining power are extremely important for the long run evolution of the industry. The documented regional imbalance in pricing, in combination with the regional differences in cost of production, does not auger well for New England and Northeast dairy farmers. As milk prices go down in 2006, Midwestern and Western farmers have more staying

power for the long haul relative to Northeast farmers because they had much larger profits than the fluid area farmers during the recent “cheese market bonanza”.⁶

III. Fluid Market Channel Pricing Problems in the Northeast.

Dairy policy has traditionally focused only on raw milk prices, and interregional pricing issues have primarily been addressed through the federal milk market order program. Since its inception in the 1930’s the milk market order program has essentially assumed that fluid milk marketing channels are competitive. Yet this is no longer the case, and, as explained in this section, private pricing power in the fluid channel now saps the ability of order classified pricing to increase the farm pay price (blend price) for milk.

Turning now to analysis of the fluid marketing channel in New England and New York, one has solid evidence that retailers have and exercise substantial market power in the fluid milk channel. Figure 1 provides the federal market orders monthly retail prices for Hartford and the corresponding announced Class 1 or Compact (during the Compact era) raw milk prices from January 1996 to June 2006.⁷ In 1996, the difference between retail and farm prices was approximately \$1.00. Ten years later the retail farm price spread is twice that, \$2.00 per gallon. The “Hartford price spread” line in Figure 1 documents that the gap has increased over time with a very large discrete leap when farm prices plummeted after the demise of the Dairy Compact.⁸ Since farm prices have not increased, the processor and retailer share of the consumer’s dollar spent on milk has increased from roughly 40% in 1996 to 57% in 2006.

Figure 2 breaks down retail prices into retail, processing, and farm components by brand and supermarket chain for March 2003. Dairy Technomics, a firm that routinely estimates processing and distribution costs by brand for supermarket chain buyers,

provided estimates which allow us to determine delivered wholesale prices. Note that the region's dominant chain, Stop and Shop, has negotiated the lowest processing cost for Garelick milk and its private label milk which is provided by Garelick, 52.5 cents per gallon compared to Garelick's 61.5 cents per gallon margin received from Shaws and A&P.⁹ Guida's private label and brand milk to Big Y has an even higher margin, 65.8 cents.

Note also in Figure 2 that the retailers routinely capture the largest share of the consumer's milk dollar. Criner (2003) and others estimate that the supermarkets fully allocated cost plus a competitive rate of return for gallons of milk is between 40 and 50 cents. Therefore, in March 2003 when raw milk prices were in a trough the retailer's excess net profit, at roughly \$1.00 per gallon, equaled the price that farmers received for the raw milk that was bottled. This stratospheric super competitive profit margin documents the market power of the supermarket chains.¹⁰

Figure 2 also documents a very interesting and important fact. Branded milk processors capture only a very small portion of the brand premium that consumer's pay. Retailers, who have no involvement in developing brands, capture nearly all of the Garelick and Hood brand premiums. Again, one has strong evidence of retailer market power.

Table 1 reports retail prices for different types of milk in Connecticut supermarkets during November 2005. For each type of milk in a supermarket the price is a weighted average across brands. Note that in A&P/Waldbaums all brands of milk are flat priced across types. Thus the average price for whole milk is identical to the average prices of 2%, 1%, and skim, and the price is \$3.75 per gallon. All of the other

supermarket chains except Wal-Mart effectively charge the same price for milk with varying butterfat content. The Class 1 raw milk price in Table 1 indicates that raw skim milk is 13 cents cheaper than 1%, 28 cents cheaper than 2% and 47 cents per gallon cheaper than whole milk. Flat milk pricing across milk types is yet another indicator of supermarket chain pricing power. In a competitive market retail prices would tend to follow raw milk prices. Only Wal-Mart pricing appears to reflect costs.

This documented exercise of market power by retailers is destroying the economic basis and power of milk market orders that seek to capture the value of fluid milk sales to increase pooled payments to farmers. As retailers, and possibly processors, with market power elevate milk prices, the demand for milk becomes more elastic. This means that a given percent increase in price yields a lower increase in total revenue for fluid milk in the pool. When the “yield” from the classified pricing of fluid milk decreases, the blend price paid farmers decreases. If market power continues to increase to tight oligopoly or monopoly levels retail prices may move so high that we have elastic market demand.¹¹ Then the Class 1 price discrimination scheme of the federal orders reduces rather than increases the blend price that farmers receive. This is because when demand is elastic a price increase actually reduces fluid revenues. At that point private economic power completely destroys the classified pricing system of the milk market orders.

IV. Policy Options

Turning now to policy, current traditional dairy policy does not address regional pricing problems. National policies, such as the Federal Milk Income Loss Contract, and the cooperative CWT Program do shore up the national price; however, they do nothing

to redress the regional imbalance in pricing. In fact, the Milk Income Loss Contract Program covers more of Wisconsin's smaller dairy farms than our larger dairy farmers in New York and New England.

