

A Law to Promote Efficient and Fair Pricing of Milk in Connecticut

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by

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Table of Contents

List of Tables and Figures..... iii

I. Introduction..... 1

**II. Current Price and Margin Conduct by Brand and Type of Milk for Leading
Supermarket Chains and Milk Processors 4**

III. Calibration of the Proposed Connecticut Law 9

IV. Explicit Language Changes to the Connecticut Bill 15

V. Concluding Comments 16

References 17

Appendix A Dairy Technomics Information

Appendix B Boston Farm and Retail Milk Prices Chart, Boston and Hartford Farm and
Retail Price Data by Month
(January 1996 – April 2003)

Appendix C Actual Retail, Estimated Wholesale, and Actual Raw Milk Prices by Type
and Brand of Milk: Stop & Shop, Shaw’s, Big Y, and A&P. March 2003

Appendix D Analysis of Retail Pricing Under the Proposed Connecticut Efficient and
Fair Milk Pricing Law

Appendix E New York State Law Materials

Appendix F Proposed Connecticut State Law: An Act Concerning The Fair Pricing of
Milk

Appendix G Responses to some questions raised at the March 14, 2003 meeting on dairy
pricing and fair pricing of milk

List of Tables and Figures

Figure 1.	Hartford Farm and Retail Milk Prices: (January 1996 – April 2003).....	18
Figure 2.	New York Retail Price vs. Raw Milk Cost: Gallons Milk (1/01-3/03).....	19
Figure 3.	Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for the Four Leading Supermarket Chains in Connecticut: March 2003.....	20
Figure 4.	Scenario 1 - Processors Cut Wholesale Price and Retailers Cut Private Label Retail Price to Comply.....	21
Figure 5.	Scenario 2 - Processors Maintain Current Margin and Retailers Cut Private Label Retail Price to Comply.....	22
Figure 6.	Scenario 3 - Retailers Maintain Current Private Label Price by Paying Higher Wholesale Price (Other retail prices remain unchanged and Hood maintains current margin).....	23
Table 1.	Connecticut Retail Milk Prices in Leading Supermarket Chains, 3/29/03	24
Table 2.	Stop & Shop Private Label Milk: The Impact of Alternative Compliance Scenarios.....	26
Table 3.	Shaw’s Private Label Milk: The Impact of Alternative Compliance Scenarios	28
Table 4.	Big Y Private Label Milk: The Impact of Alternative Compliance Scenarios	30
Table 5.	Stop & Shop Garelick Label Milk: The Impact of Alternative Compliance Scenarios.....	32
Table 6.	Shaw’s Garelick Label Milk: The Impact of Alternative Compliance Scenarios.....	34
Table 7.	Big Y Guida Label Milk: The Impact of Alternative Compliance Scenarios.....	36
Table 8.	Hood Label Milk: The Impact of Alternative Compliance Scenarios	38

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I. Introduction

The proposed Connecticut milk pricing law for milk establishes two price collars. The general concept is as follows. Wholesale fluid milk prices will be limited to no more than 140% of the raw fluid price, and retail prices will be limited to no more than 140% of the wholesale price. These 140% rates are not price ceilings. They are price collars. The proposed law does not dictate what wholesale and retail prices shall be, it only requires that the relationship between raw fluid prices, paid by processors, wholesale prices and retail prices honor the price collars (Cotterill and Rabinowitz, December, 2002).

Our initial reaction, and the reaction of industry spokespersons at the February 26, 2003 hearing before the Connecticut Legislature's Committee on the Environment, was that the proposed law would require processors and retailers to cut wholesale and retail prices to honor the 140% price collars. However, as explained at the hearing (Cotterill, 2/26/03) retailers and processors have another profitable way to honor the price collars. Retailers can raise the wholesale price paid and processors in turn can raise the raw milk price by paying an additional over-order premium to farmers. When raw milk prices are so low that the price collars bind the proposed law can pull them up. The general concept is valid, but we need to work out the details within the context of New England dairy markets.

This paper does precisely that. We have engaged Dairy Technomics, a leading and well-known firm that regularly measures raw milk costs, processing costs at individual milk plants, and delivery costs from those plants to retail stores. Please see Appendix A for information on Dairy Technomics and the information that they have provided us. Food retailers regularly

engage Dairy Technomics to measure processor costs so that they can monitor the performance of the processors that supply them milk. They use the Dairy Technomics information to bargain for better prices.

We have updated our retail price information over time. Figure 1 shows farm as well as retail pricing from 1996 to March 2003 for Hartford. Retail pricing has not changed since our extensive price survey on November 19, 2002 (Cotterill, Rabinowitz, and Tian). Farm price has continued to drop.

Figure 2 provides comparable data for New York State from January 2001 through March 2003. Note the difference! Retail prices in metro New York City and upstate New York have declined since the November 2001 collapse in raw milk prices. Connecticut and Boston (see Appendix B, Figure 1) have severely impacted retail prices.

We also have completed a second in-store price survey of leading supermarket chains. Our March 29, 2003 in-store price survey indicates, in a more detailed fashion, that retail prices in Connecticut are essentially unchanged since our November survey.

In conjunction with the retail price information, the Dairy Technomics information on raw milk prices processing and delivery costs documents continued market failure in the pricing of fluid milk in New England. Consequently, there is continuing and immediate need for redress of pricing in the New England milk channel. Retailers, most notably Stop & Shop and Shaw's, are capturing more of the retail price of milk for their in-store services than farmers are capturing for the production of that same milk.

The next section of this paper analyzes the recent retail price survey results and uses the Dairy Technomics information to analyze the current conduct of the major players in the New England dairy industry. Those players are Dean Foods/Garelick, H.P. Hood, Guida-Seibert

Dairy, Stop & Shop, Shaw's, Big Y, and A&P. Our analysis documents market failure at the retail level of the milk pricing system. Supermarket chains are exercising substantial market power that generates margins that are far above the costs of providing retail services. At the farm level one has a complex combination of market and public policy failure that provides farmers prices that are far below their cost of production. These failures in the retail and farm pricing of milk generate economic inefficiencies and a very skewed distribution of income. Hence there is a need for this law to promote the economically efficient and fair pricing of milk in Connecticut. There also is a need for similar laws in other New England states and New York.¹

Section three uses the retail price and wholesale cost information to calibrate the proposed law. Calibration includes refining the proposed law's language and demonstrating that a set of detailed regulations, based on the economics of the industry, exists that can implement the law. We also analyze alternative retailer and processor response scenarios to identify the boundaries of the price solution set. One can rule out many pricing strategies because they are not profit enhancing or in the best interest of the players. Although we cannot predict exactly what the post compliance retail, wholesale and raw milk prices will be, we are reasonably certain that raw milk prices via the payment of higher over-order premiums will increase. Wholesale milk prices will also increase and retail milk prices should decrease. Appendix D provides advanced economic analysis that supports these conclusions.

Section four gives explicit language revisions that need to be made to the current Bill. If the proposed legislation becomes law the Commissioner could promulgate detailed regulations

¹ For evidence on retail and wholesale prices in Vermont, see De Geus (2003). New York does not appear to have as severe a retail pricing problem as New England. Nonetheless, farm milk prices exhibit similar volatility and are currently in a trough. The proposed law, if adopted in New York, would provide a similar price floor via over order premiums when farm milk prices are as low as they are today.

based on this price and cost analysis. We would, however, recommend that this analysis be used only as a starting point or analytical road map. The Commission should hold a public hearing, gather confidential cost and pricing information from processors and retailers, and then promulgate regulations that implement the law. Let us now turn to the nitty gritty.

Section five gives concluding comments.

II. Current Price and Margin Conduct by Brand and Type of Milk for Leading Supermarket Chains and Milk Processors.

Figure 3 summarizes in visual form what we know about milk pricing at the raw milk, wholesale and retail level. The results are most interesting. Examine the first vertical bar in Figure 3. It gives the weighted average all milk price. This is the average price for the four types of milk—3.25%, 2%, 1%, and skim across all brands and all checked supermarket chains (see Table 1 for details). Figure 3 also gives the dollar amount of the retail price that goes to supermarkets, processors and farmers. Supermarkets charge \$3.105 per gallon on average for milk. They keep \$1.487 of this price for in store services. Processors capture 58.2 cents per gallon for delivering milk to each store and placing it in the dairy case cooler. Farmers receive only \$1.036 per gallon for this milk. According to Dairy Technomics the processor's margins are in line with roughly their costs. (See Appendix A for Dairy Technomics plant level cost assessments.) This clearly suggests that the pricing problems in this milk market channel are at the farm and retail stages. Farmers receive too little and retailers too much of the retail value of milk.

The documented division of retail price into the retailer, processor and farmer shares most certainly does not reflect the cost of production at the retail and farm stages of the channel for this milk. The retailer captures \$1.487 per gallon to cover the cost of keeping the milk cool

for at most a few days, stocking the shelves,² checkout costs, and store overhead. The farmer receives only \$1.04 per gallon for all of the farming activities that go into producing a gallon of milk. Moreover, this division of value has persisted since December 2001. It is not due to lags in price transmission or what would have to be massive increases in in-store costs of selling milk. We therefore conclude that it is not a fair or a competitive market allocation of value between the farmer and the retailer.³

Figure 3 also breaks down the retail prices for brands of milk in individual supermarket chains. Since Stop & Shop accounts for over 43% of supermarket all commodity sales activity in Connecticut (Table 1) we will examine its brand level milk pricing. Stop & Shop charges \$2.969 per gallon for private label milk. It keeps \$1.419 of this revenue for in-store services. The processor captures only 52.5 cents and the farmer receives only \$1.03.

The pricing imbalance is even worse for Garelick and Hood milk sold at Stop & Shop. Stop & Shop retails Garelick milk for \$3.39 per gallon, and captures \$1.836 per gallon for in-store services. This is more than the combined value share of farmers who produce the milk and Dean/Garelick the processor. Together they capture \$1.555 per gallon. Stop & Shop retails Hood milk for \$3.604 per gallon and captures \$1.911 for in-store retail services. The farmer and processor component again is only \$1.555 per gallon.

The situation is similar for Shaw's and A&P; however, note that they pay Dean/Garelick a significantly higher processing and delivery fee than Stop & Shop for the same milk. Their

² The labor required for stocking shelves is now minimal because most stores use milk bossies. A milk bossy is a mobile milk rack about six feet high and three feet square that shelves 45 gallons of milk. They are loaded at the plant, rolled onto delivery trucks, and rolled into a store's cooler.

³ Retailer power has been exercised against processors and farmers as well as against consumers. One direct piece of evidence on this is the low processing margin negotiated by Stop & Shop when it signed a long term contract (over 10 years) with Dean Suiza in return for closing its milk plant in 2000. Note in Appendix A that Stop & Shop pays 49 cents per gallon for processing and delivery of private label and Garelick milk, while other chains such as Shaws and A&P pay 58 cents per gallon for the same milk processing and delivery. Note also that Dean/Garelick

processing charges for private label and Garelick brand milk are 61.5 cents, 9 cents above the price Stop & Shop pays.⁴

When we checked prices on March 29, 2003, Big Y and A&P had deep discount special prices in effect on Hood and private label milk respectively. Nonetheless, as indicated in Figure 3, they still retain positive dollar margins that are so substantial that we fully expect that they continue to earn net profits after accounting for in-store costs. Big Y captures 80.7 cents per gallon on the deeply discounted Hood, and A&P captures 97.7 cents per gallon on their discounted private label for in-store services.

We have access to no in store milk retailing costs; however, the recent Midland Farms case documents that they are far below these retail margins. In fact, the State of Massachusetts after investigating Midland's raw milk, processing, and retailing costs agreed to allow Midland to retail skim milk for \$1.58 per gallon, 1% for \$1.64, 2% for \$1.74, and whole milk for \$1.88 per gallon (Mohl 1/9/2003). Note that Midland Farm's retail prices are less than what Stop & Shop charges for in-store services on all types of Hood Milk, \$1.91 per gallon and all types of Garelick milk, \$1.84 per gallon. Midland's in-store costs were less than 20 cents per gallon.⁵

Figure 3 also contains critical information on processor costs that we will use in the next section to calibrate the law. Note that the Dean/Garelick Franklin, MA superplant has lower unit costs than Hood or Guida. Dean/Garelick costs, as noted above, are 52.5 cents per gallon for

pays lower premium to farmers than Hood or Guida (95 cents per hundredweight versus \$1.15 and \$1.20, respectively).

⁴ See Appendix C for details of this estimate by Dairy Technomics. The processing cost numbers reported in the text include other raw milk costs paid by the processor but not paid to the farmer as well as "processing and delivery costs." Also see Appendix A for the Dairy Technomics data that underpins Appendix C. This fact raises antitrust concerns about price discrimination under the Robinson Patman; however that is another issue.

⁵ The senior author served as Midland's expert economist in the recent regulatory case.

Stop & Shop and 61.5 cents per gallon for Shaw's, A&P, and other supermarket chains. Hood's processor charges are 64.2 cents per gallon, and Guida's are 65.8 cents per gallon.⁶

Table 1 reports the results of our March 29, 2003 survey of prices. We did an abbreviated price survey of only 18 chain supermarkets in central and eastern Connecticut, however, we strongly doubt that the results would change appreciably if we surveyed more stores of these chains in other parts of the state. The all milk, all store weighted average prices are highlighted in bold type. The average retail milk price is \$3.105 per gallon. The corresponding average wholesale price is only \$1.618 per gallon, and the raw milk price is \$1.036 per gallon. We find that six months after our November 2002 survey, chain supermarket prices for milk remain remarkably similar. For example, the average "lowest priced" offer for whole milk in Connecticut is \$2.92 per gallon. In November it was \$2.94 per gallon. The lowest priced offer is usually private label milk, but on occasion it is a brand on deep discount such as Hood milk in Big Y at \$2.50 per gallon. The average lowest price for 2% is \$2.88, in November it also was \$2.88; for 1% it is \$2.87 and in November it was \$2.93; and for skim it is \$2.86 whereas as in November it was \$2.92 (Cotterill et al, 11/19/02, Table 1a).

Average prices for Hood, Garelick and Guida branded milk in March 2003 are \$3.46 per gallon, \$3.39 per gallon, and \$3.29 per gallon respectively. Note in Table 1 that all chains are pricing all types of milk (whole, 2%, 1%, skim) for each of these brands at identical prices. The same is true for all private label milk except for one of the seven Stop & Shops surveyed. Only the Willimantic, Connecticut Stop & Shop has a 10-cent differential between types of milk ranging from \$2.99 for whole to \$2.69 for skim. This may be because they compete against one

⁶ Again, please see Appendix C and A for the details on these Dairy Technomics estimates.

of two Wal-Mart Supercenters⁷ in the state that prices milk by fat content. All other Stop & Shops price all types of milk at \$2.99.

Note in Table 1 that raw milk prices for different fat content milk are very different. Raw skim milk for Stop & Shop is 90 cents a gallon. One percent costs 99 cents a gallon. Two percent costs \$1.085, and whole milk costs \$1.20 per gallon. Note also in Table 1 that wholesale prices reflect the variation in raw milk prices but retail prices do not. We conclude that retail pricing of milk in Connecticut is not cost based. In a competitive market channel retail prices would reflect costs. Milk with less butterfat, i.e., the healthier alternatives, would be cheaper. The differential is roughly 10 cents per gallon.⁸

Tables C1 through C12 in Appendix C provide additional details of milk channel pricing by type of milk by brand by supermarket chain. They also provide average statistics across all types of milk by brand and chain. Of particular interest are the current percent markups because the proposed law would limit wholesale markup to 140% and the retail markup on the regular lowest priced brand (private label) to 130%. In Table C1, for example, we find that the average percent wholesale markup for the 4 types of Stop & Shop private label milk is 147.1%. The average percent retail markup over wholesale for the same Stop & Shop milk is 193.3%. In Tables 3 and 4 one finds similar wholesale markups but even higher retail markups for Garelick and Hood milk, 218% and 213% respectively. Average retail markups for other chains in Tables C5 to C12 are lower than Stop & Shop; nonetheless they all are always above 176% except for the Big Y Hood on special at 148% mark up and A&P private label on special at 159% mark up.

The proposed Connecticut Fair Pricing Law's 130% retail price collar will bind in the current market and force lower retail prices or higher wholesale prices. Appendix D contains a

⁷ There are only two Wal-Mart Supercenters in the IRI Hartford/Springfield market area, an area that includes Western Massachusetts as well as most of Connecticut (Market Scope, 2003, p.512).

rigorous economic analysis or retailer pricing conduct. It finds that under fairly general conditions that most likely hold in today's market place retailers will cut retail price and elevate wholesale prices to comply with the law. If retailers elevate wholesale prices processors in turn will pay higher farmer premiums to honor the 140% wholesale price collar.

III. Calibration of the Proposed Connecticut Law

The proposed Connecticut law seeks to redress the unbalanced farm and retail pricing in the milk-marketing channel to provide relief first and foremost to farmers who are suffering through the lowest prices in decades. Consumers also deserve some price relief. The changes will also promote economic efficiency in the processing and distribution channel. The purpose of the law is not to decree prices or to set price floors for raw milk prices or price ceilings at retail. Rather, the purpose is to establish incentives for processors and retailers to redress the pricing imbalance without unduly constraining their marketing and pricing choices.

To achieve maximum marketing flexibility while building in strong incentives to redress unbalanced, i.e., economically inefficient and unfair pricing, we propose the following refinements and revisions to the Bill.

The wholesale price collar can remain at 140%; however, it should be applied to the average class 1 plus over order premiums raw milk price across the four types of milk (whole, 2%, 1%, skim). This resulting allowable margin for processing and distributing milk will then be added to the class 1 plus premium raw milk price for each type of milk to generate the permissible wholesale milk price. If the resulting dollar margin is so low that the processor incurs losses they have options. They can suffer as farmers suffer when farm prices are low, or

⁸ In the Midland Farms case, the State of Massachusetts agreed to 10 cents per gallon differentials (Mohl, 1/9/2003).

they can pay higher premiums. The latter increases the permissible processing margin. We analyze these and other scenarios below.

At retail we recommend that the price collar be 130%, and that it only be applied to the brand of milk that is, over the long run, the lowest priced milk, i.e., private label. Long run may be measured by the average prices for private label and other brands of milk over the most recent calendar year. Applying the price collar only to private label milk allows market forces to adjust the retail prices of competing brands. If a retailer lowers (or raises) the retail price of private label the retail price of the other brands must also change to preserve brand premium differentials that consumers accept.

The long run feature allows for temporary price reduction, i.e., price specials such as Big Y's March 2003 special offer of Hood at \$2.50 per gallon, down for a week from the regular price of \$3.59 per gallon. These can occur without switching the 130% price collar from private label to brands on price special. This means that the impact of the price collar remains focused on the underlying milk price structure for private label and "regular" brand prices.

We recommend that the wholesale price generated by a retailer's honoring of the 130% price collar on private label also be paid for any other brands of milk that the retailer buys from that processor. According to Dairy Technomics, this rule is in line with current wholesale pricing practices by Dean/Garelick and Guida. It means that if retailers increase the wholesale price for private label milk to honor the retail price collar, they must increase the wholesale prices for branded milk delivered by their private label processor.

With these revisions/specifications to the proposed Connecticut Fair Pricing Law in place let us now analyze the impact of the policy on farmers, processors, retailers, and consumers. Under fairly general and existing competitive conditions in these markets there is a set of

equilibrium outcomes that will raise farm prices, protect processor margins, reduce retailer margins and reduce consumer prices. There are at least three reasons why we predict the system will settle on one of these outcomes. First, processors and retailers will not price in a fashion that generates persistent negative profits (losses). At current raw milk price levels processors have no choice but to raise farm prices if they wish to avoid losses. Second, Appendix D proves that for reasonable and currently observed non-milk costs at retail and the selected price collar (130%) it is profit maximizing (enhancing) for retailers to cut retail prices and raise wholesale prices after implementation of the law. Appendix D also demonstrates that processors will elevate wholesale and raw milk prices. Third, competition between private label and brands at retail will lead to lower branded as well as private label prices.

