# ANALYSIS OF FARM-TO-RETAIL PRICE SPREADS FOR WHOLE AND TWO PERCENT MILK IN SEVEN SELECTED CITIES

A Thesis

by

MARLA LASHEA DICKERSON

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

December 2003

Major Subject: Agricultural Economics

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Approved as to style and content by:

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| Oral Capps, Jr.<br>(Chair of Committee) | Mike Tomaszewski<br>(Member) |
| Robert Schwart, Jr.<br>(Member) | A. Gene Nelson<br>(Head of Department) |

December 2003

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# ABSTRACT

Analysis of Farm-to-Retail Price Spreads for Whole and Two Percent Milk in Seven Selected Cities. (December 2003)

Marla Lashea Dickerson, B.S., North Carolina A&T State University

Chair of Advisory Committee: Dr. Oral Capps, Jr.

The objectives of this study were threefold: (1) to determine a suitable model for defining the farm-retail price spread for two percent and whole milk in seven cities (Atlanta, Boston, Chicago, Dallas, Hartford, Seattle, St. Louis); (2) to discover the determinants that contribute significantly to the price spreads of two percent and whole milk in seven selected cities, and (3) to calculate the elasticity of price transmission for whole and two percent milk in the seven cities. The work of Wohlgenant and Mullen in "Modeling the Farm-Retail Price Spread for Beef" was followed in order to determine a suitable model. The two specifications considered were the markup pricing model and the relative price spread model. Factors considered to affect the farm-to-retail price spread of whole and two percent milk were the retail price for whole and two percent milk, marketing costs such as fuel and labor costs, milk production, seasonality, and structural change.

Monthly data were collected over a 106 month period from January 1994 through October 2002 for the selected cities in this investigation. Principal findings from the analysis are the following. The markup pricing model was determined to be the better model for both products throughout the seven cities through the examination of

the Schwarz and Akaike criteria of model selection. The driving forces of the farm-to-retail price spread for whole and two percent milk in most cites were retail price and seasonality. In addition, the price spreads in the Northeast were significantly lower before and during the implementation of the Northeast Dairy Compact compared to the period corresponding to the termination of the program. The price spreads of both whole and two percent milk were highest in the third quarter and lowest in the fourth quarter.

Elasticities of price transmission, measures of the sensitivity of retail prices to changes in farm prices, were higher in all regions for two percent milk compared to whole milk. The range of the elasticities of transmission for whole milk was from 0.37 (Hartford) to 2.54 (Dallas) and from 0.39 (Hartford) to 3.66 (Dallas) for two percent milk.

## DEDICATION

I dedicate this thesis to the loving memory of my grandmother, Mrs. Laura Dorothy Keys Dickerson. She was a loving, caring, giving, enlightening human being whose words, even after death, provide strength, courage, and wisdom for me in every day life.

## ACKNOWLEDGEMENTS

I would like to thank Dr. Oral Capps, Jr. for granting me the privilege to work with him on this project. I truly enjoyed the time spent working with him. Dr. Capps provided priceless words of encouragement and endless patience throughout this process. I would have been lost without him. I would also like to thank the other members of my committee. Dr. Robert Schwart's expertise was an invaluable resource. He was extremely patient and always eager when schooling me on the dairy industry. I would also like to thank Dr. Mike Tomaszewski for lending me his time and expertise to help with this project. I would also like to thank Dr. Fred Boadu whose friendship and advice has been very inspiring throughout my time at Texas A&M University. Last, but not least, I have to thank my Angels on Earth, my family. The love, guidance, and support that I receive from them are my life source. I am truly blessed to be a part of their lives.

# TABLE OF CONTENTS

Page

# LIST OF FIGURES

FIGURE Page

# LIST OF TABLES

# CHAPTER I

## INTRODUCTION

Milk production occurs in every state in the continental United States. In order to regulate milk market conditions, milk-producing states are divided into eleven Federal Milk Marketing orders. According to the United States Department of Agriculture (Agriculture Marketing Service), the purpose of this program is, "to stabilize market conditions, and assure consumers of adequate supplies of pure and wholesome milk at all time." The intended benefit of the program to the dairy farmer would be to ensure a fair minimum price throughout the year. The minimum price varies throughout the eleven Federal Milk Marketing orders.

There has been a debate going on for many years concerning the farm and retail prices of milk. According to a report by researchers at Pennsylvania State University, dairy farmers are "facing three crushing blows: low milk prices, rising feeding costs, and the after-effects of drought conditions that have limited their feed production." As well, the low farm prices paid to dairy farmers are mirrored by high retail milk prices paid by consumers.