If either of these programs were benchmarked to cover the higher cost of production in New England and applied equally across the entire country, New England farmers would be making money, but farmers elsewhere would be making huge amounts of money and would expand supply in such a fashion as to totally blow those programs away. Any national policy that encourages or abets the same raw milk price for all farmers ignores the economic need for different price levels in different regions of the nation.

One could provide relief to the Northeast if one revised the Class I differentials in the federal milk market orders to create a higher fluid price in the Northeast. There is some talk of this in 2006 as Congress moves towards a new farm bill (Robert Gray). This option, however, faces a host of opponents in Congress from other regions. Class I differentials have not changed in over 25 years. At Boston one adds \$3.25/cwt to the Eau Claire, Wisconsin base (manufacturing milk) price. This is only \$1.55 cwt more than the differential added for fluid milk at Eau Claire. Given that it currently costs around 61 cents to move a 100 pounds of raw milk a hundred miles the federal order fluid differential between the Midwest and the Northeast is definitely too low to influence regional prices.

What does the rise of private pricing power in the dairy marketing channel suggest for dairy policy? Curiously it predicts that product differentiation (new product development), may take dairy farmers down the ready to eat breakfast cereal path. Wheat

farmers have gained little or nothing from the proliferation of cereal brands. Branded product manufacturers and retailers seek to maximize profits not sales volume. This implies that the output restriction effect of market power can offset the increase in consumer demand due to increased variety. The push to provide new “high value” differentiated dairy products and the subsidy of such by dairy farmers may very well not benefit farmers. At a minimum most of the benefits will stay with processors and retailers.

Antitrust enforcement that prevents further consolidation in milk processing and in supermarket retailing is a good idea. But in many regions shutting this door does no good because the horse is already out of the barn. Recently, in Chicago, a consumer class action lawsuit against the dominant supermarket chains, Jewel and Dominick’s failed because the price leadership scheme they use is not price fixing. Jewel sets a high price. Dominick’s and others match that price. Since no one talks (conspires) with others to set the price, their conduct is legal (Zimmermann 2003).

When markets are not competitive and antitrust is ineffective, economists look to regulation to improve economic performance. During the deep raw milk price trough in 1989 and the early 1990’s New York legislators passed two related milk price regulation laws. The Rogers Allen law that empowers the state to regulate raw milk prices was strengthened. It briefly served as a basis for fluid milk price elevation to provide farmers relief from low prices; however, the implemented over-order pricing system was challenged and found to be in violation of the interstate commerce clause of the U.S. Constitution. When this farm oriented law was strengthened, a price gouging law also passed in a log rolling compromise for down state support. The New York price gouging

law has continued to operate. The law limits the retail price to no more than 200% of the raw milk price processors pay.

Figure 3 reports milk prices for New York and New England. Retail prices, on average, in New York are lower than in New England. Note that the price gouging law tends to be most effective (binding) when raw milk prices are low. During low raw milk price periods, New York prices are much lower than New England prices where there is no price gouging law.¹²

One way forward for milk pricing reform in the Northeast is to renew a focus on state level policies. State level bargaining or mandated over-order premiums in the Northeast have been tried in the past. As briefly explained when discussing the New York Rogers Allen law the approach was not successful for legal reasons. Also from the economic standpoint if one assembles 95% of the Northeast farmers into a bargaining unit and bargains for an over-order price, processors can defeat these over-order premiums movement by shifting their business to the 5% that don't participate and attracting others to defect from the bargaining unit. This free rider problem exists because of the difference between the Class I price that a processor pays for the milk, which includes the over-order premium, and the blend price that all farmers receive when such premiums are blended back across manufacturing as well as fluid milk. The processor can split the difference between the bargained fluid price and the blend price with someone outside the bargaining unit. Both are better off. Ultimately, the bargaining effort collapses.

There needs to be a new way to redistribute revenue in the milk-marketing channel from powerful retailers to farmers and consumers. A policy that reduces retailer

market power would also help to reinvigorate the federal orders pool pricing as a vehicle for higher farm milk prices. A new state level policy also needs to avoid the free rider problem inherent in elevating raw milk price in a particular state or region. The new policy must also not violate the interstate commerce clause which prohibits states from impeding the flow of commerce in the nation, i.e. it must not discriminate between in state and out of state farmers and processors that supply the states fluid milk needs.

Consider a fair share price policy that returns a portion of the retail margin to farmers. Under a fair share approach one could set the following policy parameters. Retailers would be permitted to mark fluid milk up 20%, and after that half of any additional mark up would be shared with the farmer. This money would be paid back into a pool that would include all the farmers that supply the milk to that particular retailer.

Note that there is no free rider problem in this milk pricing policy. All retailers pay. They cannot avoid paying by switching to a different fluid milk processor or a different set of farmers that supply that processor. Also the Connecticut Attorney General has ruled that a price collar approach that is similar to this fair share approach does not violate the interstate commerce clause. Thus the fair share approach is a legal milk pricing policy that a state can implement. This is the case because it does not discriminate between milk supplied by farmers and/or processors from instate and out of state.¹³

Note that the fair share has no impact on the fluid milk processing industry. A fluid milk processor continues to pay a price for milk as determined currently and

continues to sell to supermarkets based upon market conditions as they do now. The only difference is that a retailer must share part of any markup over 20% with farmers.