To demonstrate the impact of the proposed law we now simulate the impact of alternative compliance strategies by processors and retailers. At the outset we stress that we do not expect the players to follow exactly any one of these strategies. Rather we offer them to illustrate the boundaries of the solution set. We know that implementation of this law will change wholesale and retail pricing and premiums paid farmers. Our current purpose is to see if we can rule out some strategies and thereby get an idea of the range that prices and premiums might fall into.

Figure 4 summarizes our results for scenario one. Here processors cut the wholesale price to comply with the 140% price collar, and retailers cut private label retail prices to comply with the 130% collar. Under this scenario consumers experience large gains, and farmers receive no increase in milk price. The average across the four milk types private label retail milk prices at Stop & Shop, Shaw's, and A&P drops to \$1.874 per gallon. At Big Y, private label average (across milk type) retail price drops to \$1.89 per gallon. Note that we do not know the retail prices for Garelick, Hood, and Guida branded milk because the retail price collar applies only to

private label milk. Nonetheless, one can be very certain that they will not remain at current levels (3.79, 3.465, and 3.29 respectively). With private label retailing at less than \$1.90 per gallon under this scenario retail prices of brands would have to fall in equally dramatic fashion. Again, we stress these are retail average prices for all types of milk (whole, 2%, 1%, skim). Tables 2 through 4 provide prices by type of milk. In this scenario A&P is identical to Shaw's and Stop & Shop because they are also supplied by Dean/Garelick.

Under scenario one the Dean/Garelick processing margin drops to 41.2 cents, the Guida processing margin drops to 41.5 cents, and the Hood processing margin drops to 42 cents. These processing margins are so low that processors lose money under this scenario. This means that we can rule out this scenario. Processors will pay premiums to raise raw milk prices to increase their permitted wholesale dollar margin and avoid losses.

One concern that processors have raised is the fear that an out of area processor, such as Midland Farms, might defeat this move to higher wholesale prices by making a low ball offer to capture an in area retailer. Recently, Midland made such an offer to Big Y in an attempt to take that contract away from Guida.

Rather than encourage this conduct, the proposed law actually does the opposite. It discourages and makes such low ball conduct less likely. See Appendix G for details. Briefly, a retail chain has less incentive to go with a low priced processor because the 130% price collar would then be applied to a lower wholesale price thereby generating less dollar gross margin for the retailer.

Figure 5 presents our next scenario. In scenario two processors price to maintain their current margins, margins that we believe may be close to effectively competitive. At least compared to retailers, processors seem to be covering costs and retaining a reasonable rate of

profit. In scenario two retailers continue as in scenario one to cut private label prices to comply with the 130% price collar. Retail private label prices, on average across the four types of milk now range from \$2.534 per gallon at Stop & Shop to \$2.652 per gallon at Shaw's and A&P, to \$2.886 per gallon at Big Y.

As in scenario one we do not know the retail prices of Garelick, Hood and Guida; however, the prices will fall to preserve similar brand premiums on private label. The price differences between chains are due to mark ups of the different actual processor costs as reported by Dairy Technomics. **Note that these processing cost differences exist today, and retailers tend to charge identical or very similar retail prices. Retailers will most probably respond to market forces and continue to charge similar retail prices when complying with the law.** This could happen if Stop & Shop, Shaw's and A&P comply by elevating wholesale prices enough to raise retail prices toward those offered by Big Y. Again we stress that this type of pricing conduct currently occurs in the market place.

Note, finally, that under scenario two raw milk prices increase to levels ranging from \$1.425 for Dean Garelick to \$1.604 for Hood and \$1.644 for Guida. These increases benefit farmers. The underlying documentation for Figure 5 and scenario two is in Tables 2 to 8.

The third scenario that we illustrate is in Figure 6. Now retailers maintain their current private label prices by paying higher wholesale prices. The retail prices for the other brands (Garelick, Hood, and Guida) are also assumed to be unchanged, and Hood pays premiums to maintain its current margin. The higher wholesale prices that processors receive for their private label and brand milk from retailers force them, under the 140% wholesale price collar, to pay higher raw milk prices.

Consider the first column in Figure 6. It is Stop & Shop private label milk. The price remains unchanged at \$2.969 per gallon, but now retail keep only 68.5 cents per gallon for retail services. The processor's margin increases from the current actual margin of 52.5 cents to 65.2 cents, and the raw milk price increases from \$1.03 to \$1.631 per gallon. Note also that when retailers comply by raising wholesale prices they keep a higher retail dollar margin—65.2 cents for Stop & Shop private label, compared to compliance by cutting retail prices, 58.5 cents for Stop & Shop private label in scenario two.

The last scenario that we considered is presented as scenario four in Tables 2, 3, and 4. That scenario is that retailers raise retail price to maintain current dollar retail margins on private label milk. This strategy is untenable because it elevates private label retail milk price to over \$5.00 per gallon and often over \$6.00 per gallon. Lost sales volume from such high prices clearly makes this strategy unprofitable for retailers.⁹

Appendix D provides more insight into the question of whether retailers would elevate retail and wholesale prices after the law applies to the market place. Analysis of milk pricing by retailers that seek to maximize profits indicates that under fairly general cost conditions that most likely apply in this industry retailers enhance (maximize) their profits under the law by cutting retail and raising wholesale prices from pre-law levels.

In summary, we predict that retailers will cut retail price and elevate wholesale price to comply with the law. Processors will pay higher over-order premiums to comply with the law.

⁹ Cotterill and Franklin (2001, p.50) estimate based on retail scanner data that the demand elasticity for milk in the Hartford IRI market area is -0.79 . Dhar and Cox have found similar elasticities for other IRI market areas across the U.S. A doubling of retail price to around \$6.00 per gallon is outside of the sample range of prices used to estimate these elasticities. With such a large price change, the elasticities may be much higher. If we ignore this, one obtains a 79% reduction in the quantity of milk sold. The incentive for others to enter the retail market for milk sales would make this sales loss even higher and thereby unprofitable. Even if it were profitable in the market place, public oversight agencies would most likely not permit such high retail milk prices if they in fact find current prices high and pass this legislation.

IV. Explicit Language Changes to the Connecticut Bill

The Connecticut Bill is provided in Appendix E. We recommend the following revisions to the Bill's language. Changes are underlined.

- ❖ The name could be changed to “an Act Concerning the Efficient and Fair Pricing of Milk.”
- ❖ Section 1. Producer's cooperative is a farmer owned and controlled organization that assembles and markets member's milk.
- ❖ Section 1. “Lowest price brand” shall mean the lowest priced brand of milk sold by the retailer during the most recent calendar year. Usually this will be the store private or own label milk.
- ❖ Section 2(b) (1) should be changed to:
“the price charged to a retailer exceeds one hundred and forty percent of the price actually paid to the producer, or the producer's cooperative, by the processor for the same fluid milk net of processor sales of excess cream.”
- ❖ Section 2b (2) should be changed to read:
“the price charged by a retailer to a consumer for the lowest price brand exceeds one hundred and thirty percent of the price actually paid to the processor by the retailer for the same fluid milk...a processor or retailer may charge a price in excess of the limits established in this subsection if the processor or retailer demonstrates that the limited price is below the processor's or retailer's reasonable direct (variable) costs incurred.”
- ❖ Section 2c (1). Section 2b applies to gallons of milk. The Commissioner may make adjustments to the pricing rules for half gallons and quarts of milk.

2c (2). The Commissioner may make adjustments to the pricing rules of Section 2b to accommodate sub-dealers and/or distribution that is not direct store delivery by processors.

❖ Section 5: Exemptions

Retailers who operate three or fewer retail outlets whose sales total to less than \$15 million shall be exempt from this law. Processors that process less than 50 million pounds of milk during the most recent calendar year shall be exempt from this law.

V. Concluding Comments

One might wonder how the New York law has performed and how it would perform if it were in force in Connecticut today. Please see Appendix E for information from Charles Huff, Chief of Licensing and Auditing, Division of Milk Control and Dairy Service in New York State Department of Agriculture and Markets. If the law were in force in Connecticut the retail threshold price would be \$2.42 per gallon. Prices above this level invite state investigation of costs and profit levels. Virtually all Connecticut supermarket retailers would be open to investigation.

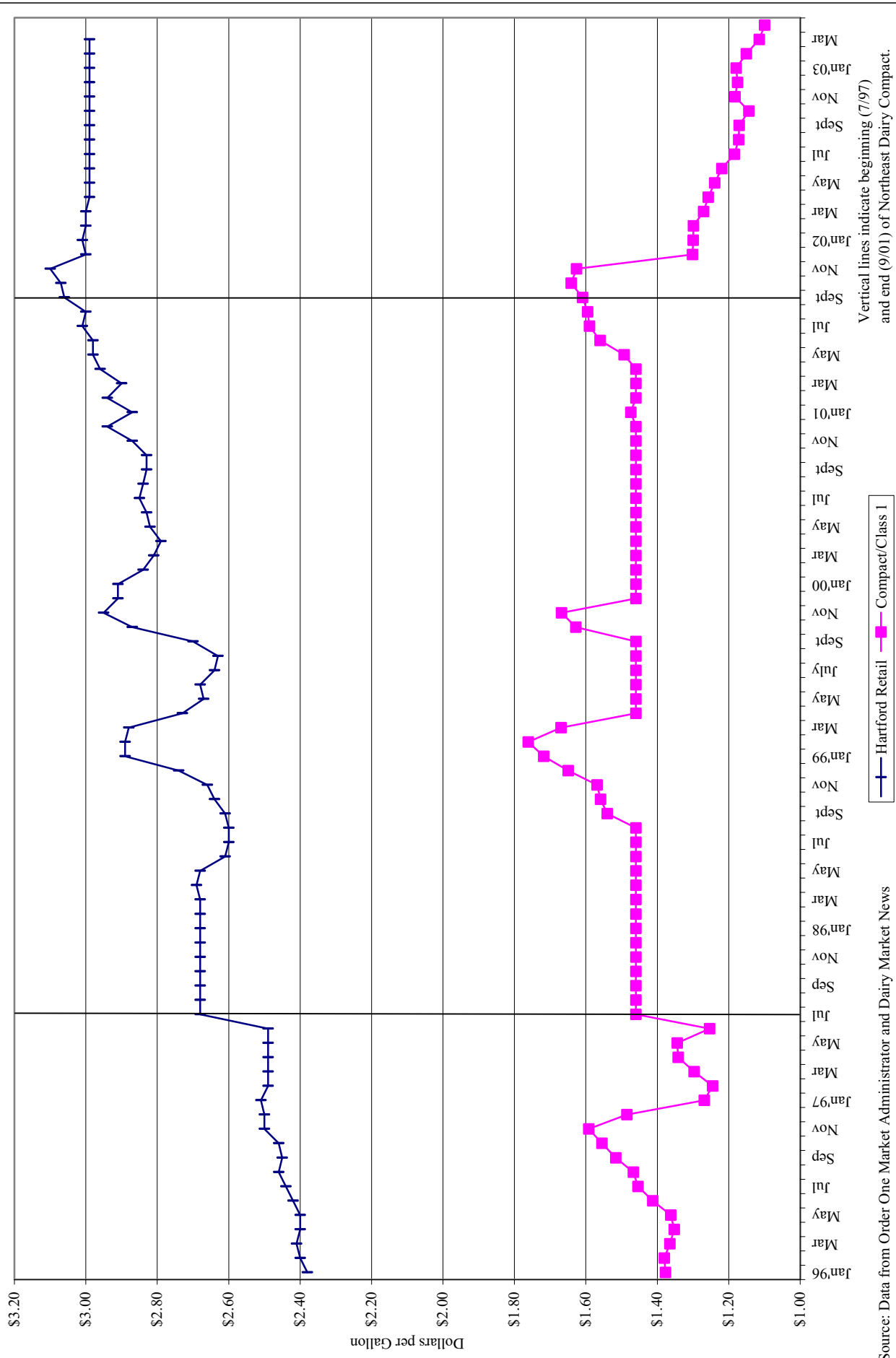
Appendix G contains responses to some questions that probe the resilience of the proposed law.

For the proposed Connecticut law to be most effective, similar laws are needed in other New England states.

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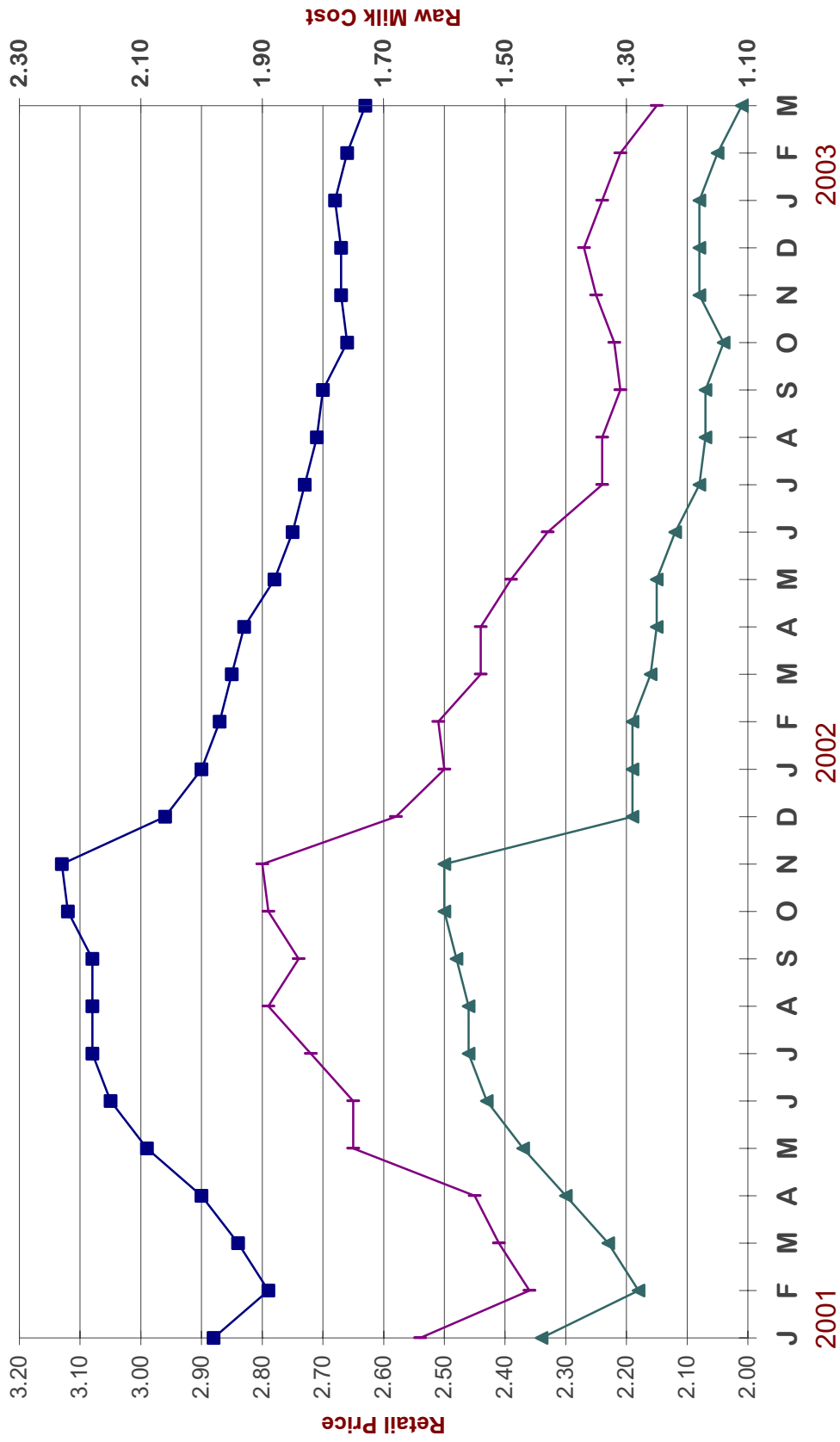
Hartford
 Market Level Retail and Farm Fluid Milk Price
 January 1996 - April 2003



Source: Data from Order One Market Administrator and Dairy Market News

Vertical lines indicate beginning (7/97) and end (9/01) of Northeast Dairy Compact.

Figure 2.
New York Retail Price vs. Raw Milk Cost:
Gallons Milk (1/01-3/03)



Raw milk cost = Class 1 price, Northeast Order @ Syracuse, adj. For bf, plus estimated premium.

Figure 3: Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for the Four Leading Supermarket Chains in Connecticut: March 2003

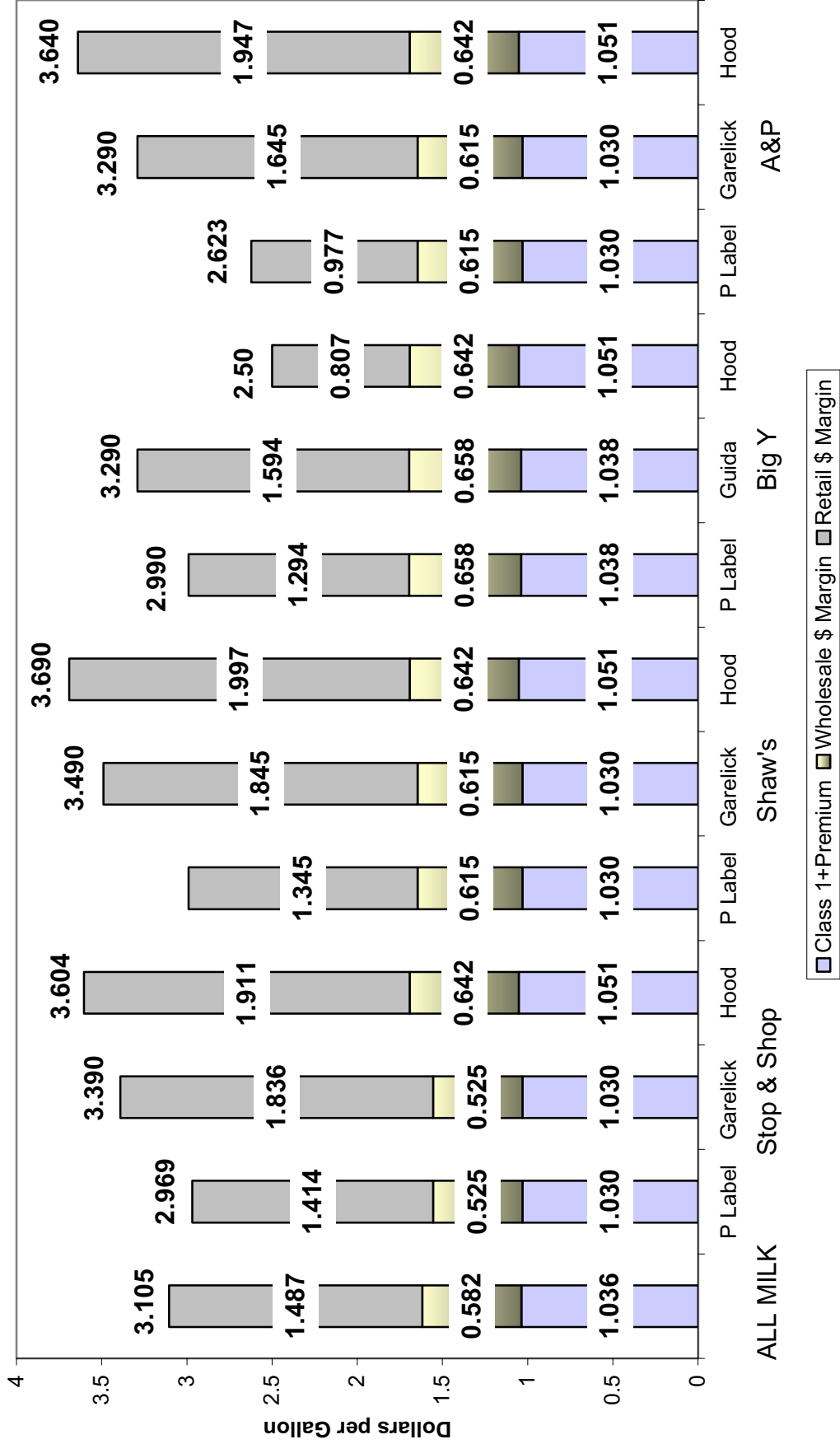


Figure 4: Scenario 1 - Processors Cut Wholesale Price and Retailers Cut Private Label Retail Price to Comply

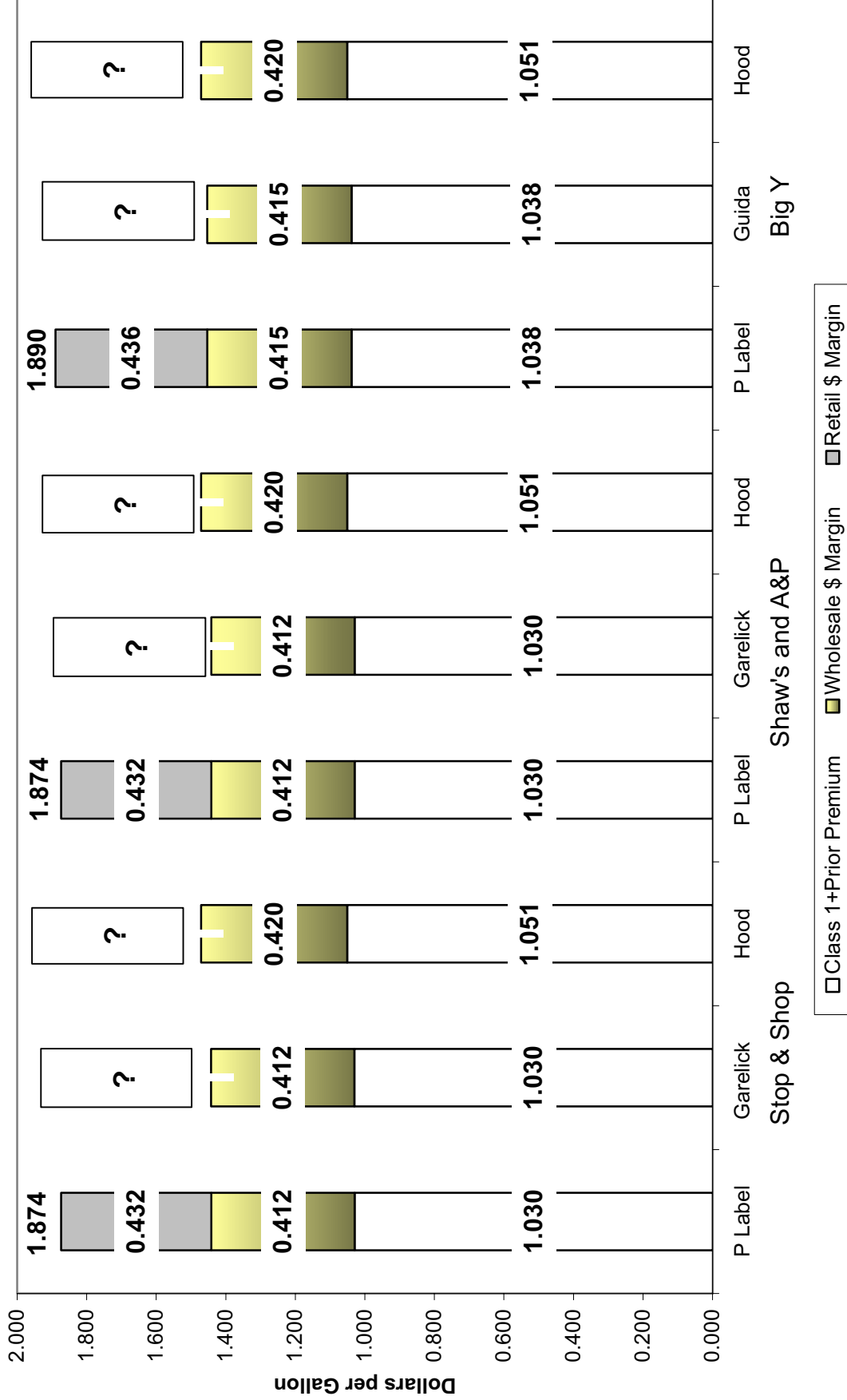


Figure 5: Scenario 2 - Processors Maintain Current Margin and Retailers Cut Private Label Retail Price to Comply

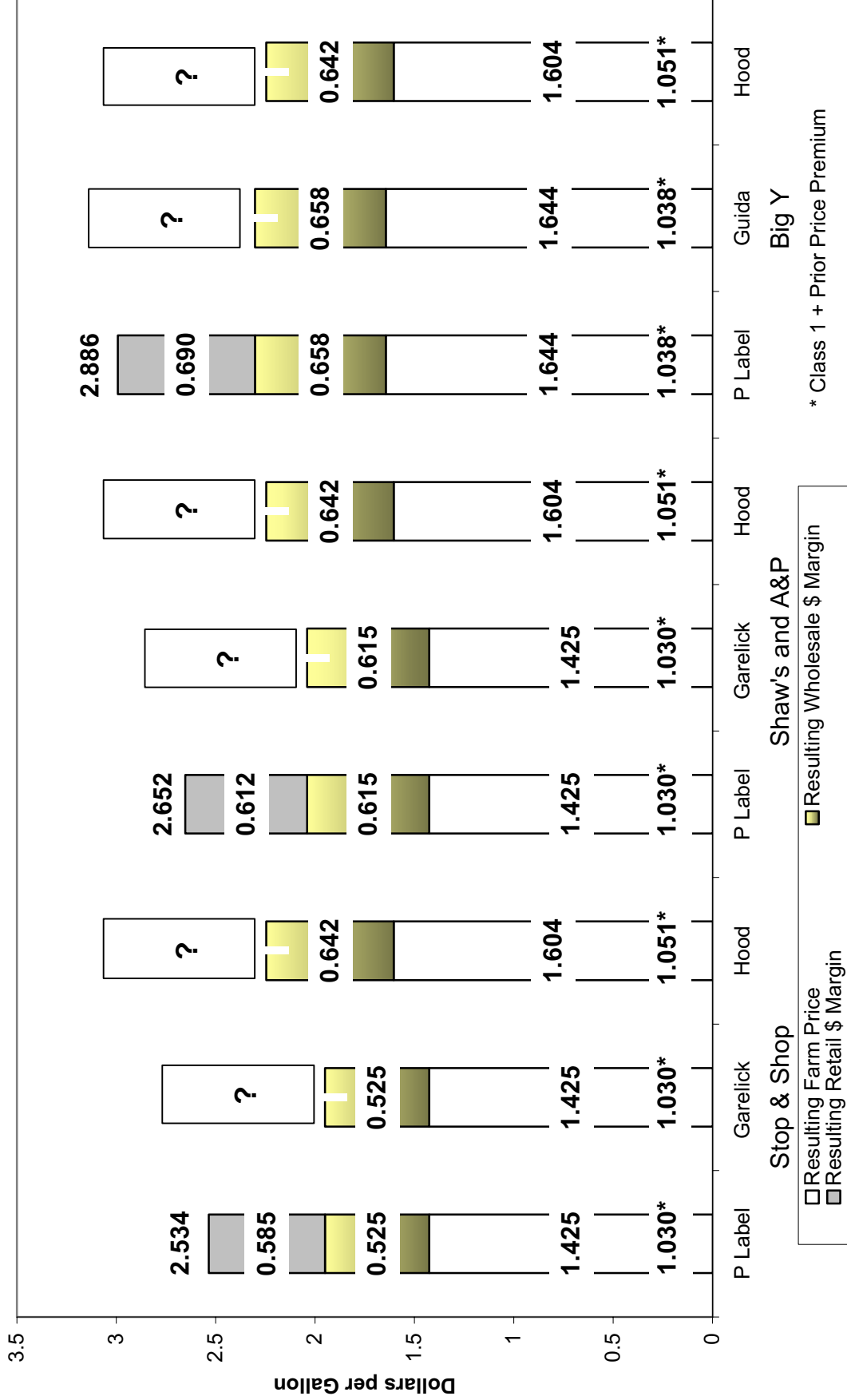


Figure 6: Scenario 3 - Retailers Maintain Current Private Label Price by Paying Higher Wholesale Price

(Other retail prices remain unchanged and Hood maintains current margin)

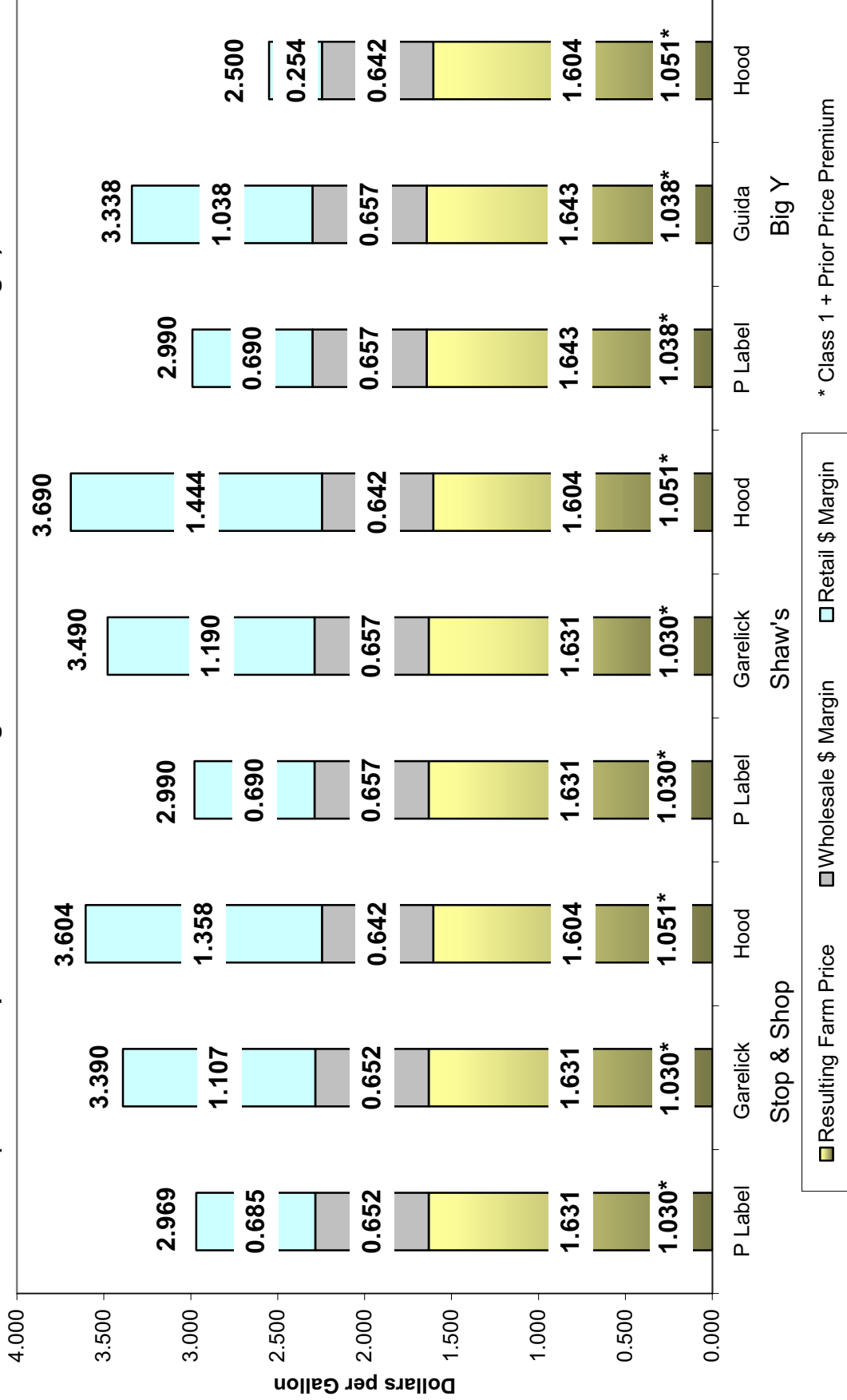


Table 1. Connecticut Retail Milk Prices in Leading Supermarket Chains, 3/29/03

Store Name	Number of Stores	Weighted Average of All Milk Prices			Direct Store Deliver Wholesale Price*			Class 1 Plus Premium Price									
		Average	Whole	2%	Average	Whole	2%	Average	Whole	2%							
Stop & Shop	7	3.147	3.159	3.153	3.144	3.130	3.130	1.577	1.729	1.616	1.523	1.441	1.033	1.185	1.072	0.979	0.897
Shaw's	5	3.190	3.190	3.190	3.190	3.190	3.190	1.653	1.805	1.692	1.599	1.516	1.033	1.185	1.072	0.979	0.897
Big Y	3	2.950	2.989	2.964	2.937	2.912	2.912	1.696	1.848	1.734	1.641	1.559	1.040	1.192	1.079	0.986	0.903
A&P	2	2.903	3.148	2.822	2.822	2.822	2.822	1.653	1.805	1.692	1.599	1.516	1.033	1.185	1.072	0.979	0.897
Shop Rite	1	3.140	3.140	3.140	3.140	3.140	3.140	1.693	1.845	1.732	1.639	1.556	1.051	1.203	1.090	0.997	0.915
Total**	18	3.105	3.137	3.105	3.096	3.084	3.084	1.618	1.770	1.657	1.564	1.482	1.036	1.188	1.075	0.982	0.899

* Direct Store Deliver Wholesale Price consists of "Class 1 Plus Premium Price" plus other raw milk costs, processing, and delivery costs.

** Total is based on a weighted average using market shares from last column of sections below. These are market shares of supermarket sales in the Connecticut ADI market (Market Scope 2003).
 *** All prices in this section are computed by taking a weighted average. For all chains except Big Y and Stop & Shop, Private Label is weighted at 66.7% and Hood and Garelick are weighted at 16.7% each. For Shop Rite, Private Label is weighted at 75% and Hood at 25%. For Big Y, we first average the Mega and Private Label brands, and then weight that price at 66.7% and weight Guida and Hood at 16.7% each. See Cotterill, et al. 11/19/2002, p.6 for discussion of this weighting scheme.

Store Name	Number of Stores	Average Lowest Price			Direct Store Deliver Wholesale Price*			Class 1 Plus Premium Price			Brand and Processor	Market Share		
		Whole	2%	1%	Whole	2%	1%	Whole	2%	1%				
Stop & Shop	7	2.990	2.976	2.961	2.947	1.706	1.500	1.418	1.182	1.068	0.976	0.893	PL - Garelick	43.9
Shaw's	5	2.990	2.990	2.990	2.990	1.797	1.591	1.508	1.182	1.068	0.976	0.893	PL - Garelick	7.6
Big Y	3	2.500	2.500	2.500	2.500	1.845	1.639	1.556	1.203	1.090	0.997	0.915	Hood	10.1
A&P	2	2.990	2.500	2.500	2.500	1.797	1.591	1.508	1.182	1.068	0.976	0.893	PL - Garelick	5.7
Shop Rite	1	2.990	2.990	2.990	2.990	1.745	1.539	1.456	1.185	1.072	0.979	0.896	PL - Readington	7.4
Total**	18	2.924	2.878	2.869	2.861	1.745	1.539	1.456	1.185	1.072	0.979	0.896		74.7

* Direct Store Deliver Wholesale Price consists of "Class 1 Plus Premium Price" plus other raw milk costs, processing, and delivery costs.

** Total is based on a weighted average using market shares of last column. These are market shares of supermarket sales in the Connecticut ADI market (Market Scope 2003).

Store Name	Number of Stores	Average Private Label Price			Direct Store Deliver Wholesale Price*			Class 1 Plus Premium Price			Private Label Processor	Market Share		
		Whole	2%	1%	Whole	2%	1%	Whole	2%	1%				
Stop & Shop	7	2.990	2.976	2.961	2.947	1.706	1.500	1.418	1.182	1.068	0.976	0.893	Garelick	43.9
Shaw's	5	2.990	2.990	2.990	2.990	1.797	1.591	1.508	1.182	1.068	0.976	0.893	Garelick	7.6
Big Y***	3	3.040	3.007	2.973	2.940	1.848	1.642	1.559	1.190	1.077	0.984	0.902	Guida	10.1
A&P	2	2.990	2.500	2.500	2.500	1.797	1.591	1.508	1.182	1.068	0.976	0.893	Garelick	5.7
Shop Rite	1	2.990	2.990	2.990	2.990	1.745	1.539	1.457	1.183	1.070	0.977	0.894	Readington	7.4
Total**	18	2.997	2.947	2.933	2.921	1.745	1.539	1.457	1.183	1.070	0.977	0.894		74.7

* Direct Store Deliver Wholesale Price consists of "Class 1 Plus Premium Price" plus other raw milk costs, processing, and delivery costs.

** Total is based on a weighted average using market shares of last column. These are market shares of supermarket sales in the Connecticut ADI market (Market Scope 2003).

*** Big Y Private contains both Big Y label and Mega label, both processed by Guida

(continues)

Table 1. (continued)

Store Name	Number of Stores	Average Garelick Price			Direct Store Deliver Wholesale Price*			Class 1 Plus Premium Price			Garelick Processor	Market Share		
		Whole	2%	1%	Whole	2%	1%	Whole	2%	1%			Skim	
Stop & Shop	7	3.390	3.390	3.390	1.706	1.593	1.500	1.418	1.182	1.068	0.976	0.893	Garelick	43.9
Shaw's	5	3.490	3.490	3.490	1.797	1.684	1.591	1.508	1.182	1.068	0.976	0.893	Garelick	7.6
Big Y	3													10.1
A&P	2	3.290	3.290	3.290	1.797	1.684	1.591	1.508	1.182	1.068	0.976	0.893	Garelick	5.7
Shop Rite	1													7.4
Total**	18	3.393	3.393	3.393	1.727	1.614	1.521	1.439	1.182	1.068	0.976	0.893		74.7

* Direct Store Deliver Wholesale Price consists of "Class 1 Plus Premium Price" plus other raw milk costs, processing, and delivery costs.

** Total is based on a weighted average using market shares of last column. These are market shares of supermarket sales in the Connecticut ADI market (Market Scope 2003).

Store Name	Number of Stores	Average Hood Price			Direct Store Deliver Wholesale Price*			Class 1 Plus Premium Price			Hood Processor	Market Share		
		Whole	2%	1%	Whole	2%	1%	Whole	2%	1%			Skim	
Stop & Shop	7	3.604	3.604	3.604	1.845	1.732	1.639	1.556	1.203	1.090	0.997	0.915	Hood	43.9
Shaw's	5	3.690	3.690	3.690	1.845	1.732	1.639	1.556	1.203	1.090	0.997	0.915	Hood	7.6
Big Y	3	2.500	2.500	2.500	1.845	1.732	1.639	1.556	1.203	1.090	0.997	0.915	Hood	10.1
A&P	2	3.640	3.640	3.640	1.845	1.732	1.639	1.556	1.203	1.090	0.997	0.915	Hood	5.7
Shop Rite	1	3.590	3.590	3.590	1.845	1.732	1.639	1.556	1.203	1.090	0.997	0.915	Hood	7.4
Total**	18	3.465	3.465	3.465	1.845	1.732	1.639	1.556	1.203	1.090	0.997	0.915		74.7

* Direct Store Deliver Wholesale Price consists of "Class 1 Plus Premium Price" plus other raw milk costs, processing, and delivery costs.

** Total is based on a weighted average using market shares of last column. These are market shares of supermarket sales in the Connecticut ADI market (Market Scope 2003).