How would a fair share policy effect consumers? The share ratio can then be manipulated in such a fashion that one can determine a distribution to farmers, a residual amount remaining to retailers, and confer a certain benefit to consumers as well. In other words this milk pricing regulatory policy could benefit farmers, processors and consumers with a more equitable distribution of the proceeds from the milk production and distribution activity. A fair share policy could be managed by a regulatory board that represents all parties, such as the Connecticut Milk Regulation Board.

Consider the following example. A state's milk regulation board determines that the paid raw milk fluid price should be no lower than \$17.00/cwt for 3.5% butter fat milk. It decides that retailers will keep the first 20% of their markup over wholesale price, that they will pay a certain "fair share" of markups beyond 20% to farmers, and that mark ups be capped at 50%. Note that if the raw price is at or above \$17.00/cwt the fair share rate is zero; however, the 50% markup cap persists. The law is similar to the New York price gouging law. However, when farm prices are low the fair share law returns money to farmers.

Table 2 illustrates how the fair share policy could work. From February through June 2006 Class I raw milk prices at Boston dropped from \$18.28 to \$15.65 per hundred weight (cwt) for 3.5% butter fat milk. April 2003 is also in the table so that one can see how the policy could work at an even lower Class I price, \$14.42 per cwt. Section 2 of the Table gives the raw milk prices per gallon for each type of milk for each month. The

price of skim milk, for example, falls from \$1.17 per gallon in February 2006 to \$.94 per gallon in the lowest priced month, April 2003.

Section 3 of Table 2 gives the corresponding wholesale prices for each type of milk. One obtains wholesale prices by adding Dairy Technomics August 2005 estimate for private label milk processing and distribution to raw milk prices (Durling, 2005). Any retailer complying with the policy and the regulatory agency would need only the delivered wholesale prices which are readily available. In this example the average wholesale price for all types of milk ranges from \$2.11 per gallon in February 2006, the highest price month, to \$1.84 per gallon in the lowest price month. Although this example ignores brand level differences, a markup rule based on delivered wholesale prices can accommodate them and would therefore limit retailer's capture of processor's brand equity.

Section 4 computes the 20% retail trigger price. Prices above this require the retailer to pay into the fair share fund if farm prices are below \$17.00.

Section 5 computes the retail ceiling prices at 50% markup for each month. Section 6 gives the actual (current) price for each month. Note that the actual price in every month is above the policy ceiling price so retailers need to cut price. Consumers' savings range from 29 cents in February 2006, the highest priced month, to 23 cents per gallon in the lowest priced month.

Section 7 analyzes farmer benefits. During February and March 2006 raw milk prices are above \$17.00/cwt, so the fair share ratio is zero. Farmers receive no benefit. In April 2006 prices are below \$17.00 and the program kicks in with a 17% share ratio. This pays 9 cents per gallon and restores the raw price to \$1.46 per gallon (\$17.00/cwt).

As the price drops in the other months in Table 2 the fair share ratio goes up to 44% and program payments per gallon go up to 24 cents to keep farmers at the \$17.00 raw price.

Section 8 illustrates the impact of the policy on supermarkets. This policy reduces their “net of payments to farmers” price. Their realized gross margin ranges are from 33% to 27%. Their dollar gross margins range from \$1.03 to \$.68 per gallon. Note that these realized gross margins are well above the 40-50 cents that Criner and others have estimated are sufficient to cover all costs including a competitive return to equity capital.

This regulatory policy could require that supermarkets pay fair share monies to the processors who supply their milk. Processors in turn would return monies to the cooperatives that supply them, most notably Dairy Marketing Services and Agri-Mark. The cooperatives would then devise a payout schedule, possibly a straight prorate share based on the volume of milk supplied by each farmer. Note that if only one state, for example Connecticut, enacts this law the fair share payment would be diluted over all farmers that supplied milk to a plant that also supplies New York, Massachusetts and possibly other states. However, if all states supplied by that plant had a fair share law there would be no dilution.

What if one does not do some sort of regional milk policy along these lines? Would consumers, in fact, benefit from lower priced milk from the Midwest and the far West? This is an excellent question, however, the answer is clearly they would not. Yes, the cost of production in the Northeast is higher than those more distant areas; however, in Spring 2006 it cost approximately 61 cents to transport a hundredweight of raw milk a hundred miles. This means that transporting fluid milk from very distant areas tends to

generate very expensive milk. Also, as we have seen under the existing policies the mail box prices are not lower in the upper Midwest, they are higher or at best roughly equal to the Northeast over the dairy pricing cycle. The disappearance of production and processing here would only put them in a stronger supply situation, i.e., elevate delivered prices in the Northeast. Adding transportation costs to either fluid or processed products for shipping east also creates higher consumer prices in the Northeast.

V. Conclusions

This analysis suggests that there is a need for reform of milk pricing in the Northeast. The New York price gouging law needs to be recast as a fair share law. This reform benefits farmers and processors as well as consumers. It enhances the survival of Northeast dairy farmers and the region's dairy processing industry.

The fair share policy could be implemented even if there were competitive pricing in the retail milk-marketing channel in our region. The cold hard fact, however, is that we do not have competitive retail milk pricing in New England. . Thus the milk policy outlined here “kills two birds with one stone.” It not only addresses the regional raw milk pricing issue where farmers need relief, it also reforms the pricing of milk at retail by limiting and redistributing excessive margins. Clearly the economic viability of Northeast dairy farms depends importantly on state level action. Milk pricing reform at the state level deserves attention. It can improve the performance of the dairy and fluid milk industries.

References

- Cassels, J. M. 1937. *A Study of Fluid Milk Prices*. Harvard University Press, Cambridge, Massachusetts.
- Cotterill, R. W. 2004. “Milk Pricing Problems and Solutions: An Essay on the Need for New State Level Milk Price Regulation in the Northeast, with Special Attention to Connecticut Substitute Bill No. 5642.” April. Available at <http://www.fmpc.uconn.edu/research/milk/>
- Cotterill, R. W., A. N. Rabinowitz, and L. Tian. 2003. “Milk Market Channel Structure: Its Impact on Farmers and Consumers, and the Inadequacies of Antitrust Enforcement as a Foundation for Dairy Policies: Evidence from the Northeast Dairy Industry.” Testimony before the United States Senate Committee on the Judiciary. Hearing titled, “Monopsony Issues in Agriculture: Buying Power of Processors in Our Nation’s Agricultural Markets.” October. Available at <http://www.fmpc.uconn.edu/research/milk/>
- Cheese Reporter*. 2004. “UK Report Finds Falling Farm Margin, Flat Processor Margin, & Rising Retailer Margin.” September 10, page 3.
- Criner, G. K. 2003. “Milk Retail Costs and Margins” presented at The Northeast Dairy Policy and Prices Summit Meeting, University of Connecticut, November 17-18, 2003. Available at <http://www.fmpc.uconn.edu/research/milk/>

Cropp, B. and E. Jesse. 2003. "Rethinking Dairyland." University of Wisconsin-Madison, Department of Agricultural and Applied Economics Paper No. 78D, January.

Dairy Tech. 2005. Letter to Mr. Wayne Kasacek, Connecticut Department of Agriculture, Milk Regulation Board. September 20.

DeSantis, D. 2003. "The Economic Regulation of Milk" presented at The Northeast Dairy Policy and Prices Summit Meeting, University of Connecticut, November 17-18, 2003. Available at <http://www.fmpc.uconn.edu/research/milk/>

Gray, R. 2006. Telephone conference call, March 23.

Huff, C. 2003. "A Review of New York's Milk Price Gouging Law" presented at the 67th IAMCA Annual Conference, Harrisburg, Pennsylvania, August 19, 2003. Available at <http://www.fmpc.uconn.edu/research/milk/>

Jesse, E. and B. Jones. 2003. "Cost of Producing Milk: A Comparison by State." University of Wisconsin-Madison, Department of Agricultural and Applied Economics Paper No. 84, November.

Novakovic, A. M. 2004a. "Do Federal Orders Still Help Dairy Farmers?" *Hoard's Dairyman*, page 391, June.