Store Name	Number of Stores	Average Guida Price			Direct Store Deliver Wholesale Price			Class 1 Plus Premium Price			Guida Processor	Market Share		
		Whole	2%	1%	Whole	2%	1%	Whole	2%	1%			Skim	
Stop & Shop	7													43.9
Shaw's	5													7.6
Big Y	3	3.290	3.290	3.290	1.848	1.735	1.642	1.559	1.190	1.077	0.984	0.902	Guida	10.1
A&P	2													5.7
Shop Rite	1													7.4
Total**	18	3.290	3.290	3.290	1.848	1.735	1.642	1.559	1.190	1.077	0.984	0.902		74.7

* Direct Store Deliver Wholesale Price consists of "Class 1 Plus Premium Price" plus other raw milk costs, processing, and delivery costs.

** Total is based on a weighted average using market shares of last column. These are market shares of supermarket sales in the Connecticut ADI market (Market Scope 2003).

Table 2. **Stop & Shop Private Label Milk:** The Impact of Alternative Compliance Scenarios

Scenario One - Processor Cuts Wholesale Price and Retailer Cuts Retail Price to Comply

Impact Summary: No premiums to farmers, processors lose money, retail margins are at low end of reasonable range.

	Average	Private Label Stop & Shop			
		Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Wholesale Dollar Margin @ 140% Price Collar*	0.412	0.412	0.412	0.412	0.412
Resulting Wholesale Price	1.442	1.594	1.480	1.387	1.305
Retail Dollar Margin @130% Price Collar	0.432	0.432	0.432	0.432	0.432
Resulting Retail Price	1.874	2.026	1.913	1.820	1.737

* Margins at the Processor and Retailer level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Scenario Two - Processor Maintains Current Margin And Retailer Cuts Retail Price to Comply

Impact Summary: Low premiums to farmers, processors remain at current profit levels, retail margins may be reasonable.

	Average	Private Label Stop & Shop			
		Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Processor Margin to be Covered*	0.570	0.570	0.570	0.570	0.570
Farm Price Needed @ 140% to Cover Margin	1.425	1.425	1.425	1.425	1.425
Additional Raw Milk Premium Needed	0.395	0.395	0.395	0.395	0.395
Resulting Farm Price	1.425	1.577	1.464	1.371	1.288
Actual Processing & Delivery Cost	0.492	0.492	0.492	0.492	0.492
Other Raw Milk Cost	0.033	0.033	0.033	0.033	0.033
Resulting Wholesale Prices	1.950	2.102	1.988	1.895	1.813
Retail Dollar Margin @130% Price Collar	0.585	0.585	0.585	0.585	0.585
Resulting Retail Price	2.534	2.686	2.573	2.480	2.398

* Average of Stop & Shop and Other Chain Stores Used to Compute the Margin

(continues)

Table 2. (continued)

Scenario Three - Retailer Maintains Current Price by Paying Higher Wholesale Price

Impact Summary: Premiums to farmers are substantial, reasonable margins to processors (above current levels), retail margins may be reasonable range.

	Average	Private Label Stop & Shop			
		Whole	2%	1%	Skim
Retail Price (Private Label 3/29/03)	2.969	2.990	2.976	2.961	2.947
Based on 130% Dollar Retail Price Collar					
Resulting Retail Dollar Margin*	0.685	0.685	0.685	0.685	0.685
Needed Wholesale Price	2.283	2.305	2.291	2.276	2.262
Based on 140% Wholesale Price Collar					
Needed Raw Milk Price	1.631	1.653	1.639	1.624	1.610
Resulting Wholesale Dollar Margin	0.652	0.652	0.652	0.652	0.652
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Additional Premium Needed	0.601	0.471	0.570	0.648	0.717

* Margins at the Processor and Retailer level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Scenario Four - Retailer Maintains Current Margin

Impact Summary: Not reasonable, not profit maximizing for retailer because retail prices are too high, lost sales volume too high

	Average	Private Label Stop & Shop			
		Whole	2%	1%	Skim
Current Dollar Gross Margin	1.414	1.284	1.383	1.461	1.529
Based on 130% Retail Price Collar					
Needed Retail Price	6.128	5.564	5.993	6.331	6.626
Needed Wholesale Price	4.714	4.280	4.610	4.870	5.097
Based on 140% Wholesale Price Collar					
Wholesale Price	4.714	4.280	4.610	4.870	5.097
Wholesale Dollar Margin	1.347	1.223	1.317	1.391	1.456
Needed Raw Milk Price	3.367	3.057	3.293	3.479	3.640
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Additional Premium Needed	2.338	1.875	2.224	2.503	2.747

Table 3. **Shaw's Private Label Milk: The Impact of Alternative Compliance Scenarios**

Scenario One - Processor Cuts Wholesale Price and Retailer Cuts Retail Price to Comply

Impact Summary: No premiums to farmers, processors lose money, retail margins are at low end of reasonable range.

	Average	Private Label Shaw's			
		Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Wholesale Dollar Margin @ 140% Price Collar*	0.412	0.412	0.412	0.412	0.412
Resulting Wholesale Price	1.442	1.594	1.480	1.387	1.305
Retail Dollar Margin @130% Price Collar	0.432	0.432	0.432	0.432	0.432
Resulting Retail Price	1.874	2.026	1.913	1.820	1.737

* Margins at the Processor and Retailer level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Scenario Two - Processor Maintains Current Margin And Retailer Cuts Retail Price to Comply

Impact Summary: Low premiums to farmers, processors remain at current profit levels, retail margins may be reasonable.

	Average	Private Label Shaw's			
		Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Processor Margin to be Covered*	0.570	0.570	0.570	0.570	0.570
Farm Price Needed @ 140% to Cover Margin	1.425	1.425	1.425	1.425	1.425
Additional Raw Milk Premium Needed	0.395	0.395	0.395	0.395	0.395
Resulting Farm Price	1.425	1.577	1.464	1.371	1.288
Actual Processing & Delivery Cost	0.583	0.583	0.583	0.583	0.583
Other Raw Milk Cost	0.033	0.033	0.033	0.033	0.033
Resulting Wholesale Prices	2.040	2.192	2.079	1.986	1.904
Retail Dollar Margin @130% Price Collar	0.612	0.612	0.612	0.612	0.612
Resulting Retail Price	2.652	2.804	2.691	2.598	2.516

* Average of Stop & Shop and Other Chain Stores Used to Compute the Margin

(continues)

Table 3. (continued)

Scenario Three - Retailer Maintains Current Price by Paying Higher Wholesale Price

Impact Summary: Premiums to farmers are substantial, reasonable margins to processors (above current levels), retail margins may be reasonable range.

	Average	Private Label Shaw's			
		Whole	2%	1%	Skim
Retail Price (Private Label 3/29/03)	2.990	2.990	2.990	2.990	2.990
Based on 130% Dollar Retail Price Collar					
Resulting Retail Dollar Margin*	0.690	0.690	0.690	0.690	0.690
Needed Wholesale Price	2.300	2.300	2.300	2.300	2.300
Based on 140% Wholesale Price Collar					
Needed Raw Milk Price	1.643	1.643	1.643	1.643	1.643
Resulting Wholesale Dollar Margin	0.657	0.657	0.657	0.657	0.657
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Additional Premium Needed	0.613	0.461	0.574	0.667	0.750

* Margins at the Processor and Retailer level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Scenario Four - Retailer Maintains Current Margin

Impact Summary: Not reasonable, not profit maximizing for retailer because retail prices are too high, lost sales volume too high

	Average	Private Label Shaw's			
		Whole	2%	1%	Skim
Current Dollar Gross Margin	1.345	1.193	1.306	1.399	1.482
Based on 130% Retail Price Collar					
Needed Retail Price	5.828	5.170	5.659	6.062	6.422
Needed Wholesale Price	4.483	3.977	4.353	4.663	4.940
Based on 140% Wholesale Price Collar					
Wholesale Price	4.483	3.977	4.353	4.663	4.940
Wholesale Dollar Margin	1.281	1.136	1.244	1.332	1.411
Needed Raw Milk Price	3.202	2.840	3.110	3.331	3.529
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Additional Premium Needed	2.173	1.659	2.041	2.355	2.636

Table 4. **Big Y Private Label Milk:** The Impact of Alternative Compliance Scenarios

Scenario One - Processor Cuts Wholesale Price and Retailer Cuts Retail Price to Comply

Impact Summary: No premiums to farmers, processors lose money, retail margins are at low end of reasonable range.

	Private Label Big Y				
	Average	Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.038	1.190	1.077	0.984	0.902
Wholesale Dollar Margin @ 140% Price Collar*	0.415	0.415	0.415	0.415	0.415
Resulting Wholesale Price	1.454	1.605	1.492	1.399	1.317
Retail Dollar Margin @130% Price Collar	0.436	0.436	0.436	0.436	0.436
Resulting Retail Price	1.890	2.041	1.928	1.835	1.753

* Margins at the Processor and Retailer level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Scenario Two - Processor Maintains Current Margin And Retailer Cuts Retail Price to Comply

Impact Summary: Low premiums to farmers, processors remain at current profit levels, retail margins may be reasonable.

	Private Label Big Y				
	Average	Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.038	1.190	1.077	0.984	0.902
Processor Margin to be Covered	0.658	0.658	0.658	0.658	0.658
Farm Price Needed @ 140% to Cover Margin	1.644	1.644	1.644	1.644	1.644
Additional Raw Milk Premium Needed	0.606	0.606	0.606	0.606	0.606
Resulting Farm Price	1.644	1.796	1.683	1.590	1.508
Actual Processing & Delivery Cost	0.625	0.625	0.625	0.625	0.625
Other Raw Milk Cost	0.033	0.033	0.033	0.033	0.033
Resulting Wholesale Prices	2.302	2.453	2.340	2.247	2.165
Retail Dollar Margin @130% Price Collar	0.690	0.690	0.690	0.690	0.690
Resulting Retail Price	2.992	3.144	3.031	2.938	2.856

(continues)

Table 4. (continued)

Scenario Three - Retailer Maintains Current Price by Paying Higher Wholesale Price

Impact Summary: Premiums to farmers are substantial, reasonable margins to processors (above current levels), retail margins may be reasonable range.

	Private Label				
	Average	Whole	2%	1%	Skim
Retail Price (Private Label 3/29/03)	2.990	3.040	3.007	2.973	2.940
Based on 130% Dollar Retail Price Collar					
Resulting Retail Dollar Margin*	0.690	0.690	0.690	0.690	0.690
Needed Wholesale Price	2.300	2.350	2.317	2.283	2.250
Based on 140% Wholesale Price Collar					
Needed Raw Milk Price	1.643	1.693	1.660	1.626	1.593
Resulting Wholesale Dollar Margin	0.657	0.657	0.657	0.657	0.657
Class 1 + Premium Raw Milk Price	1.038	1.190	1.077	0.984	0.902
Additional Premium Needed	0.605	0.503	0.583	0.642	0.691

* Margins at the Processor and Retailer level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Scenario Four - Retailer Maintains Current Margin

Impact Summary: Not reasonable, not profit maximizing for retailer because retail prices are too high, lost sales volume too high

	Private Label				
	Average	Whole	2%	1%	Skim
Current Dollar Gross Margin	1.294	1.192	1.272	1.331	1.381
Based on 130% Retail Price Collar					
Needed Retail Price	5.607	5.165	5.512	5.768	5.984
Needed Wholesale Price	4.313	3.973	4.240	4.437	4.603
Based on 140% Wholesale Price Collar					
Wholesale Price	4.313	3.973	4.240	4.437	4.603
Wholesale Dollar Margin	1.232	1.135	1.211	1.268	1.315
Needed Raw Milk Price	3.081	2.838	3.029	3.169	3.288
Class 1 + Premium Raw Milk Price	1.038	1.190	1.077	0.984	0.902
Additional Premium Needed	2.043	1.648	1.952	2.185	2.386

Table 5. **Stop & Shop Garelick Label Milk: The Impact of Alternative Compliance Scenarios**

Scenario One - Processor Cuts Wholesale Price and Retailer Cuts Private Label Retail Price to Comply

Impact Summary: No premiums to farmers, processors lose money, Garelick retail price will be cut to compete with lower private label price.

	Average	Garelick Stop & Shop			
		Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Wholesale Dollar Margin @ 140% Price Collar*	0.412	0.412	0.412	0.412	0.412
Resulting Garelick Wholesale Price	1.442	1.594	1.480	1.387	1.305

Resulting Garelick Retail Price Will be lower than current price

* Margins at the Processor level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Scenario Two - Processor Maintains Current Margin And Retailer Cuts Private Label Retail Price to Comply

Impact Summary: Low premiums to farmers, processors remain at current profit levels, Garelick retail price will be cut to compete with lower private label price.

	Average	Garelick Stop & Shop			
		Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Processor Margin to be Covered*	0.570	0.570	0.570	0.570	0.570
Farm Price Needed @ 140% to Cover Margin	1.425	1.425	1.425	1.425	1.425
Additional Raw Milk Premium Needed	0.395	0.395	0.395	0.395	0.395
Resulting Farm Price	1.425	1.577	1.464	1.371	1.288
Actual Processing & Delivery Cost	0.492	0.492	0.492	0.492	0.492
Other Raw Milk Cost	0.033	0.033	0.033	0.033	0.033
Resulting Garelick Wholesale Prices	1.950	2.102	1.988	1.895	1.813

Resulting Garelick Retail Price Will be lower than current price and above scenario one price

* Average of Stop & Shop and Other Chain Stores Used to Compute the Margin

(continues)

Table 5. (continued)

Scenario Three - Retailer Maintains Current Private Label Retail Price by Paying Higher Private Label Wholesale Price

Impact Summary: Premiums to farmers are substantial, reasonable margins to processors (above current levels), Garelick retail price will remain the same.

	Average	Garelick Stop & Shop			
		Whole	2%	1%	Skim
Retail Price (Garelick 3/29/03)	3.390	3.390	3.390	3.390	3.390
Wholesale Price for Garelick Milk (Same as Private Label)	2.283	2.305	2.291	2.276	2.262
Resulting Retail Dollar Margin	1.107	1.085	1.099	1.114	1.128
Based on 140% Wholesale Price Collar					
Needed Raw Milk Price	1.631	1.653	1.639	1.624	1.610
Resulting Wholesale Dollar Margin*	0.652	0.652	0.652	0.652	0.652
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Additional Premium Needed	0.601	0.471	0.570	0.648	0.717

* Margins at the Processor are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Table 6. **Shaw's Garelick Label Milk: The Impact of Alternative Compliance Scenarios**

Scenario One - Processor Cuts Wholesale Price and Retailer Cuts Private Label Retail Price to Comply

Impact Summary: No premiums to farmers, processors lose money, Garelick retail price will be cut to compete with lower private label price.

	Average	Garelick Shaw's			
		Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Wholesale Dollar Margin @ 140% Price Collar*	0.412	0.412	0.412	0.412	0.412
Resulting Wholesale Price	1.442	1.594	1.480	1.387	1.305

Resulting Garelick Retail Price Will be lower than current price

* Margins at the Processor level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Scenario Two - Processor Maintains Current Margin And Retailer Cuts Private Label Retail Price to Comply

Impact Summary: Low premiums to farmers, processors remain at current profit levels, Garelick retail price will be cut to compete with lower private label price.

	Average	Garelick Shaw's			
		Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Processor Margin to be Covered*	0.570	0.570	0.570	0.570	0.570
Farm Price Needed @ 140% to Cover Margin	1.425	1.425	1.425	1.425	1.425
Additional Raw Milk Premium Needed	0.395	0.395	0.395	0.395	0.395
Resulting Farm Price	1.425	1.577	1.464	1.371	1.288
Actual Processing & Delivery Cost	0.583	0.583	0.583	0.583	0.583
Other Raw Milk Cost	0.033	0.033	0.033	0.033	0.033
Resulting Garelick Wholesale Prices	2.040	2.192	2.079	1.986	1.904

Resulting Garelick Retail Price Will be lower than current price and above scenario one price

* Average of Stop & Shop and Other Chain Stores Used to Compute the Margin

(continues)

Table 6. (continued)

Scenario Three - Retailer Maintains Current Private Label Retail Price by Paying Higher Private Label Wholesale Price

Impact Summary: Premiums to farmers are substantial, reasonable margins to processors (above current levels), Garelick retail price will remain the same.

	Average	Garelick Shaw's			
		Whole	2%	1%	Skim
Retail Price (Garelick 3/29/03)	3.490	3.490	3.490	3.490	3.490
Wholesale Price for Garelick Milk (Same as Private Label)	2.300	2.300	2.300	2.300	2.300
Resulting Retail Dollar Margin	1.190	1.190	1.190	1.190	1.190
Based on 140% Wholesale Price Collar					
Needed Raw Milk Price	1.643	1.643	1.643	1.643	1.643
Resulting Wholesale Dollar Margin*	0.657	0.657	0.657	0.657	0.657
Class 1 + Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Additional Premium Needed	0.613	0.461	0.574	0.667	0.750

* Margins at the Processor level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Table 7. **Big Y Guida Label Milk:** The Impact of Alternative Compliance Scenarios

Scenario One - Processor Cuts Wholesale Price and Retailer Cuts Private Label Retail Price to Comply

Impact Summary: No premiums to farmers, processors lose money, Guida retail price will be cut to compete with lower private label price.

	Guida Big Y				
	Average	Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.038	1.190	1.077	0.984	0.902
Wholesale Dollar Margin @ 140% Price Collar*	0.415	0.415	0.415	0.415	0.415
Resulting Wholesale Price	1.454	1.606	1.492	1.399	1.317
Resulting Garelick Retail Price	Will be lower than current price				

* Margins at the Processor level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Scenario Two - Processor Maintains Current Margin And Retailer Cuts Private Label Retail Price to Comply

Impact Summary: Low premiums to farmers, processors remain at current profit levels, Guida retail price will be cut to compete with lower private label price.

	Guida Big Y				
	Average	Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.038	1.190	1.077	0.984	0.902
Processor Margin to be Covered	0.658	0.658	0.658	0.658	0.658
Farm Price Needed @ 140% to Cover Margin	1.644	1.644	1.644	1.644	1.644
Additional Raw Milk Premium Needed	0.606	0.606	0.606	0.606	0.606
Resulting Farm Price	1.644	1.796	1.683	1.590	1.507
Actual Processing & Delivery Cost	0.625	0.625	0.625	0.625	0.625
Other Raw Milk Cost	0.033	0.033	0.033	0.033	0.033
Resulting Guida Wholesale Prices	2.302	2.453	2.340	2.247	2.165
Resulting Guida Retail Price	Will be lower than current price and above scenario one price				

(continues)

Table 7. (continued)

Scenario Three - Retailer Maintains Current Private Label Retail Price by Paying Higher Private Label Wholesale Price

Impact Summary: Premiums to farmers are substantial, reasonable margins to processors (above current levels), Guida retail price will remain the same.

	Average	Guida Big Y			
		Whole	2%	1%	Skim
Retail Price (Private Label 3/29/03)	3.290	3.290	3.290	3.290	3.290
Wholesale Price for Guida Milk (Same as Private Label)	2.300	2.350	2.317	2.283	2.250
Resulting Retail Dollar Margin	0.990	0.940	0.973	1.007	1.040
Based on 140% Wholesale Price Collar					
Needed Raw Milk Price	1.643	1.693	1.660	1.626	1.593
Resulting Wholesale Dollar Margin*	0.657	0.657	0.657	0.657	0.657
Class 1 + Premium Raw Milk Price	1.038	1.190	1.077	0.984	0.902
Additional Premium Needed	0.605	0.503	0.583	0.642	0.691

* Margins at the Processor level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Table 8. **Hood Label Milk:** The Impact of Alternative Compliance Scenarios

Scenario One - Processor Cuts Wholesale Price and Retailer Cuts Private Label Retail Price to Comply

Impact Summary: No premiums to farmers, processors lose money, Hood retail price will be cut to compete with lower private label price.

	Hood				
	Average	Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.051	1.203	1.090	0.997	0.915
Wholesale Dollar Margin @ 140% Price Collar*	0.420	0.420	0.420	0.420	0.420
Resulting Hood Wholesale Price	1.472	1.624	1.510	1.418	1.335

Resulting Hood Retail Price Will be lower than current price

* Margins at the Processor level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Scenario Two - Processor Maintains Current Margin And Retailer Cuts Private Label Retail Price to Comply

Impact Summary: Low premiums to farmers, processors remain at current profit levels, Hood retail price will be cut to compete with lower private label price.