_____. 2004b. "What Milk Marketing Orders Really Do." *Hoard's Dairyman*, page 462, July.

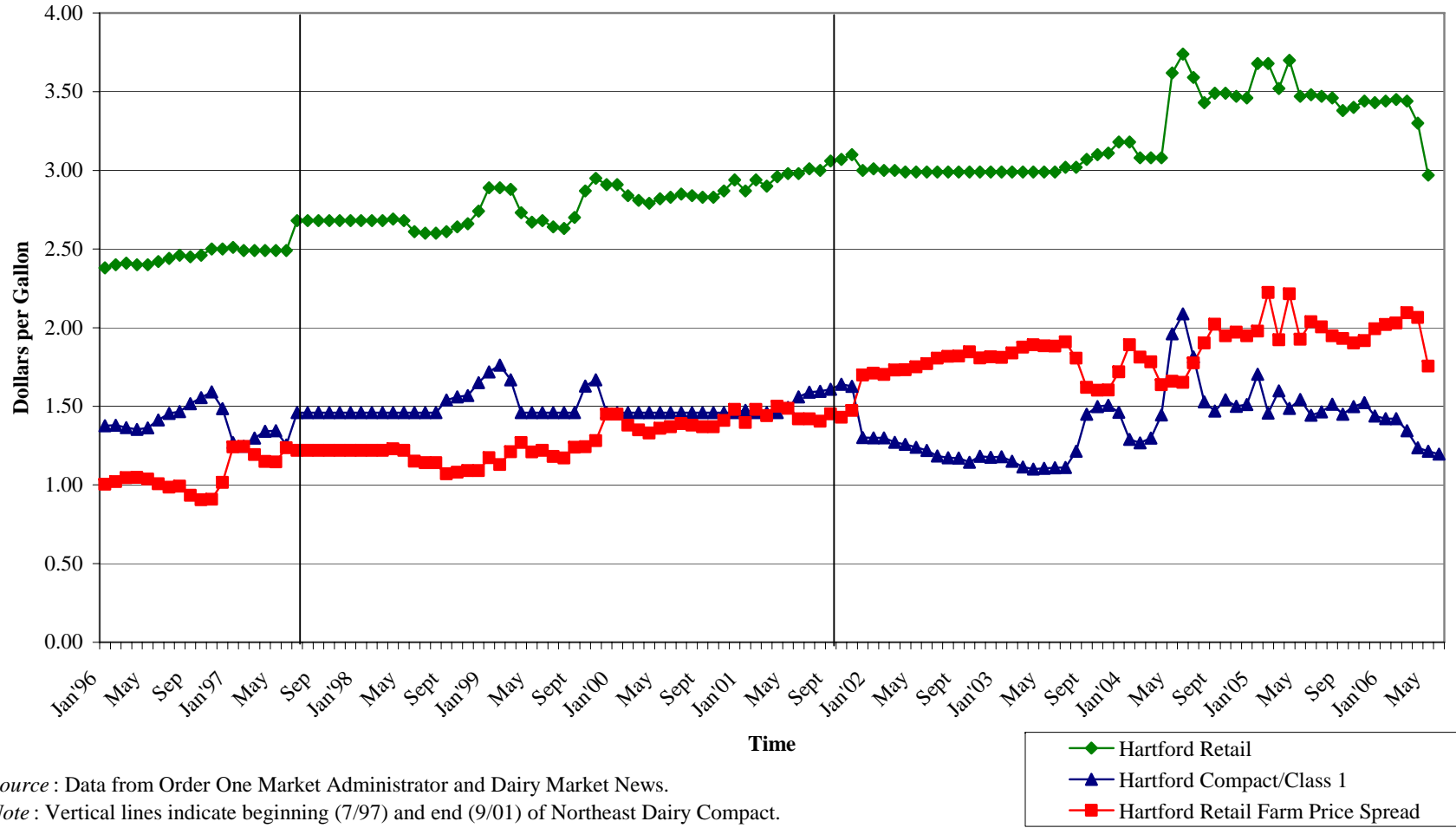
Pratt et al. 1998. "Estimation of Regional Differences in Class I Milk Values Across U.S. Milk Markets." Cornell University, Ithaca, New York, Department of Agricultural, Resource and Managerial Economics E.B. 98-01, January.

Sciabarassi, M. 2003. "Dairy Farming in New England at the Start of the 21st Century." Presented at The Northeast Dairy Policy and Prices Summit Meeting, November 17-18, at the University of Connecticut, Storrs.

Tian, L. and R. W. Cotterill, 2004. "The Theory of Price Collars: The Linking of Prices in a Market Channel to Redress the Exercise of Market Power." Proceedings of conference titled, "Industrial Organization and the Food Processing Industry," Institute for Industrial Economics, and I.N.R.A., University of Toulouse, France, June.

Zimmermann, S. 2003. "Cost of Breakfast Just Got Steeper." *The Chicago Sun-Times*, August 30.

**Figure 1. Hartford
Market Level Retail and Farm Fluid Milk Price
January 1996 - June 2006**



Source : Data from Order One Market Administrator and Dairy Market News.
 Note : Vertical lines indicate beginning (7/97) and end (9/01) of Northeast Dairy Compact.

Figure 2. Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for the Four Leading Supermarket Chains in Southern New England: March 2003

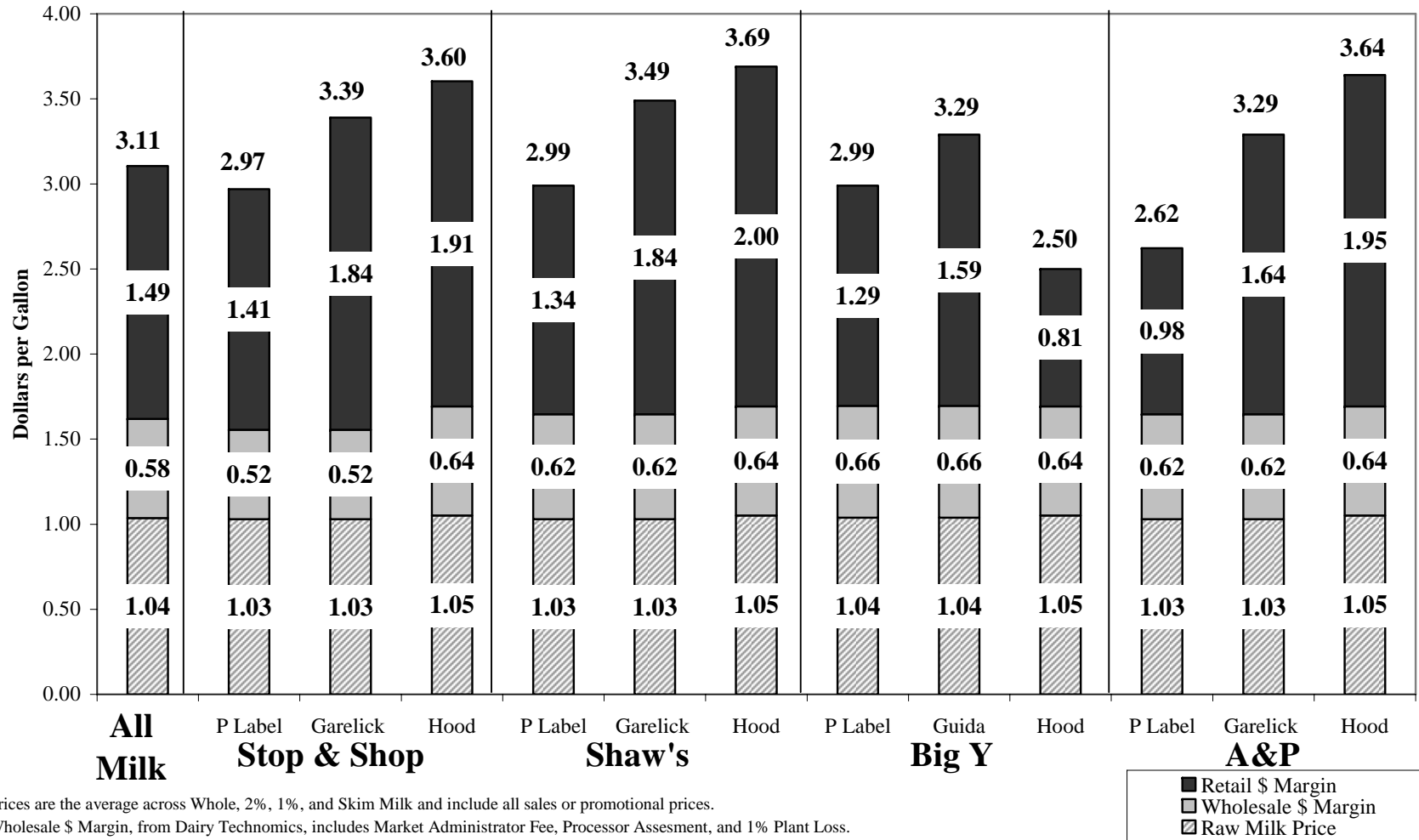
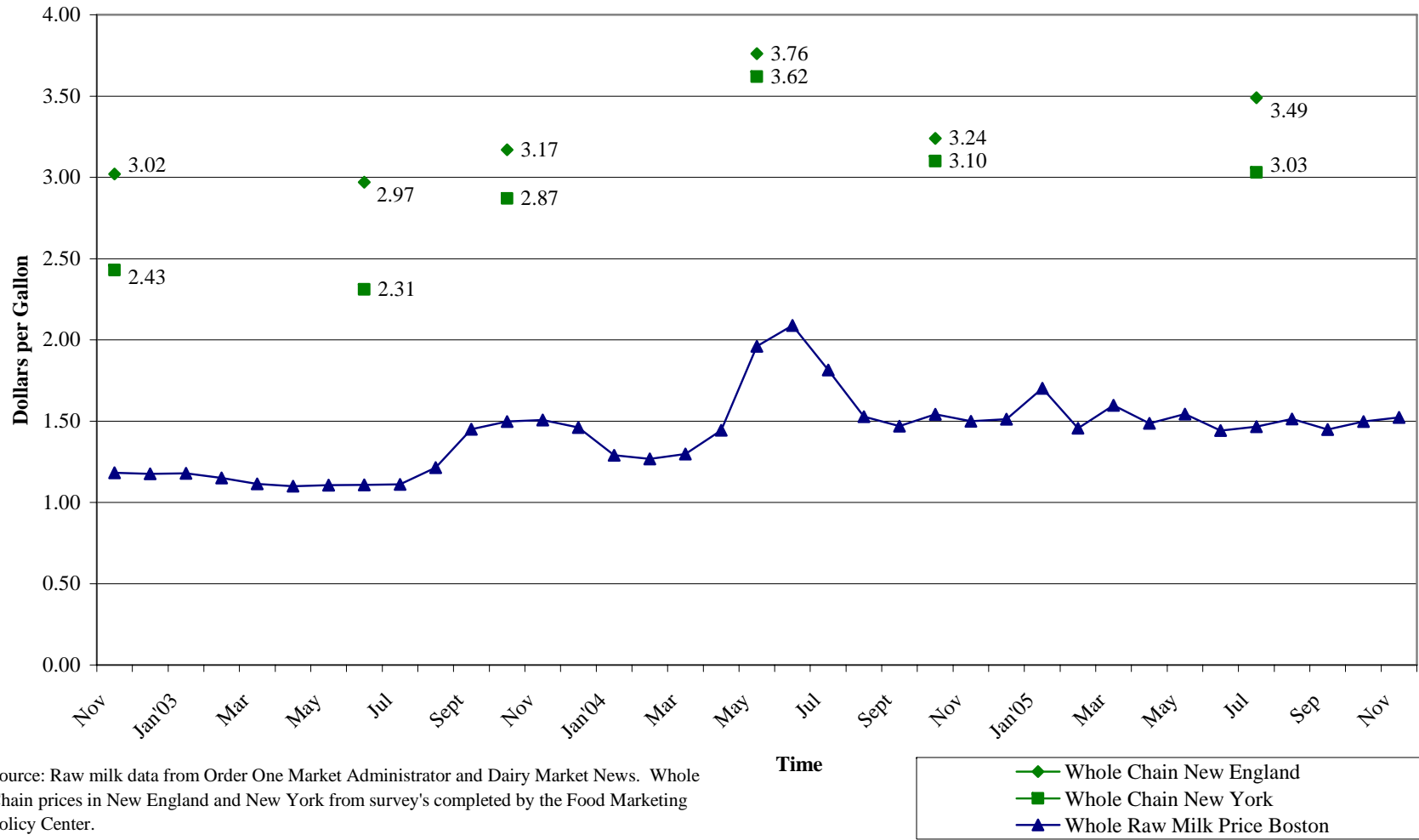