	Hood				
	Average	Whole	2%	1%	Skim
Class 1 + Premium Raw Milk Price	1.051	1.203	1.090	0.997	0.915
Processor Margin to be Covered	0.642	0.642	0.642	0.642	0.642
Farm Price Needed @ 140% to Cover Margin	1.604	1.604	1.605	1.605	1.605
Additional Raw Milk Premium Needed	0.553	0.553	0.553	0.553	0.553
Resulting Farm Price	1.604	1.756	1.643	1.550	1.468
Actual Processing & Delivery Cost	0.609	0.609	0.609	0.609	0.609
Other Raw Milk Cost	0.033	0.033	0.033	0.033	0.033
Resulting Hood Wholesale Prices	2.246	2.398	2.285	2.192	2.110
Resulting Hood Retail Price	Will be lower than current price and above scenario one price				

(continues)

Table 8. (continued)

Scenario Three - Retailer Maintains Current Private Label Retail Price by Paying Higher Private Label Wholesale Price

Impact Summary: Premiums to farmers are substantial, processor maintains current margin, and Hood retail price will remain the same.

	Hood				
	Average	Whole	2%	1%	Skim
Retail Price (Hood 3/29/03)*	3.465	3.465	3.465	3.465	3.465
Wholesale Price for Hood Milk (Same as Scenario Two)	2.246	2.398	2.285	2.192	2.110
Resulting Retail Dollar Margin	1.219	1.067	1.180	1.273	1.355
Based on 140% Wholesale Price Collar					
Needed Raw Milk Price	1.604	1.756	1.643	1.550	1.468
Resulting Wholesale Dollar Margin**	0.642	0.642	0.642	0.642	0.642
Class 1 + Premium Raw Milk Price	1.051	1.203	1.090	0.997	0.915
Additional Premium Needed	0.553	0.553	0.553	0.553	0.553

* Retail Price is the Weighted Average Price across all stores for Hood from Table 1.

** Margins at the Processor level are based on the Average Price of all four types of milk, and consequently is the same dollar amount for each type.

Appendix A

Dairy Technomics Information



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Our Role: Dairy Technomics enables milk category managers to lower their procurement costs. We provide monthly target purchase price points for each of your dairy suppliers. By leveraging multiple data sources, then utilizing our custom designed data retrieval and delivery systems we are able to provide the most current and precise cost analysis system available.

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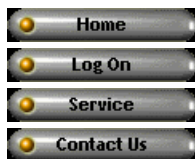
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Services



-
- Provide target purchase price points for each of your milk and cream SKU's for all of your dairy suppliers.

- Results for clients: 5-15% reduction in fluid milk/cream costs (.10-.25/gal)

- Training and backup "point sheets" to help your procurement managers successfully negotiate target purchase prices with suppliers.
-



Contact Information



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DAIRY TECH

COST REVIEW MODEL

Garelick Farms - Stop'n Shop

Franklin, Mass

3/24/03

Raw Milk -		<u>March '03</u>	<u>April '03</u>
Class I - Fed Order 1	Zone 3.25	13.060	12.890
Plant Producer Premium		0.950	0.950
Market Administrator Fee		0.040	0.040
Processor Assesment "Got Milk"		0.200	0.200
1% Plant Loss		<u>0.143</u>	<u>0.141</u>
Milk Cost @ 3.5% Butterfat/CWT		14.393	14.221

Jug Weight in Grams	60gr.	45gr.	
Package	PI Gallon	PI 1/2 Gal	PP Qt.
Resin \$0.53/lb.	0.072	0.053	
Cap & Label	0.016	0.017	
Labor	0.010	0.007	
<u>Overhead</u>	<u>0.010</u>	<u>0.008</u>	
Subtotal Package	0.108	0.085	0.063

Plant			
Labor & Benefits	0.065	0.034	0.055
Maintenance	0.012	0.006	0.000
Lab	0.006	0.003	0.000
Utilities	0.020	0.010	0.000
Depreciation	0.007	0.004	0.000
<u>Overhead/Other</u>	<u>0.040</u>	<u>0.020</u>	<u>0.000</u>
Subtotal Plant	0.150	0.077	0.055

Gen & Admin.			
Salary & Benefits	0.010	0.005	0.0030
Interest	0.002	0.001	0.0005
Insurance	0.002	0.001	0.0005
Legal	0.002	0.001	0.0005
<u>Building & Grounds</u>	<u>0.000</u>	<u>0.000</u>	<u>0.0000</u>
Subtotal G & A	0.016	0.008	0.005

Delivery			
Milk Case Use	0.020	0.010	0.005
Labor	0.084	0.042	0.021
<u>Equipment</u>	<u>0.102</u>	<u>0.051</u>	<u>0.025</u>
Subtotal Delivery	0.206	0.103	0.051

Sales & Marketing			
Order Entry	0.002	0.001	0.0005
Sales & Benefits	0.010	0.005	0.003
T & E	0.000	0.000	0.000
Advertising	0.000	0.000	0.000
<u>Promotion</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>
Subtotal Sales & Mkt	0.012	0.006	0.003

TOTAL OVERHEAD	0.492	0.279	0.177
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DAIRY TECH

COST REVIEW MODEL

Garelick Farms - Chain Store

Franklin, Mass

3/24/03

Raw Milk -

		<u>March '03</u>	<u>April '03</u>
Class I - Fed Order 1	Zone 3.25	13.060	12.890
Plant Producer Premium		0.950	0.950
Market Administrator Fee		0.040	0.040
Processor Assesment "Got Milk"		0.200	0.200
1% Plant Loss		<u>0.143</u>	<u>0.141</u>
Milk Cost @ 3.5% Butterfat/CWT		14.393	14.221

Jug Weight in Grams	60gr.	45gr.	
Package	PI Gallon	PI 1/2 Gal	PP Qt.
Resin \$0.53/lb.	0.072	0.053	
Cap & Label	0.016	0.017	
Labor	0.010	0.007	
<u>Overhead</u>	<u>0.010</u>	<u>0.008</u>	
Subtotal Package	0.108	0.085	0.063

Plant

Labor & Benefits	0.065	0.034	0.055
Maintenance	0.012	0.006	0.000
Lab	0.006	0.003	0.000
Utilities	0.020	0.010	0.000
Depreciation	0.007	0.004	0.000
<u>Overhead/Other</u>	<u>0.040</u>	<u>0.020</u>	<u>0.000</u>
Subtotal Plant	0.150	0.077	0.055

Gen & Admin.

Salary & Benefits	0.010	0.005	0.0030
Interest	0.002	0.001	0.0005
Insurance	0.002	0.001	0.0005
Legal	0.002	0.001	0.0005
<u>Building & Grounds</u>	<u>0.000</u>	<u>0.000</u>	<u>0.0000</u>
Subtotal G & A	0.016	0.008	0.005

Delivery

Milk Case Use	0.020	0.010	0.005
Labor	0.084	0.042	0.021
<u>Equipment</u>	<u>0.102</u>	<u>0.051</u>	<u>0.025</u>
Subtotal Delivery	0.206	0.103	0.051

Sales & Marketing

Order Entry	0.002	0.001	0.0005
Sales & Benefits	0.010	0.005	0.003
T & E	0.000	0.000	0.000
Advertising	0.000	0.000	0.000
<u>Promotion</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>
Subtotal Sales & Mkt	0.012	0.006	0.003

Contribution to Overhead	0.0909	0.0455	0.0232
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TOTAL OVERHEAD	0.5828	0.3248	0.1997
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DAIRY TECH

COST REVIEW MODEL

Guida - Seibert Dairy - Chain Store

New Briton, Conn

3/24/03

Raw Milk -		<u>March '03</u>	<u>April '03</u>
Class I - Fed Order 1	Zone 3.15	12.960	12.790
Plant Producer Premium		1.150	1.150
Market Administrator Fee		0.040	0.040
Processor Assesment "Got Milk"		0.200	0.200
1% Plant Loss		<u>0.144</u>	<u>0.142</u>
Milk Cost @ 3.5% Butterfat/CWT		14.494	14.322

Jug Weight in Grams	60gr.	45gr.	
Package	PI Gallon	PI 1/2 Gal	PP Qt.
Resin \$0.55/lb.	0.075	0.078	
Cap & Label	0.018	0.017	
Labor	0.013	0.008	
<u>Overhead</u>	<u>0.010</u>	<u>0.010</u>	
Subtotal Package	0.116	0.113	0.068

Plant			
Labor & Benefits	0.071	0.036	0.065
Maintenance	0.022	0.011	0.000
Lab	0.008	0.004	0.000
Utilities	0.018	0.009	0.000
Depreciation	0.030	0.015	0.000
<u>Overhead/Other</u>	<u>0.050</u>	<u>0.025</u>	<u>0.000</u>
Subtotal Plant	0.199	0.100	0.065

Gen & Admin.

Salary & Benefits	0.066	0.033	0.017
Interest	0.010	0.005	0.003
Insurance	0.010	0.005	0.003
Legal	0.002	0.001	0.001
<u>Building & Grounds</u>	<u>0.010</u>	<u>0.005</u>	<u>0.003</u>
Subtotal G & A	0.098	0.049	0.027

Delivery

Milk Case Use	0.020	0.010	0.005
Labor	0.080	0.040	0.020
<u>Equipment</u>	<u>0.076</u>	<u>0.038</u>	<u>0.019</u>
Subtotal Delivery	0.176	0.088	0.044

Sales & Marketing

Order Entry	0.004	0.002	0.001
Sales & Benefits	0.020	0.010	0.005
T & E	0.002	0.001	0.001
Advertising	0.010	0.005	0.003
<u>Promotion</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>
Subtotal Sales & Mkt	0.036	0.018	0.010

TOTAL OVERHEAD	0.625	0.368	0.214
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DAIRY TECH

COST REVIEW MODEL

HP Hood Branded to Chain Store

Agawam, Mass

3/24/03

Raw Milk -		<u>March '03</u>	<u>April '03</u>
Class I - Fed Order 1	Zone 3.25	13.060	12.890
Plant Producer Premium		1.200	1.200
Market Administrator Fee		0.040	0.040
Processor Assesment "Got Milk"		0.200	0.200
1% Plant Loss		<u>0.145</u>	<u>0.143</u>
Milk Cost @ 3.5% Butterfat/CWT		14.645	14.473

Jug Weight in Grams	62gr.	45gr.	
Package	PI Gallon	PI 1/2 Gal	PP Qt.
Resin \$0.55/lb.	0.080	0.058	
Cap & Label	0.018	0.017	
Labor	0.013	0.008	
<u>Overhead</u>	<u>0.010</u>	<u>0.008</u>	
Subtotal Package	0.121	0.091	0.066

Plant			
Labor & Benefits	0.068	0.034	0.063
Maintenance	0.020	0.010	0.000
Lab	0.006	0.003	0.000
Utilities	0.022	0.011	0.000
Depreciation	0.012	0.011	0.000
<u>Overhead/Other</u>	<u>0.060</u>	<u>0.030</u>	<u>0.000</u>
Subtotal Plant	0.188	0.099	0.063

Gen & Admin.			
Salary & Benefits	0.020	0.010	0.005
Interest	0.008	0.004	0.002
Insurance	0.002	0.001	0.001
Legal	0.003	0.002	0.001
<u>Building & Grounds</u>	<u>0.010</u>	<u>0.005</u>	<u>0.003</u>
Subtotal G & A	0.043	0.022	0.012

Delivery			
Milk Case Use	0.020	0.010	0.005
Labor	0.095	0.047	0.023
<u>Equipment</u>	<u>0.086</u>	<u>0.043</u>	<u>0.022</u>
Subtotal Delivery	0.201	0.100	0.050

Sales & Marketing			
Order Entry	0.004	0.002	0.001
Sales & Benefits	0.010	0.005	0.003
T & E	0.002	0.001	0.001
Advertising	0.040	0.020	0.010
<u>Promotion</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>
Subtotal Sales & Mkt	0.056	0.028	0.015

TOTAL OVERHEAD	0.609	0.340	0.205
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DAIRY TECH

COST REVIEW MODEL

Garelick Farms - Warehouse Drop & Warehouse to Retail

Franklin, Mass

3/24/03

Raw Milk -		<u>March '03</u>	<u>April '03</u>
Class I - Fed Order 1	Zone 3.25	13.060	12.890
Plant Producer Premium		0.950	0.950
Market Administrator Fee		0.040	0.040
Processor Assesment "Got Milk"		0.200	0.200
1% Plant Loss		<u>0.143</u>	<u>0.141</u>
Milk Cost @ 3.5% Butterfat/CWT		14.393	14.221

Jug Weight in Grams	60gr.	45gr.	
Package	PI Gallon	PI 1/2 Gal	PP Qt.
Resin \$0.53/lb.	0.072	0.053	
Cap & Label	0.016	0.017	
Labor	0.010	0.007	
<u>Overhead</u>	<u>0.010</u>	<u>0.008</u>	
Subtotal Package	0.108	0.085	0.063

Plant			
Labor & Benefits	0.065	0.034	0.055
Maintenance	0.012	0.006	0.000
Lab	0.006	0.003	0.000
Utilities	0.020	0.010	0.000
Depreciation	0.007	0.004	0.000
<u>Overhead/Other</u>	<u>0.040</u>	<u>0.020</u>	<u>0.000</u>
Subtotal Plant	0.150	0.077	0.055

Gen & Admin.			
Salary & Benefits	0.010	0.005	0.0030
Interest	0.002	0.001	0.0005
Insurance	0.002	0.001	0.0005
Legal	0.002	0.001	0.0005
<u>Building & Grounds</u>	<u>0.000</u>	<u>0.000</u>	<u>0.0000</u>
Subtotal G & A	0.016	0.008	0.005

Delivery			
Milk Case Use	0.020	0.010	0.005
Labor	0.060	0.030	0.015
<u>Equipment</u>	<u>0.046</u>	<u>0.023</u>	<u>0.012</u>
Subtotal Delivery	0.126	0.063	0.032

Sales & Marketing			
Order Entry	0.002	0.001	0.0005
Sales & Benefits	0.010	0.005	0.003
T & E	0.000	0.000	0.000
Advertising	0.000	0.000	0.000
<u>Promotion</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>
Subtotal Sales & Mkt	0.012	0.006	0.003
SUB-TOTAL OVERHEAD	0.412	0.239	0.158
Contribution to Overhead	<u>0.0995</u>	<u>0.0468</u>	<u>0.0254</u>
	0.5114	0.2861	0.1829
WAREHOUSE TO STORE	<u>0.250</u>	<u>0.125</u>	<u>0.070</u>
	0.761	0.411	0.253

DAIRY TECH

COST REVIEW MODEL

Marcus Dairy - General Wholesale

Danbury, Conn

3/24/03

Raw Milk -		<u>March '03</u>	<u>April '03</u>
Class I - Fed Order 1	Zone 3.15	12.960	12.790
Plant Producer Premium		1.200	1.200
Market Administrator Fee		0.040	0.040
Processor Assesment "Got Milk"		0.200	0.200
1% Plant Loss		<u>0.144</u>	<u>0.142</u>
Milk Cost @ 3.5% Butterfat/CWT		14.544	14.372

Jug Weight in Grams	60gr.	45gr.	
Package	PI Gallon	PI 1/2 Gal	PP Qt.
Resin \$0.55/lb.	0.080	0.078	
Cap & Label	0.020	0.018	
Labor	0.020	0.015	
<u>Overhead</u>	<u>0.010</u>	<u>0.010</u>	
Subtotal Package	0.130	0.121	0.072

Plant			
Labor & Benefits	0.071	0.036	0.065
Maintenance	0.022	0.011	0.000
Lab	0.010	0.005	0.000
Utilities	0.018	0.009	0.000
Depreciation	0.030	0.015	0.000
<u>Overhead/Other</u>	<u>0.050</u>	<u>0.025</u>	<u>0.000</u>
Subtotal Plant	0.201	0.101	0.065

Gen & Admin.			
Salary & Benefits	0.066	0.033	0.017
Interest	0.010	0.005	0.003
Insurance	0.010	0.005	0.003
Legal	0.005	0.003	0.002
<u>Building & Grounds</u>	<u>0.010</u>	<u>0.005</u>	<u>0.003</u>
Subtotal G & A	0.101	0.051	0.028

Delivery			
Milk Case Use	0.020	0.010	0.005
Labor	0.116	0.058	0.029
<u>Equipment</u>	<u>0.102</u>	<u>0.051</u>	<u>0.025</u>
Subtotal Delivery	0.238	0.119	0.059

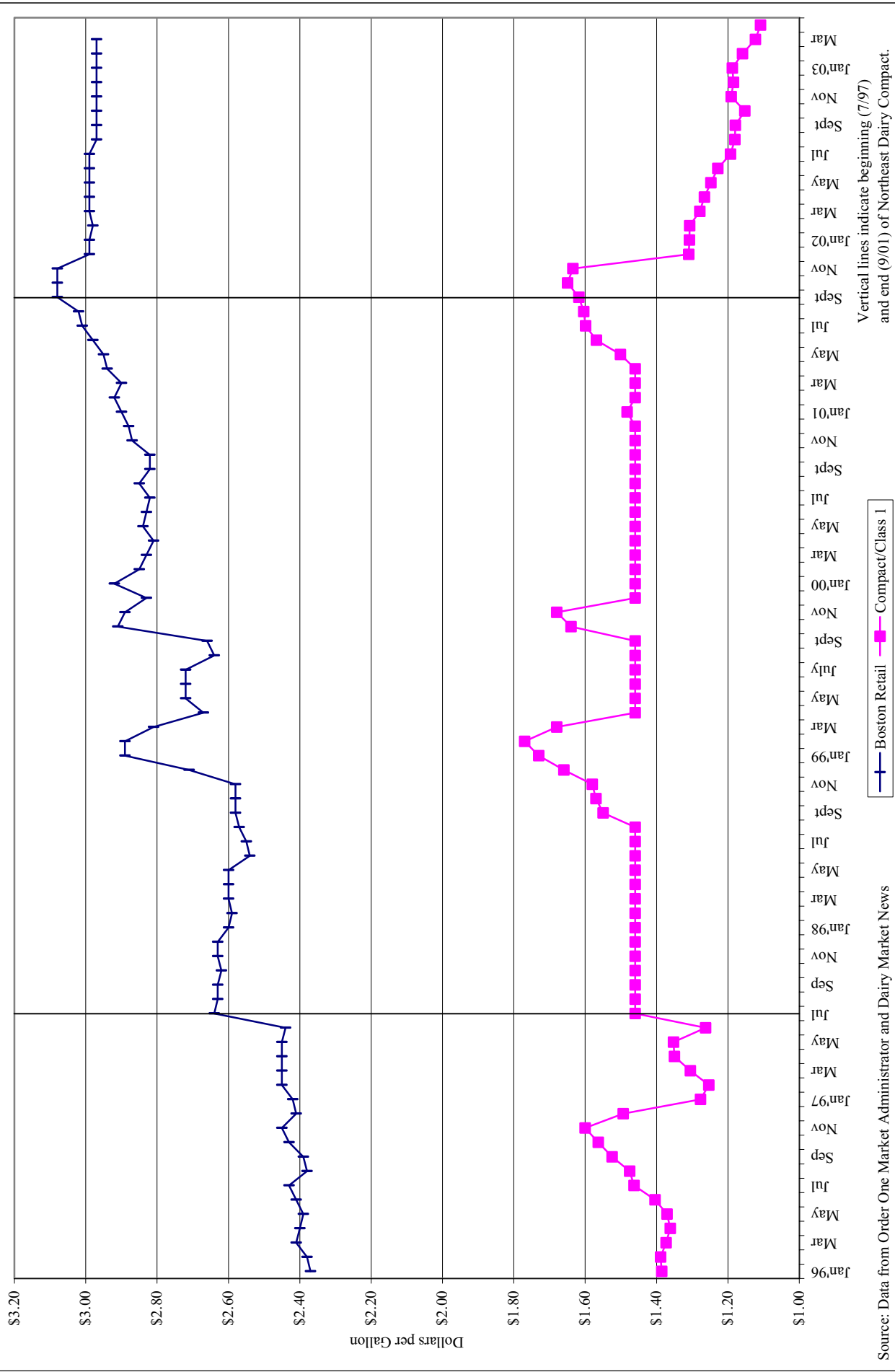
Sales & Marketing			
Order Entry	0.004	0.002	0.001
Sales & Benefits	0.020	0.010	0.005
T & E	0.002	0.001	0.001
Advertising	0.010	0.005	0.003
<u>Promotion</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>
Subtotal Sales & Mkt	0.036	0.018	0.010

TOTAL OVERHEAD	0.706	0.410	0.234
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Appendix B

Boston Farm and Retail Milk Prices
(January 1996 – April 2003)

Boston
 Market Level Retail and Farm Fluid Milk Price
 January 1996 - April 2003



Source: Data from Order One Market Administrator and Dairy Market News

Vertical lines indicate beginning (7/97) and end (9/01) of Northeast Dairy Compact.

Table 1: Hartford and Boston Retail Milk Prices and Raw Fluid Milk Prices

January 1996 - April 2003				
	Hartford Class I & Compact	Hartford Retail Price	Boston Class I & Compact	Boston Retail Price
	Per gallon	Per gallon	Per gallon	Per gallon
Jan'96	1.38	2.38	1.39	2.37
Feb	1.38	2.40	1.39	2.38
Mar	1.36	2.41	1.37	2.41
Apr	1.35	2.40	1.36	2.40
May	1.36	2.40	1.37	2.39
Jun	1.41	2.42	1.40	2.41
Jul	1.45	2.44	1.46	2.43
Aug	1.47	2.46	1.48	2.38
Sep	1.52	2.45	1.52	2.39
Oct	1.55	2.46	1.56	2.43
Nov	1.59	2.50	1.60	2.45
Dec	1.49	2.50	1.49	2.41
Jan'97	1.27	2.51	1.28	2.42
Feb	1.25	2.49	1.25	2.45
Mar	1.30	2.49	1.31	2.45
Apr	1.34	2.49	1.35	2.45
May	1.34	2.49	1.35	2.45
Jun	1.25	2.49	1.26	2.44
Jul	1.46	2.68	1.46	2.64
Aug	1.46	2.68	1.46	2.63
Sep	1.46	2.68	1.46	2.63
Oct	1.46	2.68	1.46	2.62
Nov	1.46	2.68	1.46	2.63
Dec	1.46	2.68	1.46	2.63
Jan'98	1.46	2.68	1.46	2.60
Feb	1.46	2.68	1.46	2.59
Mar	1.46	2.68	1.46	2.60
Apr	1.46	2.69	1.46	2.60
May	1.46	2.68	1.46	2.60
Jun	1.46	2.61	1.46	2.54
Jul	1.46	2.60	1.46	2.55
Aug	1.46	2.60	1.46	2.57
Sept	1.54	2.61	1.55	2.58
Oct	1.56	2.64	1.57	2.58
Nov	1.57	2.66	1.58	2.58
Dec	1.65	2.74	1.66	2.71

(continues)

Table 1. (continued)

	January 1996 - April 2003			
	Hartford Class I & Compact	Hartford Retail Price	Boston Class I & Compact	Boston Retail Price
	Per gallon	Per gallon	Per gallon	Per gallon
Jan'99	1.72	2.89	1.73	2.89
Feb	1.76	2.89	1.77	2.89
Mar	1.67	2.88	1.68	2.81
Apr	1.46	2.73	1.46	2.67
May	1.46	2.67	1.46	2.72
June	1.46	2.68	1.46	2.72
July	1.46	2.64	1.46	2.72
August	1.46	2.63	1.46	2.64
Sept	1.46	2.70	1.46	2.66
Oct	1.63	2.87	1.64	2.91
Nov	1.67	2.95	1.68	2.89
Dec	1.46	2.91	1.46	2.83
Jan'00	1.46	2.91	1.46	2.92
Feb	1.46	2.84	1.46	2.85
Mar	1.46	2.81	1.46	2.83
Apr	1.46	2.79	1.46	2.81
May	1.46	2.82	1.46	2.84
Jun	1.46	2.83	1.46	2.83
Jul	1.46	2.85	1.46	2.82
August	1.46	2.84	1.46	2.85
Sept	1.46	2.83	1.46	2.82
Oct	1.46	2.83	1.46	2.82
Nov	1.46	2.87	1.46	2.87
Dec	1.46	2.94	1.46	2.88
Jan'01	1.47	2.87	1.48	2.90
Feb	1.46	2.94	1.46	2.92
Mar	1.46	2.90	1.46	2.90
Apr	1.46	2.96	1.46	2.94
May	1.49	2.98	1.50	2.95
Jun	1.56	2.98	1.57	2.98
Jul	1.59	3.01	1.60	3.01
August	1.60	3.00	1.60	3.02
Sept	1.61	3.06	1.62	3.08
Oct	1.64	3.07	1.65	3.08
Nov	1.63	3.10	1.63	3.08
Dec	1.30	3.00	1.31	2.99

(continues)

Table 1. (continued)

January 1996 - April 2003				
	Hartford Class I & Compact	Hartford Retail Price	Boston Class I & Compact	Boston Retail Price
	Per gallon	Per gallon	Per gallon	Per gallon
Jan'02	1.30	3.01	1.31	2.99
Feb	1.30	3.00	1.31	2.98
Mar	1.27	3.00	1.28	2.99
Apr	1.26	2.99	1.27	2.99
May	1.24	2.99	1.25	2.99
Jun	1.22	2.99	1.23	2.99
Jul	1.18	2.99	1.19	2.99
August	1.17	2.99	1.18	2.97
Sept	1.17	2.99	1.18	2.97
Oct	1.14	2.99	1.15	2.97
Nov	1.18	2.99	1.19	2.97
Dec	1.18	2.99	1.18	2.97
Jan'03	1.18	2.99	1.19	2.97
Feb	1.15	2.99	1.16	2.97
Mar	1.11	2.99	1.12	2.97
Apr	1.10	N/A	1.11	N/A

Source: Data from Order One Market Administrator and Dairy Market News

Note: Northeast Dairy Compact began 7/97 and ended 9/01

Appendix C

Actual Retail, Estimated Wholesale, and Actual Raw Milk Prices
by Type and Brand of Milk: Stop & Shop, Shaw's, Big Y, and A&P

March 2003

Table C1: Stop & Shop Private Label Milk Prices, March 2003, Dean Food's Production at Franklin Mass. Plant

	Types of Milk				
	Average	Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.492	0.492	0.492	0.492	0.492
Wholesale Price	1.554	1.706	1.593	1.500	1.418
Wholesale Percent Markup	150.9%	144.4%	149.1%	153.8%	158.7%
Wholesale Dollar Gross Margin	0.525	0.525	0.525	0.525	0.525
Wholesale Percent Gross Margin	33.8%	30.7%	32.9%	35.0%	37.0%
Retail Price (Private Label 3/29/03)	2.969	2.990	2.976	2.961	2.947
Retail Percent Markup	191.0%	175.2%	186.8%	197.4%	207.9%
Retail Dollar Gross Margin	1.414	1.284	1.383	1.461	1.529
Retail Percent Gross Margin	47.6%	42.9%	46.5%	49.3%	51.9%

Table C2: Stop & Shop Garelick Milk Prices, March 2003, Dean Foods Production at Franklin Mass. Plant

	Types of Milk				
	Average	Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.492	0.492	0.492	0.492	0.492
Wholesale Price	1.554	1.706	1.593	1.500	1.418
Wholesale Percent Markup	150.9%	144.4%	149.1%	153.8%	158.7%
Wholesale Dollar Gross Margin	0.525	0.525	0.525	0.525	0.525
Wholesale Percent Gross Margin	33.8%	30.7%	32.9%	35.0%	37.0%
Retail Price (Private Label 3/29/03)	3.390	3.390	3.390	3.390	3.390
Retail Percent Markup	218.1%	198.7%	212.8%	226.0%	239.1%
Retail Dollar Gross Margin	1.836	1.684	1.797	1.890	1.972
Retail Percent Gross Margin	54.2%	49.7%	53.0%	55.7%	58.2%

Table C3: Stop & Shop Hood Milk Prices, March 2003, Production at Agawam Mass. Plant

	Types of Milk				
	Average	Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.051	1.203	1.090	0.997	0.915
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.609	0.609	0.609	0.609	0.609
Wholesale Price	1.693	1.845	1.732	1.639	1.556
Wholesale Percent Markup	161.0%	153.3%	158.9%	164.4%	170.2%
Wholesale Dollar Gross Margin	0.642	0.642	0.642	0.642	0.642
Wholesale Percent Gross Margin	37.9%	34.8%	37.1%	39.2%	41.2%
Retail Price (Private Label 3/29/03)	3.604	3.604	3.604	3.604	3.604
Retail Percent Markup	212.9%	195.3%	208.1%	219.9%	231.6%
Retail Dollar Gross Margin	1.911	1.759	1.872	1.965	2.048
Retail Percent Gross Margin	53.0%	48.8%	52.0%	54.5%	56.8%

Table C4: Shaw's Private Label Milk Prices, March 2003

	Average	Types of Milk			
		Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.583	0.583	0.583	0.583	0.583
Wholesale Price	1.645	1.797	1.684	1.591	1.508
Wholesale Percent Markup	159.8%	152.1%	157.6%	163.1%	168.9%
Wholesale Dollar Gross Margin	0.615	0.615	0.615	0.615	0.615
Wholesale Percent Gross Margin	37.4%	34.2%	36.5%	38.7%	40.8%
Retail Price (Private Label 3/29/03)	2.990	2.990	2.990	2.990	2.990
Retail Percent Markup	181.8%	166.4%	177.6%	187.9%	198.2%
Retail Dollar Gross Margin	1.345	1.193	1.306	1.399	1.482
Retail Percent Gross Margin	45.0%	39.9%	43.7%	46.8%	49.6%

Table C5: Shaw's Garelick Milk Prices, March 2003

	Average	Types of Milk			
		Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.583	0.583	0.583	0.583	0.583
Wholesale Price	1.645	1.797	1.684	1.591	1.508
Wholesale Percent Markup	159.8%	152.1%	157.6%	163.1%	168.9%
Wholesale Dollar Gross Margin	0.615	0.615	0.615	0.615	0.615
Wholesale Percent Gross Margin	37.4%	34.2%	36.5%	38.7%	40.8%
Retail Price (Private Label 3/29/03)	3.490	3.490	3.490	3.490	3.490
Retail Percent Markup	212.2%	194.2%	207.3%	219.4%	231.4%
Retail Dollar Gross Margin	1.845	1.693	1.806	1.899	1.982
Retail Percent Gross Margin	52.9%	48.5%	51.8%	54.4%	56.8%

Table C6: Shaw's Hood Milk Prices, March 2003, Production at Agawam Mass. Plant

	Average	Types of Milk			
		Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.051	1.203	1.090	0.997	0.915
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.609	0.609	0.609	0.609	0.609
Wholesale Price	1.693	1.845	1.732	1.639	1.556
Wholesale Percent Markup	161.0%	153.3%	158.9%	164.4%	170.2%
Wholesale Dollar Gross Margin	0.642	0.642	0.642	0.642	0.642
Wholesale Percent Gross Margin	37.9%	34.8%	37.1%	39.2%	41.2%
Retail Price (Private Label 3/29/03)	3.690	3.690	3.690	3.690	3.690
Retail Percent Markup	218.0%	200.0%	213.1%	225.2%	237.1%
Retail Dollar Gross Margin	1.997	1.845	1.958	2.051	2.134
Retail Percent Gross Margin	54.1%	50.0%	53.1%	55.6%	57.8%

Table C7: Big Y Private Label Milk Prices, March 2003, Guida's Production at New Briton, Conn. Plant

	Types of Milk				
	Average	Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.038	1.190	1.077	0.984	0.902
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.625	0.625	0.625	0.625	0.625
Wholesale Price	1.696	1.848	1.735	1.642	1.559
Wholesale Percent Markup	163.3%	155.2%	161.1%	166.8%	172.9%
Wholesale Dollar Gross Margin	0.658	0.658	0.658	0.658	0.658
Wholesale Percent Gross Margin	38.8%	35.6%	37.9%	40.1%	42.2%
Retail Price (Private Label 3/29/03)	2.990	3.040	3.007	2.973	2.940
Retail Percent Markup	176.3%	164.5%	173.3%	181.1%	188.5%
Retail Dollar Gross Margin	1.294	1.192	1.272	1.331	1.381
Retail Percent Gross Margin	43.3%	39.2%	42.3%	44.8%	47.0%

Table C8: Big Y Guida Milk Prices, March 2003, Guida's Production at New Briton, Conn. Plant

	Types of Milk				
	Average	Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.038	1.190	1.077	0.984	0.902
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.625	0.625	0.625	0.625	0.625
Wholesale Price	1.696	1.848	1.735	1.642	1.559
Wholesale Percent Markup	163.3%	155.2%	161.1%	166.8%	172.9%
Wholesale Dollar Gross Margin	0.658	0.658	0.658	0.658	0.658
Wholesale Percent Gross Margin	38.8%	35.6%	37.9%	40.1%	42.2%
Retail Price (Private Label 3/29/03)	3.290	3.290	3.290	3.290	3.290
Retail Percent Markup	194.0%	178.0%	189.7%	200.4%	211.0%
Retail Dollar Gross Margin	1.594	1.442	1.555	1.648	1.731
Retail Percent Gross Margin	48.5%	43.8%	47.3%	50.1%	52.6%

Table C9: Big Y Hood Milk Prices, March 2003, Production at Agawam Mass. Plant

	Types of Milk				
	Average	Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.051	1.203	1.090	0.997	0.915
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.609	0.609	0.609	0.609	0.609
Wholesale Price	1.693	1.845	1.732	1.639	1.556
Wholesale Percent Markup	161.0%	153.3%	158.9%	164.4%	170.2%
Wholesale Dollar Gross Margin	0.642	0.642	0.642	0.642	0.642
Wholesale Percent Gross Margin	37.9%	34.8%	37.1%	39.2%	41.2%
Retail Price (Private Label 3/29/03)	2.500	2.500	2.500	2.500	2.500
Retail Percent Markup	147.7%	135.5%	144.4%	152.5%	160.6%
Retail Dollar Gross Margin	0.807	0.655	0.768	0.861	0.944
Retail Percent Gross Margin	32.3%	26.2%	30.7%	34.4%	37.7%

Table C10: A&P Private Label Milk Prices, March 2003, Dean Food's Production at Franklin Mass. Plant

	Types of Milk				
	Average	Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.583	0.583	0.583	0.583	0.583
Wholesale Price	1.645	1.797	1.684	1.591	1.508
Wholesale Percent Markup	159.8%	152.1%	157.6%	163.1%	168.9%
Wholesale Dollar Gross Margin	0.615	0.615	0.615	0.615	0.615
Wholesale Percent Gross Margin	37.4%	34.2%	36.5%	38.7%	40.8%
Retail Price (Private Label 3/29/03)	2.623	2.990	2.500	2.500	2.500
Retail Percent Markup	159.4%	166.4%	148.5%	157.1%	165.7%
Retail Dollar Gross Margin	0.977	1.193	0.816	0.909	0.992
Retail Percent Gross Margin	37.3%	39.9%	32.6%	36.4%	39.7%

Table C11: A&P Garelick Milk Prices, March 2003, Dean Foods Production at Franklin Mass. Plant

	Types of Milk				
	Average	Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.030	1.182	1.068	0.976	0.893
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.583	0.583	0.583	0.583	0.583
Wholesale Price	1.645	1.797	1.684	1.591	1.508
Wholesale Percent Markup	159.8%	152.1%	157.6%	163.1%	168.9%
Wholesale Dollar Gross Margin	0.615	0.615	0.615	0.615	0.615
Wholesale Percent Gross Margin	37.4%	34.2%	36.5%	38.7%	40.8%
Retail Price (Private Label 3/29/03)	3.290	3.290	3.290	3.290	3.290
Retail Percent Markup	200.0%	183.1%	195.4%	206.8%	218.1%
Retail Dollar Gross Margin	1.645	1.493	1.606	1.699	1.782
Retail Percent Gross Margin	50.0%	45.4%	48.8%	51.6%	54.2%

Table C12: A&P Hood Milk Prices, March 2003, Production at Agawam Mass. Plant

	Types of Milk				
	Average	Whole	2%	1%	Skim
Class 1 plus Premium Raw Milk Price	1.051	1.203	1.090	0.997	0.915
Other Raw Milk Costs	0.033	0.033	0.033	0.033	0.033
Processing & Delivery Cost	0.609	0.609	0.609	0.609	0.609
Wholesale Price	1.693	1.845	1.732	1.639	1.556
Wholesale Percent Markup	161.0%	153.3%	158.9%	164.4%	170.2%
Wholesale Dollar Gross Margin	0.642	0.642	0.642	0.642	0.642
Wholesale Percent Gross Margin	37.9%	34.8%	37.1%	39.2%	41.2%
Retail Price (Private Label 3/29/03)	3.640	3.640	3.640	3.640	3.640
Retail Percent Markup	215.0%	197.3%	210.2%	222.1%	233.9%
Retail Dollar Gross Margin	1.947	1.795	1.908	2.001	2.084
Retail Percent Gross Margin	53.5%	49.3%	52.4%	55.0%	57.2%

Appendix D

Analysis of Retail Pricing Under the Proposed Connecticut
Efficient and Fair Milk Pricing Law

APPENDIX D: THE THEORY OF PRICING UNDER THE PROPOSED
CONNECTICUT FAIR PRICING LAW

(Revised 4/23/03)

Introduction

In this appendix we develop the theory of pricing for a differentiated product, milk, under the proposed law. Assuming only that firms maximize profits we identify the conditions that are necessary for retail milk prices to decrease and for wholesale and farm milk prices to increase. Current economic conditions in fact combine with this general economic model to predict that these price changes would occur if the law were implemented today.

We start by analyzing the retail monopoly case and then generalize it to Nash–Bertrand competition in retail oligopoly model. Next we discuss deviation from Nash–Bertrand pricing in the oligopoly context. Finally, we explain how the same models apply at the processor level and show how the law would generate increased wholesale and raw milk prices under current market conditions.

Case 1: Retail Monopoly

We start this analysis with the proposed law's retail price collar in general form by assuming $P = kP_w$. P is retail milk price, P_w is wholesale milk price, and k is the price collar that takes value greater than 1. For example, k is 1.3 in the proposed pricing law. We also assume the price collar is binding. Otherwise, the analysis of this price collar would not be meaningful. The retail monopoly case is more general than it sounds because retailers are differentiated by geographic space, store format and services. Once a consumer is at a store their demand for milk from that store is even less elastic. These

conditions imply that inter-chain own price elasticities are low, i.e. individual chains face downward sloping demand curves. See Cotterill and Dhar (2003) for actual estimation of inter-chain elasticities. They range from -1.33 to -1.53 across 5 chains in Boston. For example, if Stop and Shop raised the price of all milk brands (Hood, Garelick, and Private Label) in its Boston IRI market stores 1%, it loses only 1.36% volume. These empirical results provide support for a retail monopoly analysis that others such as Slade (1995) have assumed to be the relevant case.