Figure 3. Weighted Average Chain Store 3.25% Whole Milk Prices in New York and New England and Respective 3.5% Whole Raw Milk Prices



Source: Raw milk data from Order One Market Administrator and Dairy Market News. Whole Chain prices in New England and New York from survey's completed by the Food Marketing Policy Center.

Table 1. Weighted Average Price of Gallon Fluid Milk in CT by Chain: November 2005

Store Name	Whole	2%	1%	Skim	No of Stores
A & P/Waldbaums	\$3.75	\$3.75	\$3.75	\$3.75	3
Big Y	\$3.55	\$3.50	\$3.50	\$3.45	8
Shaw's/Star Market	\$3.69	\$3.69	\$3.68	\$3.68	7
Shop Rite	\$3.88	\$3.85	\$3.83	\$3.80	6
Stop & Shop	\$3.88	\$3.87	\$3.86	\$3.84	15
Wal-Mart Supercenter	\$3.32	\$3.04	\$2.87	\$2.71	2
Class 1 Raw Milk	\$1.51	\$1.32	\$1.17	\$1.04	

Table 2. An Example of the Fair Share Approach to Milk Price Regulation:

Basic Rule: \$0.76 markup to wholesale, 20% markup to retail trigger price, 50% markup to retail ceiling price, and a progressive share ratio to establish a raw fluid price floor at \$17.00 per hundredweight.

	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Apr 2003
1. Components of Class 1 Price						
Class 1 Skim Price	11.66	11.10	10.17	10.05	9.72	9.07
Class 1 Butterfat Price	1.51	1.41	1.30	1.26	1.29	1.15
Coop Premium	1.50	1.50	1.50	1.50	1.50	1.40
Assessments	0.25	0.25	0.25	0.25	0.25	0.23
Class 1 3.5% Price	18.28	17.39	16.12	15.87	15.65	14.42
2. Per Gallon Prices						
Whole (3.25%)	1.54	1.47	1.36	1.34	1.32	1.23
2%	1.40	1.33	1.23	1.22	1.19	1.12
1%	1.28	1.22	1.13	1.12	1.09	1.02
Skim	1.17	1.12	1.04	1.03	1.00	0.94
Average Raw Milk Price	1.35	1.28	1.19	1.18	1.15	1.08
3. Processor Dollar Markup	0.76	0.76	0.76	0.76	0.76	0.76
Wholesale Prices Per Gallon						
Whole (3.25%)	2.30	2.23	2.12	2.10	2.08	1.99
2%	2.16	2.09	1.99	1.98	1.95	1.88
1%	2.04	1.98	1.89	1.88	1.85	1.78
Skim	1.93	1.88	1.80	1.79	1.76	1.70
Average Wholesale Price	2.11	2.04	1.95	1.94	1.91	1.84
4. Retail Trigger Price Markup	20%	20%	20%	20%	20%	20%
Dollar Trigger Markup	0.42	0.41	0.39	0.39	0.38	0.37
Trigger Prices Per Gallon						
Whole (3.25%)	2.72	2.64	2.51	2.49	2.46	2.35
2%	2.58	2.50	2.38	2.36	2.34	2.24
1%	2.46	2.39	2.28	2.26	2.23	2.15
Skim	2.35	2.29	2.19	2.18	2.14	2.07
Average Trigger Price	2.53	2.45	2.34	2.32	2.29	2.20

(continues)

Table 2. (continued)