We assume that supermarket chains apply category management techniques, i.e. they seek to maximize profit:

$$\max_P \quad \pi = (P - AC)Q = [P - P_W - C]Q$$

where $AC = \text{Constant Average Cost} = \text{Constant Marginal Cost} = P_W + C$

$C = \text{the non-milk component of retailer's unit costs}$

$Q = f(P)$ is the demand curve for milk; $\frac{\partial Q}{\partial P} < 0$

$P_W = \text{Wholesale price after the law is implemented}$

Now define a new variable $P_N = (1 - \frac{1}{k})P = P - P_W$, then the new profit maximization

problem becomes:

$$\begin{aligned} \max_{P_N} \quad & \pi = (P - AC)Q = [P_N - C]Q \\ \text{s.t.} \quad & Q = f(P_N) \end{aligned}$$

In this new problem, we can see that the slope of the new demand function becomes much flatter because the slope decreases by $\frac{k}{k-1} - 1$. For example, if $k = 1.3$, then the slope of

the demand $-\frac{\partial Q}{\partial P}$ becomes $-4.33 \frac{\partial Q}{\partial P}$. Also note that P_W now is determined when one determines P .

The solution to the profit maximization problem after the law is implemented is:

$$(1) \quad P_N^* = \frac{k-1}{k} P^* = \frac{\varepsilon_N}{1+\varepsilon_N} C$$

where ε_N is the demand elasticity at the optimal retail price level, P_N^* .

We know that the profit maximizing retail price before the law is:

$$(2) \quad P_B^* = \frac{\varepsilon_B}{1+\varepsilon_B} (C + P_W^B)$$

where P_W^B is the wholesale milk price before the law is implemented and ε_B is the demand elasticity at the optimal retail price level, P_B^* .

From (1) and (2) we can derive the following relation between P_B and P (3):

$$(3) \quad P_B^* - P^* = \frac{\varepsilon_B}{1+\varepsilon_B} (C + P_W^B) - \frac{k}{k-1} \frac{\varepsilon_N}{1+\varepsilon_N} C$$

If one assumes that the retail price before and after the law is the same, then

$$(4) \quad \varepsilon_N = \frac{\partial Q}{\partial P_N} \frac{P_N}{Q} = \frac{\partial Q}{\partial P} \frac{\partial P}{\partial P_N} \frac{k-1}{k} \frac{P}{Q} = \frac{\partial Q}{\partial P} \frac{k}{k-1} \frac{k-1}{k} \frac{P}{Q} = \frac{\partial Q}{\partial P} \frac{P}{Q} = \varepsilon_B$$

(4) tells that if there is no price change in prices, then the demand elasticities before and after will also be the same. Equating (3) to 0 and substituting (4) into it give:

$$(5) \quad \frac{C}{P_W^B} = k - 1$$

(5) states that when the ratio of non-milk unit costs over the pre-law wholesale milk price is equal to $k - 1$ (0.3 if a 130% collar is assumed), we can expect no change in retail milk

price after the law is imposed. If the ratio is smaller (greater) than $k - 1$, the retail milk price will become lower (higher).

The non-milk cost of selling a unit of milk primarily includes electricity cost, in-cooler labor cost, interest on working capital, and the labor cost needed to check out a gallon of milk. If this cost is less than 30% of the current pre-law wholesale milk price, then we expect supermarkets to lower retail prices after the law is implemented

For March 2003 the wholesale milk price for all milk is approximately \$1.6 per gallon (this report, Figure 3, column 1). Our pricing rule predicts that if the non-milk cost per gallon of selling milk is less than 30% of this price, i.e. less than 48 cents, then retail price will drop. For different types of milk (whole, 2%, 1%, and slim) and different brands non-milk retail costs may not vary, but a supermarket wholesale price will. Nonetheless, on average this analysis holds.

A big question is are non-milk retailing costs below cents per gallon? We have three sources on the level of non-milk costs at retail. The Maine Milk Commission cites work by George Criner, University of Maine that is based on the accounting records of four chain supermarket stores (2 Hannaford's Shop and Save and 2 Shaws). Criner found that all non-milk costs in these stores (i.e. no allocation for a profit) are 19.7 cents per gallon (Maine Milk Commission, 01-015 Chapter 27, P 2)¹.

Another source is the Pennsylvania Milk Marketing Board. In its August 2, 200 meeting they found that in-store retail costs are approximately 10 cents per quart (PMMB, P 17). The Board also adds to this cost 2.5% of retail price as an allowable net profit margin when establishing its minimum retail prices.

¹ He also computed in-store non-milk costs for half/gallons and quarts. They are 11 and 9.3 cents respectively.

Finally in New York the Department of Agriculture and Markets adjusts the 1984 Aplin and German in-store estimates to account for inflation and other changes. As of June 2001 they estimate that in-store milk retailing costs for chain supermarkets range from 33.7 to 44.2 cents per gallon. They add 3% of retail sales prices to them for net profits to obtain an allowable total retail margin. The profit estimate is 7.9 cents for a retail price at \$2.57 per gallon and 9.3 cents if retail price is \$3.09 per gallon (Huff, 4/17/03, P 23).

Based on these studies we conclude that the non-milk cost per gallon in Connecticut supermarket is less than 48 cents per gallon. Therefore we predict that Connecticut supermarkets will cut price if the proposed policy becomes law.

A second critical question that requires analysis is how will the law affect the wholesale milk price? The post-law wholesale milk prices will be greater than the pre-law wholesale milk price if the post-law retail price is greater than kP_W^B , where P_W^B is the pre-law wholesale price.

One can apply this result to the March 2003 all milk wholesale price from Figure 3, column 1 in this report, \$1.60 per gallon and $k = 1.3$ as recommended in this report. If the post-law retail price is above $kP_W^B = 1.3 * 1.60 = \$2.08$ per gallon, the resulting wholesale price will be higher than the pre-law wholesale price. If the retail price is below \$2.08 per gallon, then the post-law wholesale price is lower.

At this juncture the critical question becomes the following. Is the post-law retail price greater than \$2.08 per gallon? If it is, wholesale prices are higher than pre-law wholesale prices. One can use a more detailed version of (5) to answer this question.

Substituting $P_W = \frac{1}{k-1} \frac{\varepsilon_N}{1+\varepsilon_N} C$ into $P_W - P_W^B$ and solving for $P_W - P_W^B = 0$, one obtains

the following:

$$(6) \quad \frac{C}{P_W} = \frac{1+\varepsilon_N}{\varepsilon_N} (k-1)$$

For different values of own price demand elasticity, ε_N , pre-law wholesale prices P_W^B , and the price collar, k , we can compute using the values that the non-milk cost (C) must exceed to generate an elevation of the post-law wholesale milk price.

Table D-1: Non-Milk Cost Values for Alternative Values of Own Price Demand Elasticity to Guarantee that Post-Law Wholesale Milk Price is Greater than Pre-Law Wholesale Milk Prices (Given $k = 1.3$)

Own Price Demand Elasticity		Non-Milk Cost (C) must be above
Scenario 1: $P_W^B = \$1.60$	Scenario 2: $P_W^B = \$2.10$	
16.00	3.50	0.45
6.00	2.74	0.40
3.69	2.25	0.35
2.67	1.91	0.30
2.09	1.66	0.25
1.71	1.47	0.20
1.45	1.31	0.15
1.26	1.19	0.10
1.12	1.09	0.05

Table D-1 reports the results of this analysis. The first two columns show different values of own price elasticity in two scenarios. The third column is the values that non-milk cost (C) must exceed at different elasticities in each scenario to generate an elevation of the post-law wholesale milk price. As mentioned earlier Cotterill and Dhar estimate that supermarket chain own price demand elasticities in Boston for milk range in absolute value between 1.33 and 1.53. If initial wholesale price is \$1.60 per gallon (Scenario 1),

one finds that non–milk cost must be greater than \$0.105 to \$0.158 for wholesale price elevation to occur.

Scenario 2 in Table D–1 uses a higher retail wholesale price. If processors elevate wholesale price to \$2.10 per gallon by paying farmers premiums to continue to cover their processing margin then the initial wholesale price is \$2.10. Note in column 3 of Table D–1 that non–milk cost must now be greater than \$0.152 to \$0.209 for wholesale price elevation to be part of a retailer’s profit maximization adjustment to the law. An important implication follows. **If processors raise wholesale prices to comply with the law’s wholesale price collar, it is less likely that retailers will raise wholesale prices to comply with the retail price collar.**

In conclusion, we find the following. If the initial wholesale price is \$1.60 per gallon then non–milk cost (C) must be less than 48 cents per gallon to generate a drop in retail price and C must be greater than approximately 16 cents per gallon to generate an increase in wholesale milk prices. If the initial wholesale price is \$2.10 per gallon because processors have paid premiums to comply with the law then non–milk cost (C) must be less than 63 cents per gallon to generate a drop in retail prices and MC must be greater than approximately 21 cents per gallon to generate an increase in wholesale milk prices. We predict that retailers will drop retail prices and increase wholesale prices. A drive for increased wholesale prices will, as we show below, also come from processors.

Case 2: Retail Oligopoly

A more general model of competition among supermarkets chains for milk shoppers explicitly incorporates cross–chain substitubility for milk purchases. We illustrate the

implication of the law with a 2-brand case. Assuming product differentiation and linear demand for simplicity, demand functions are as follows:

$$Q_1 = a_1 - b_1P_1 + c_1P_2$$

$$Q_2 = a_2 - b_2P_2 + c_2P_1$$

where Q_1 , Q_2 , P_1 , and P_2 are demand quantities and prices for brand 1 and 2 respectively.

Assuming Bertrand competition, the first order conditions of the profit maximization problems for each firm is:

$$(7a) \quad P_1 = \frac{a_1 + c_1P_2 + b_1AC_1}{2b_1}$$

$$(7b) \quad P_2 = \frac{a_2 + c_2P_1 + b_2AC_2}{2b_2}$$

Using the similar approach in Case 1, one can derive the conditions for how the retail prices react after the implementation of the law:

$$(8a) \quad \frac{b_2c_1C_2 + 2b_1b_2C_1}{(b_2c_1 + 2b_1b_2)P_w} = k - 1$$

$$(8b) \quad \frac{b_1c_2C_1 + 2b_1b_2C_2}{(b_1c_2 + 2b_1b_2)P_w} = k - 1$$

If we assume C_1 and C_2 are not much different, that is, firms have similar non-milk cost structures, then we can use the average of C_1 and C_2 to approximate them:

$$(9) \quad C = \frac{C_1 + C_2}{2}$$

and thus $C_1 = C + \varepsilon_1$ and $C_2 = C + \varepsilon_2$. Substituting C_1 and C_2 into (8a) and (8b) gives:

$$(10a) \quad \frac{b_1c_2(C + \varepsilon_1) + 2b_1b_2(C + \varepsilon_2)}{(b_1c_2 + 2b_1b_2)P_w} = \frac{C}{P_w} + \frac{b_1c_2\varepsilon_1 + 2b_1b_2\varepsilon_2}{(b_1c_2 + 2b_1b_2)P_w} = k - 1$$

$$(10b) \quad \frac{b_2 c_1 (C + \varepsilon_2) + 2b_1 b_2 (C + \varepsilon_1)}{(b_2 c_1 + 2b_1 b_2) P_w} = \frac{C}{P_w} + \frac{b_2 c_1 \varepsilon_2 + 2b_1 b_2 \varepsilon_1}{(b_2 c_1 + 2b_1 b_2) P_w} = k - 1$$

As long as ε_1 and ε_2 are very small, then (10a) and (10b) converge to (5), and we still can use (5) to evaluate the post-law scenarios without losing much accuracy.

This result indicates that the only difference between the Nash–Bertrand oligopoly model and the retail monopoly model is the possibility of different supermarket level non-milk costs. On the demand side assuming Nash–Bertrand conjectures, reduces that firm’s demand relationship to the retail monopoly case. The wholesale cost analysis of the prior section also holds as long as in-store non-milk costs (C) are similar across stores. The multi-brand case can be generalized from the two-brand case, and the results are the same if chains have similar variable cost structures.

Case 3: Retail Oligopoly (collusive milk pricing, i.e. non-independent pricing by retail chain)

We rule this case out for two reasons. First, virtually all market research on the market level price elasticity of demand for milk find inelastic demand. If fully collusive pricing exists among sellers they would elevate prices to the elastic portion of the market demand curve. Since that has not happened, the Nash–Bertrand model is more appropriate. Also, if supermarket chains respond to the proposed law by pricing in a more collusive fashion and elevating retail prices, the legislature could revisit milk pricing and impose a price ceiling. This policy response possibility would be real if the current bill becomes law and would be a deterrent to collusive conduct. After all, the current bill is before the legislature because current milk prices are deemed too high.

Case 4: Processor Monopoly

Hood, Garelick, and Private Label milk have negatively sloped demand curves at retail because they are differentiated products. Cotterill and Franklin (2001) have estimated these demand curves at the market level. The corresponding derived demand curves at the wholesale level also have slope. This means that the same economic models we use at retail can be applied at wholesale. The price impact equation that corresponds to (5) is:

$$(11) \quad \frac{C_P}{P_{RAW}^B} = m - 1$$

where C_P is the non-milk unit cost of processing and delivering milk to retailers, P_{RAW}^B is the pre-law price processors pay for raw milk, and m is the wholesale price collar (1.4).

Non-milk unit costs for processors currently range from 52 to 66 cents per gallon and the raw milk price is approximately \$1.04 per gallon. Since $\frac{0.52}{1.04} = 0.5$ is greater than $1.4 - 1 = 0.4$, processors increase their post-law profits by elevating the wholesale price. Since the farm price is linked to this price by the collar, it also increases.

Case 5: Processor Oligopoly: Nash-Bertrand Pricing

The analytical results from the retail oligopoly case hold here. To the extent that non-milk marginal costs are the same across processors the processor monopoly results hold.

Case 5: Processor Oligopoly: Collusive Pricing

The results are again the same as retail.

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Appendix E

New York State Law Materials



STATE OF NEW YORK
DEPARTMENT OF AGRICULTURE & MARKETS
1 WINNERS CIRCLE
ALBANY, NEW YORK 12235
<http://www.agmkt.state.ny.us>

Division of Milk Control and Dairy Services
518-457-1772
518-485-8730 FAX

April 1, 2003

Ronald W. Cotterill, Director
Food Marketing Policy Center
University of Connecticut
Storrs, CT 06269 - 4021

Dear Dr. Cotterill:

New York's milk price gouging law applies to the retail sale of fluid milk in consumer packages. Whenever the retail price exceeds 200% of the farm price for Class I milk, the Commissioner has the responsibility to investigate and determine whether or not such price appears unconscionably excessive.

The Department calculates and announces monthly the 200% price which is known as the "threshold price". It is established for two broad regions of the state for a quart, half gallon and gallon container. Attached is the calculation for March 2003 and announcement letter. The base price is the federal order minimum for Class 1 milk at the indicated market location. In addition, the calculation includes an estimate of the average premium being paid by key handlers who sell milk in the region. Per your request, I also calculated what the threshold price would be for Connecticut based on our law and methodology.

It is not a per se violation to sell above the threshold price. If a price above the threshold is challenged, a retailer is given the opportunity to demonstrate that its prices are not unconscionably excessive or reduce its prices. Such justification needs to demonstrate that the store's gross margin (selling price minus invoice price) is not unconscionably excessive when measured against in-store handling and selling costs, including a reasonable profit, on milk. Justification must be in light of the net invoice price paid for the milk item and the actual cost per unit to handle and sell it.

As you can see, the focus of our law is on the retailer and not the processor. In addition, our law is not as precise in defining what constitutes an unconscionably excessive price as your proposed legislation concerning The Fair Pricing of Milk. In our state, whether a price is unconscionably excessive is a question of law for the court.

We have had significant compliance with our law evidenced by the attached retail graphs that track gallon retail price against raw milk cost and retail price against threshold price.

If you have any questions or would like additional information, please call me at 518-457-5731.

Sincerely,

Charles Huff
Chief, Licensing & Auditing

Via email

THRESHOLD PRICE CALCULATION FOR NEW YORK STATE

(1) Threshold price: MAR 2003

	Cwt.	Cwt.	Gal	Hgal	Qt
	Metro	Upstate			
Base price: at NYC and Syracuse					
Class 1 at 3.5% bf	12.96	12.31			
Est. premium	1.20	0.90			
Total base	14.16	13.21			
Preliminary Threshold					
Metro	28.32		2.44	1.22	0.61
Upstate		26.42	2.27	1.14	0.57
Adjustment to align hgal & qt to gal				0.05	0.06
Threshold					
Metro			2.44	1.27	0.67
Upstate			2.27	1.19	0.63

THRESHOLD PRICE CALCULATION FOR CONNECTICUT BASED ON NEW YORK PROCEDURE

	Cwt.	Gal	Hgal	Qt
Base price: at Hartford				
Class 1 at 3.5% bf	12.96			
Est. premium *	1.10			
Total base	14.06			
Preliminary Threshold	28.12	2.42	1.21	0.60
Adjustment to align hgal & qt to gal			0.05	0.06
Threshold		2.42	1.26	0.66

* based on amount provided by Ron Cotterill, University of Connecticut, 4/1/03



STATE OF NEW YORK
DEPARTMENT OF AGRICULTURE AND MARKETS
I WINNERS CIRCLE
ALBANY, NEW YORK 12235

DIVISION OF MILK CONTROL AND DAIRY SERVICES
518-457-5731

TO: Retailers of Milk
DATE: March 21, 2003
SUBJECT: Announcement of threshold price relative to milk price gouging law,
effective APRIL 2003

THRESHOLD PRICE

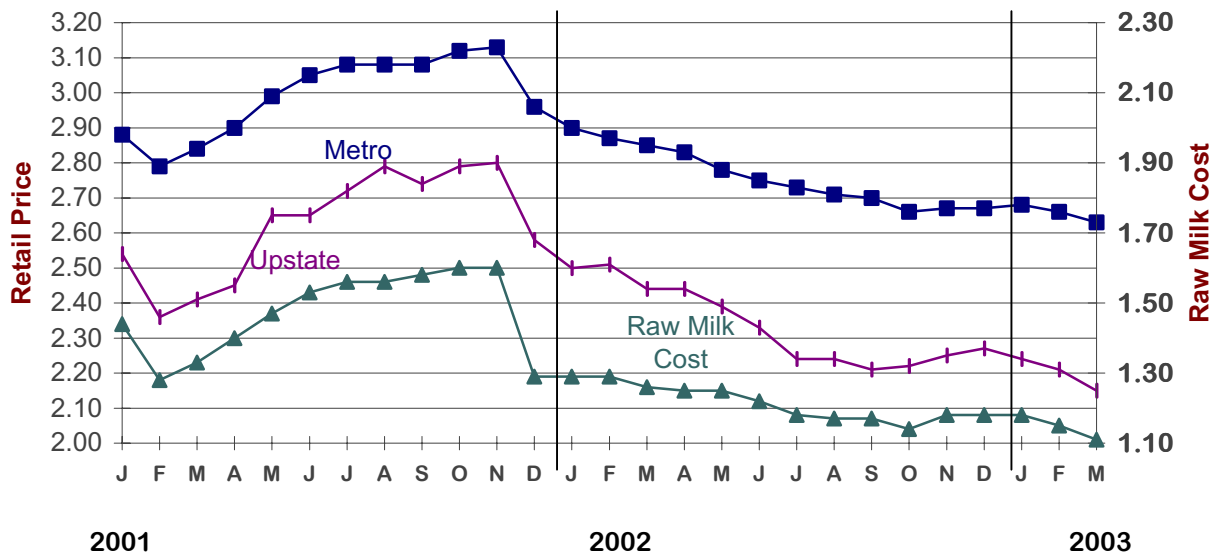
Threshold prices are unchanged from the previous month. For **APRIL 2003**, threshold prices for milk, lowfat milk, or skim milk offered for retail sale in the state are:

	<u>Gallon</u>	Half <u>Gallon</u>	<u>Quart</u>
Metro Region: (NYC and Counties of Nassau, Suffolk, Rockland, Westchester, Orange, Putnam and Dutchess)	\$2.44	\$1.27	\$.67
Upstate Region: (Remaining Counties)	\$2.27	\$1.19	\$.63

A retailer who sells above the threshold price may be in violation of the law unless such selling price is justified as not being unconscionably excessive. Such justification includes net invoice price paid for the milk item plus actual costs incurred in handling and selling that milk item.