	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Apr 2003
5. Retail Ceiling Price Markup	50%	50%	50%	50%	50%	50%
Dollar Ceiling Markup	1.05	1.02	0.98	0.97	0.96	0.92
Retail Ceiling Prices Per Gallon						
Whole (3.25%)	3.35	3.25	3.10	3.07	3.04	2.91
2%	3.21	3.11	2.97	2.95	2.91	2.79
1%	3.09	3.00	2.87	2.84	2.81	2.70
Skim	2.98	2.90	2.77	2.76	2.72	2.62
Average Ceiling Price	3.16	3.07	2.93	2.90	2.87	2.76
6. Current Price ¹	3.45	3.44	3.30	2.97	2.97	2.99
Consumer Savings	0.29	0.37	0.37	0.07	0.10	0.23
7. Farmer						
Share Ratio	0%	0%	16%	20%	24%	44%
Program Payment Per Gallon	0.00	0.00	0.10	0.12	0.14	0.24
Raw Fluid Price @ 3.5%*	1.55	1.47	1.37	1.34	1.32	1.22
Total Fluid Price Per Gallon	1.55	1.47	1.46	1.46	1.46	1.46
Raw Fluid Price Per Hundredweight @ 3.5%	18.03	17.14	15.87	15.62	15.40	14.19
Program Payment Per Hundredweight	0.00	0.00	1.12	1.38	1.59	2.81
Total Raw Fluid Price Per Hundredweight	18.03	17.14	17.00	17.00	17.00	17.00
8. Supermarket						
Average Price Net of Farm Payment	3.16	3.07	2.83	2.78	2.73	2.51
Percent Gross Margin	33%	33%	31%	30%	30%	27%
Dollar Gross Margin	1.05	1.02	0.88	0.85	0.82	0.68

* Raw Fluid Price @3.5% does not include the 0.245 Processor and Administrative Assessment (0.23 in April 03).

¹ Current Price from Federal Milk Order No. 1 monthly retail survey for Whole milk in Hartford, CT. June 06 is May 06 price.

Endnotes

¹ See Jesse (2003). The focus on pricing does not imply that cost of production differences are unimportant when addressing dairy policy issues. Clearly they are a major force driving structural change in the location and size of dairy farms. Nonetheless the price that farmers receive for their milk is also important.

² The classified pricing of federal orders is often seen as a government sanctioned cartel that uses price discrimination to extract more money from fluid milk buyers and then pool the proceeds to pay a common “blend” price to all farmers in the order. As this quote from Cassels shows, this is not true if orders are relaxed to a “competitive” setting as they are today. Earlier orders were tightly set to enact price discrimination that benefited fluid producers near large urban markets.

³ One can find mailbox prices by going to the April issue of Dairy Market News at <http://www.ams.usda.gov/DAIRY/mnncs/>.

⁴ Depooling of milk occurred during the most recent cheese price run up, but it does not affect this interregional analysis. Depooling in a market order such as the Northeast or upper Midwest does not affect the total average price received for raw milk sales. It does, however, benefit farmers that supply cheese milk at the expense of farmers that supply fluid milk and remain in the pool. For example, Robert Wellington, Agri-mark Economist, explained at the 2005 Litchfield County late summer picnic that Agri-Mark depooled cheese milk and blended it over its members to raise their price 20 cents per hundredweight. Agri-Mark’s action decreased the blend price 5 cents per hundredweight. DMS/Dairylea/St. Albans also depooled milk and depressed the orders blend price. Independent farmers not in those cooperatives could not depool and thus received only the depressed blend price. Depooling has even greater equity consequences in cheese milk areas of the country.

⁵ Current market performance is inefficient and inequitable when compared to the competitive market norm.

⁶ Major dairy states, such as California and Wisconsin, clearly take care of their farms. Increasingly “fringe area” states such as in New England and the Southeast are moving to do so as well. Go to the Maine Milk Commission website to learn of their recent price subsidy program that is tailored to benefit

smaller farmers most. The states of Connecticut and Vermont appropriated 2 and 8 million dollars respectively in 2006 to subsidize dairy farm income.

⁷ Cooperative premiums during the non-Compact era would raise the raw price slightly; however, the analysis of margins remain the same.

⁸ The Northeast Dairy Compact was attacked as a cartel that if eliminated would result in lower prices to consumers. The fluid milk processors through their trade group, the International Dairy Food Association, and the supermarket chains, through the Food Marketing Institute, aggressively pushed this viewpoint in Washington and more recently in the state houses in New England. In fact, soon after the Dairy Compact's demise raw milk prices plummeted 50 cents per gallon. According to the IDFA economist's model, retail prices should have dropped 90 cents per gallon in New England. They dropped only 10 cents. Private power not competition replaced public power.

⁹ Stop and Shop closed its own milk plant in 2000 after negotiating a 20 year supply contract with Dean Foods (Garelick). Stop and Shop used the plant as a bargaining chip to extort a very favorable price from Dean.

¹⁰ See Cotterill (2004) for similar breakdowns for June 2003 and October 2003.

¹¹ It is a theorem in economics that a profit maximizing firm always prices on the elastic portion of its firm or brand level demand curve.

¹² See Huff (2003) for a detailed explanation of the New York laws operation.

¹³ See the opinion letter from Richard Blumenthal, Connecticut Attorney General, at www.fmpc.uconn.edu.

Click on "milk pricing" and scroll down.

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Food Marketing Policy Center
1376 Storrs Road, Unit 4021
University of Connecticut
Storrs, CT 06269-4021

Tel: (860) 486-1927
FAX: (860) 486-2461
email: fmpc@uconn.edu
<http://www.fmpc.uconn.edu>