Please be advised that the threshold price is only changed if there is at least a \$0.02 per gallon (\$0.23/cwt) change in the underlying price for Class 1 (fluid) milk at 3.5% butterfat from the previous month the threshold was calculated on, March (federal order Class 1 price: \$12.96 per cwt. at NYC and \$12.31 at Syracuse).

Retail Price vs Raw Milk Cost Gallon Milk - 1/01 - 03/03



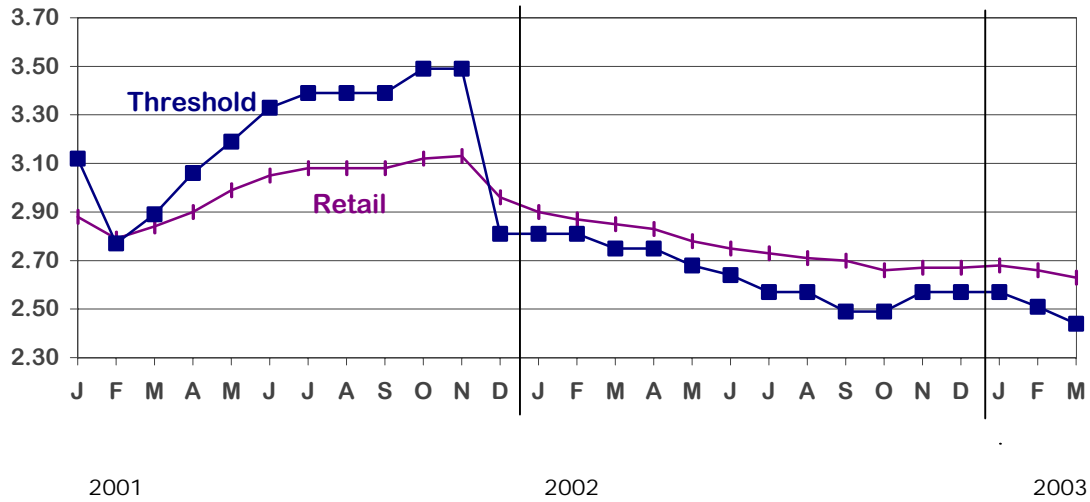
Raw milk cost = Class I price, Northeast Order @ Syracuse, adj. for bf, plus es premium.

	Metro Retail	Upstate Retail	Raw Milk Cost		Metro Retail	Upstate Retail	Raw Milk Cost		Metro Retail	Upstate Retail	Raw Milk Cost
2001				2002				2003			
J	2.88	2.54	1.44	J	2.90	2.50	1.29	J	2.68	2.24	1.18
F	2.79	2.36	1.28	F	2.87	2.51	1.29	F	2.66	2.21	1.15
M	2.84	2.41	1.33	M	2.85	2.44	1.26	M	2.63	2.15	1.11
A	2.90	2.45	1.40	A	2.83	2.44	1.25	A			
M	2.99	2.65	1.47	M	2.78	2.39	1.23	M			
J	3.05	2.65	1.53	J	2.75	2.33	1.22	J			
J	3.08	2.72	1.56	J	2.73	2.24	1.18	J			
A	3.08	2.79	1.56	A	2.71	2.24	1.17	A			
S	3.08	2.74	1.58	S	2.70	2.21	1.17	S			
O	3.12	2.79	1.60	O	2.66	2.22	1.14	O			
N	3.13	2.80	1.60	N	2.67	2.25	1.18	N			
D	2.96	2.58	1.29	D	2.67	2.27	1.18	D			
Ann. Avg.	2.99	2.62	1.47	Ann. Avg.	2.76	2.34	1.21	Ann. Avg.			
Ytd. Avg.	2.84	2.44	1.35	Ytd. Avg.	2.87	2.48	1.28	Ytd. Avg.	2.66	2.20	1.15

Raw milk cost = Class I price, Northeast Order @ Syracuse, adj. for bf, plus estimated premium.

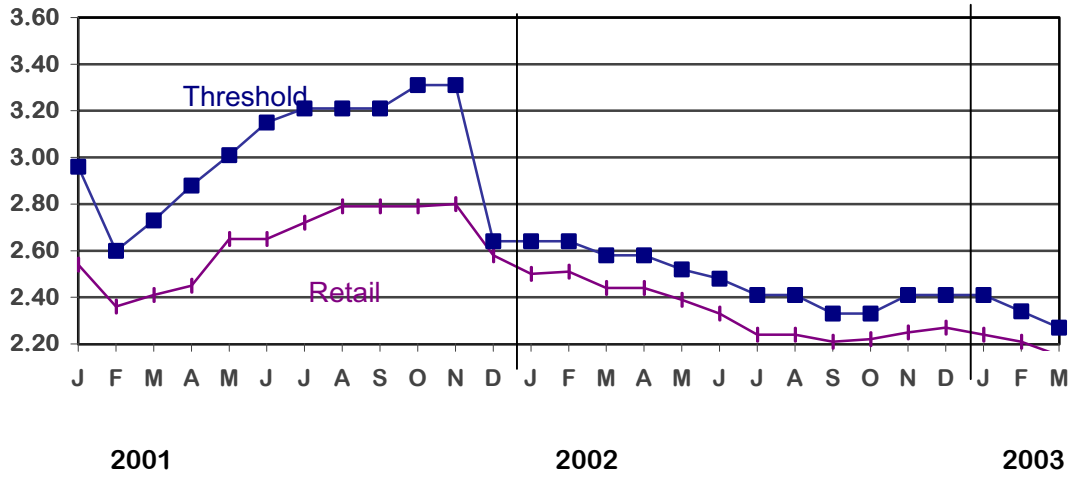
Prepared by NYS Department of Agriculture and Markets

Retail Price vs Threshold Metro - Gallon - 1/01 - 3/03



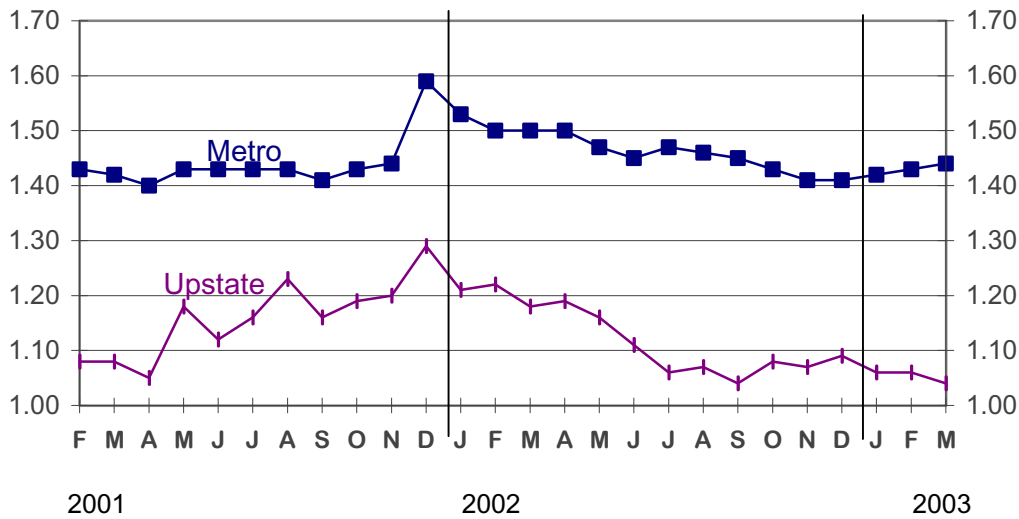
	Retail	Threshold		Retail	Threshold		Retail	Threshold
2001			2002			2003		
J	2.88	3.12	J	2.90	2.81	J	2.68	2.57
F	2.79	2.77	F	2.87	2.81	F	2.66	2.51
M	2.84	2.89	M	2.85	2.75	M	2.63	2.44
A	2.90	3.06	A	2.83	2.75	A		
M	2.99	3.19	M	2.78	2.68	M		
J	3.05	3.33	J	2.75	2.64	J		
J	3.08	3.39	J	2.73	2.57	J		
A	3.08	3.39	A	2.71	2.57	A		
S	3.08	3.39	S	2.70	2.49	S		
O	3.12	3.49	O	2.66	2.49	O		
N	3.13	3.49	N	2.67	2.57	N		
D	2.96	2.81	D	2.67	2.57	D		
Ann. Avg.	2.99	3.19	Ann. Avg.	2.76	2.64	Ann. Avg.		
Ytd. Avg.	2.84	2.93	Ytd. Avg.	2.87	2.79	Ytd. Avg.	2.66	2.51

Retail Price vs Threshold Upstate - Gallon - 1/01-3/03



	Retail	Threshold		Retail	Threshold		Retail	Threshold
2001			2002			2003		
J	2.54	2.96	J	2.50	2.64	J	2.24	2.41
F	2.36	2.60	F	2.51	2.64	F	2.21	2.34
M	2.41	2.73	M	2.44	2.58	M	2.15	2.27
A	2.45	2.88	A	2.44	2.58	A		
M	2.65	3.01	M	2.39	2.52	M		
J	2.65	3.15	J	2.33	2.48	J		
J	2.72	3.21	J	2.24	2.41	J		
A	2.79	3.21	A	2.24	2.41	A		
S	2.74	3.21	S	2.21	2.33	S		
O	2.79	3.31	O	2.22	2.33	O		
N	2.80	3.31	N	2.25	2.41	N		
D	2.58	2.64	D	2.27	2.41	D		
Ann. Avg.	2.62	3.02	Ann. Avg.	2.34	2.48	Ann. Avg.		
Ytd. Avg.	2.44	2.76	Ytd. Avg.	2.48	2.62	Ytd. Avg.	2.20	2.34

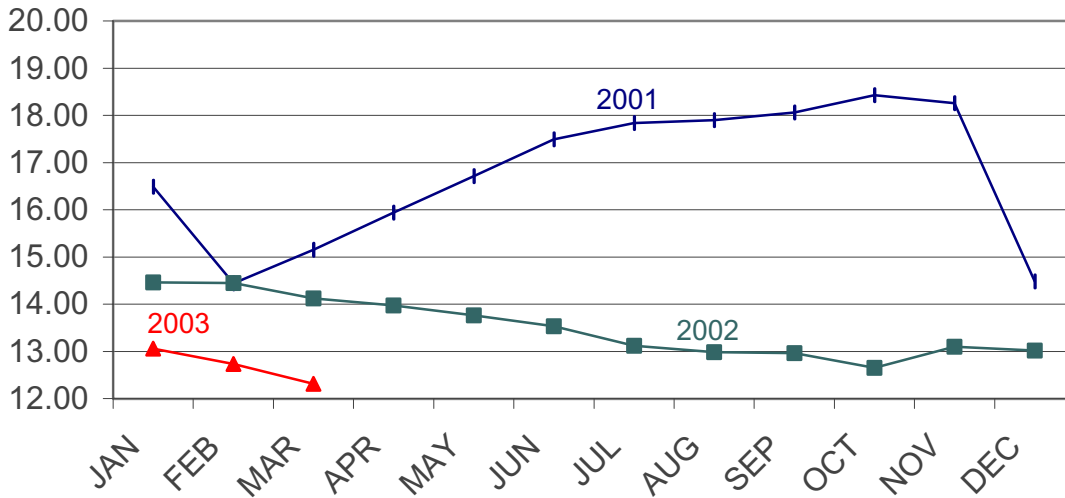
Marketing Margins Gallon Milk - 1/01-3/03



Marketing Margin = Retail price less raw milk cost
Raw milk cost = Class 1 price, Northeast Order, at Syracuse (Onondaga County)
adj. for bf, plus estimated premium.

	Metro Margin	Upstate Margin		Metro Margin	Upstate Margin		Metro Margin	Upstate Margin
2001			2002			2003		
J	1.36	1.10	J	1.53	1.21	J	1.42	1.06
F	1.43	1.08	F	1.50	1.22	F	1.43	1.06
M	1.42	1.08	M	1.50	1.18	M	1.44	1.04
A	1.40	1.05	A	1.50	1.19	A		
M	1.43	1.18	M	1.47	1.16	M		
J	1.43	1.12	J	1.45	1.11	J		
J	1.43	1.16	J	1.47	1.06	J		
A	1.43	1.23	A	1.46	1.07	A		
S	1.41	1.16	S	1.45	1.04	S		
O	1.43	1.19	O	1.43	1.08	O		
N	1.44	1.20	N	1.41	1.07	N		
D	1.59	1.29	D	1.41	1.09	D		
Ann. Avg.	1.43	1.15	Ann. Avg.	1.47	1.12	Ann. Avg.		
Ytd. Avg.	1.40	1.09	Ytd. Avg.	1.51	1.20	Ytd. Avg.	1.43	1.05

CLASS I PRICE @ 3.5% BF ^{1/}
DOLLARS PER CWT
2001-2003



^{1/} Northeast Order, Syracuse (Onondaga County)

CLASS I PRICE @ 3.5% BF ^{1/}
DOLLARS PER CWT
2001-2003

	2001	2002	2003
JAN	16.49	14.46	13.06
FEB	14.44	14.45	12.73
MAR	15.15	14.12	12.31
APR	15.94	13.97	
MAY	16.71	13.76	
JUN	17.49	13.53	
JUL	17.84	13.12	
AUG	17.90	12.98	
SEP	18.06	12.96	
OCT	18.43	12.65	
NOV	18.26	13.10	
DEC	<u>14.48</u>	<u>13.02</u>	
ANN. AVG	16.77	13.51	
YTD. AVG	15.47	14.46	12.90

^{1/} Northeast Order, Syracuse (Onondaga County)

Prepared by the NYS Department of Agriculture & Markets

Appendix F

Proposed Connecticut State Law:
An Act Concerning The Fair Pricing of Milk

AN ACT CONCERNING THE FAIR PRICING OF MILK

Section 1. (NEW). As used in this act:

“Producer” shall mean any person who is engaged in the production of milk and who is subject to registration pursuant to section 22-172 of the general statutes;

“Processor” shall mean any person engaged in the sale of milk other than a producer or retailer and who is subject to registration pursuant to section 22-173;

“Retailer” shall mean any person engaged in the sale of milk at retail to consumers and who is subject to registration pursuant to section 22-173;

“Commissioner” shall mean the Commissioner of Agriculture;

“Fluid milk” shall mean homogenized milk, low-fat milk, fortified low-fat milk, and skimmed milk as such terms are defined in section 22-127 of the general statutes.

Section 2. (NEW) (a) No processor or retailer shall sell or offer for sale fluid milk for a price that is unconscionably excessive.

(b) A price for fluid milk is unconscionably excessive if (1) the price charged by a processor to a retailer exceeds one hundred and forty percent of the price actually paid to the producer by the processor for the same fluid milk or (2) the price charged by a retailer to a consumer exceeds one hundred and forty percent of the price actually paid to the processor by the retailer for the same fluid milk, provided that a processor or retailer may charge a price in excess of the limits established in this subsection, if the processor or retailer demonstrates that the price charged is limited to the processor's or retailer's reasonable expenses actually incurred and directly related to procuring and selling the fluid milk.

Section 3. (NEW) (a) The Commissioner may investigate any violations of this act. The Commissioner may refer any violations of this act to the Attorney General who may bring an action in superior court for the judicial district of Hartford to enforce the provisions of this act.

(b) If a court finds that a person has violated section 2 of this act, the court may award injunctive relief, restitution, a civil penalty not to exceed one thousand dollars per violation and such other relief as the court deems equitable. Each day in which the person violated section 2 of this act shall be a distinct and separate violation.

Section 4. This act shall take effect on July 1, 2003.

Appendix G

Responses to some questions raised at the March 14, 2003
meeting on dairy pricing and fair pricing of milk

**Responses to some questions raised at the March 14, 2003
meeting on dairy pricing and fair pricing of milk**

by

Ronald W. Cotterill

Bob Wellington raised three excellent questions concerning the fair pricing law for the State of Connecticut. Here I restate each and provide as best an answer as I can. The first question that Bob raised was “can the law deal with cross subsidizing payments that processors might make in order to subvert the law?” What Bob was driving at was the following example: supermarkets may pay more to processors in order to comply with the law, however, this increased payment for milk might not be paid back to farmers. Rather processors might simply give retailers a discount on some other product they sell, such as orange juice or half and half. The end result of this is the retailer pays no more for milk than the paid before the law.

Answer: This type of behavior would generate bogus compliance for the retailer, however, the processor would not be able to do this activity without increasing premiums paid back to farmers. This activity does increase the wholesale price of milk, which means that the processor that is otherwise in compliance with the law would move up to a wholesale price that’s in excess of 140% of the farm price. The processor would still have to comply with the wholesale part of the law by raising prices to farmers until the wholesale price was only 140% of the farm or the raw milk price. The requirement that the processor do this effectively quashes the ability of the processor to rebate back to the retailer in some other product area the increased amount of money the retailer paid for wholesale milk.

The second question that Bob raised was basically a fear that this law would disadvantage state of Connecticut processors such as Guida because out of state processors would not have to comply with a law. Consequently out of state processors could offer lower prices to Connecticut supermarkets and capture business from in state processors. I will call this the Midland Farm strategy because as I understand it Midland Farms recently did make a bid on the Big Y private label contract that underbid Guida. At the time Big Y did not switch out of loyalty to Guida.

Answer: Under the proposed fair pricing law if an out of state processor comes in with a low ball offer to a Connecticut retailer this could trigger the retail 140% rule. In fact that would be the case because we are only analyzing the situation where the farm prices are so low that these rules are binding. What this means is that the retailer is faced with a choice of either cutting the retail price or elevating the wholesale price to comply with the law. As pointed out in my February 26th testimony the clear incentive and the most profitable move is to elevate wholesale price rather than cut retail price. Thus the law actually discourages retailers from accepting low ball offers from out of state processors. That is the case because under the proportional price collar the retailer makes a higher dollar profit margin at a higher wholesale price.

The third question that Bob raised was how exactly will the increase in over-order premiums be paid back to farmers? This indeed is a potential sticking point for the law. According to Wellington the individual state cannot dictate that farmers from several states be paid these

premiums in a milk shed wide pool. An individual state has no authority to construct or demand that such a pool be constructed. Here we will have to rely upon the bargaining ability and these incentives of the cooperatives that supply milk to Connecticut handlers and handlers in other states that have in fact passed this law. At this time we have effectively two cooperative organizations: Agri-Mark and Dairy Marketing Services. Those two cooperatives separately or in concert under the Capper Volstead Antitrust exemption must devise a way to pool and pay back premiums to farmers. Farmers that sell milk for very small specialty brands may well be processed in distant parts of the country. That milk may simply not participate in any cooperative pooling that happens for the majority of the milk that comes through this system. Those processors would be allowed to pay such premiums to farmers as they see fit. Certainly we need more insight from the cooperatives on this part of the plan.

A fourth strategy that could be used to circumvent the law in a fashion that would damage “in area” processors is as follows:

The issue as to whether the law will be applicable to a processor outside of the State of Connecticut. The Attorney General has said, yes, providing the transaction takes place within the State boundaries. Stop and Shop and Garelick can get around this issue by creating a point of sale in the State of Massachusetts at the Garelick processing plant. In this case, Stop and Shop would pick up the product instead of Garelick delivering the product. Because Garelick never steps foot in the State of Connecticut, they would never be bound by the State law. The “sale” price from Garelick would still need to be high for Stop and Shop to maintain a high markup. However, there is nothing stopping Garelick from giving discounts on Half-and-Half, Orange Juice, etc. This is a reasonable work around for Stop and Shop who has stores in both Connecticut and Massachusetts. A warehouse is not needed, as Stop and Shop could haul the milk directly into Connecticut from the Massachusetts plant. In this case, the Garelick plant in MA does not obey the 140% law, so farmers receive no over-order premium for milk supplied to that plant. Guida, being in the State of Connecticut, would lose supermarket business to out of state plants because it does have to pay farmers higher prices and obey a Connecticut 140% law. This highlights the need to have other New England states, especially Massachusetts, pass a similar law. This scenario becomes less feasible logistically with more distant plants in New York and New Jersey.