The objectives of this analysis are threefold. The objectives are to determine a suitable model for defining the farm-retail price spread for two percent and whole milk in seven selected cities; to discover the determinants that contribute significantly to the price spreads of two percent and whole milk in seven selected cities; to calculate the

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This thesis follows the format of the *Journal of Agricultural and Resource Economics.*

elasticity of price transmission in seven selected cities. The elasticity of price transmission is defined as the retail price response to a one percent change in the farm price. The cities involved in this study include Atlanta, Boston, Chicago, Dallas, Hartford, Seattle, and St. Louis. Data were collected over a 106-month period (January 1994 through October 2002) for the selected cities. This study differs from others because it examines the breakdown of the farm-to-retail price spreads for seven cities in different Federal Milk Marketing Orders. Another distinguishing characteristic is that the study looks at the farm-to-retail price spread for two types of fluid milk products (whole milk and two percent milk).

In the chapters that follow, the following descriptions will be presented. Chapter II contains a literature review of similar studies. Chapter III focuses attention on model development. The variables and associated data used in the analysis are discussed in Chapter IV. The empirical results, by city, are reported in Chapter V. A summary of the work and concluding remarks gleaned from the analysis are given in Chapter VI.

# CHAPTER II

## LITERATURE REVIEW

In August 1975, Bruce L. Gardner published a paper entitled, "The Farm-Retail Price Spread in a Competitive Food Industry" in the *American Journal of Agricultural Economics*. In this paper, Gardner studied the effects of a food demand shift, farm supply shift, and the marketing input supply on the retail-farm price ratio. Gardner developed a system of equations to explain what happen to the retail-farm price ratio in each circumstance.

In February 1980, Dale M. Heien published a paper in the *American Journal of Agricultural Economics* entitled, "Markup Pricing in a Dynamic Model of the Food Industry." Heien's paper followed the work of Bruce L. Gardner in his 1975 paper previously mentioned. Heien examined the changes in demand and supply from the farm to wholesale and from wholesale to retail levels and developed a theory of price determination consistent with Gardner's conclusions. Heien used the mark-up pricing model and developed a system of equations to reach his conclusions.

In 1985, B. Wade Brorsen, Jean-Paul Chavas, Warrren R. Grant, and L. D. Schnake published a paper in the *American Journal of Agricultural Economics* entitled, "Marketing Margins and Price Uncertainty: The Case of the U.S. Wheat Market." In this paper, the authors looked at how price uncertainty affects the farm to mill margin and the mill to retail margin for wheat. The authors examined several theories that looked at the output of competitive firms under price uncertainty, and used the expected maximization hypothesis which looks at comparative static results concerning the

influence of uncertainty on production decisions. They developed two specifications that would explain the farm-to-mill and the mill-to-retail price transmission of wheat. They concluded that "an increase in output price uncertainty significantly increases both margins suggesting that the decision makers in the wheat marketing channel are risk adverse….and would benefit from stabilization policies."

In 1987, Henry W. Kinnucan and Olan D. Forker published a paper in the *American Journal of Agricultural Economics* entitled "Asymmetry in Farm-Retail Price Transmission for Major Dairy Products." In this paper, the authors looked at four dairy products (fluid milk, butter, cheese, and ice cream) to determine if the farm-to-retail price transmission was asymmetric. The authors developed a model to explain the farm to retail price transmission process by using the markup pricing model assuming competitive conditions, fixed-proportions productions technology, and constant returns to scale in the food-marketing system. The authors concluded by stating, "Price transmission elasticities for rising farm prices were 16% to 238% larger than corresponding elasticties associated with falling farm prices depending on the dairy product.

In December 1987, Michael Wohlgenant and John D. Mullen published a paper in the *Western Journal of Agricultural Economics* entitled, "Modeling the Farm-Retail Price Spread for Beef." In this study, Wohlegenant and Mullen examined factors that affected the farm to retail price of beef. In order to determine the factors that influence the farm to retail price spread of beef, two specifications were considered. The first specification, the markup model, assumed that farm-to-retail price spreads were related

to retail price and marketing input costs. The second specification, the relative price spread model, related the farm-to-retail price spreads to production, real marketing input costs, and real retail prices.

In May 2001, the United States General Accounting Office's (GAO) Subcommittee on Agriculture, Rural Development, and Related Agencies submitted a statement to the United States Senate Committee on Appropriations. The statement concerned a study that was conducted from January 1996 through February 1998. The study looked at thirty-one selected cities and analyzed the relationship between farm prices and retail prices. The study concluded that the price of fluid milk at one stage is determined by the price at the previous stage. The study also concluded that farm level prices are basically determined by the federal and state dairy programs and that wholesale prices were dependent upon such factors as processing, packaging, and distributing costs. The final conclusion of the study was that retail price was determined by the retail outlet as well as the wholesale costs, labor, rent, and other operating costs.

In June 2001, Kenneth Bailey published, "Impact of the Northeast Interstate Dairy Compact on Consumer Prices for Fluid Milk" for Pennsylvania State University. The purpose of the study was to analyze the effect of the compact on retail prices in the New England states. Bailey compared farm and retail prices in two periods, before the compact and during the compact. Bailey also simulated three scenario models for Boston and Hartford for the period during the compact. Bailey concluded that about seventy percent of the increase in retail price in Hartford and Boston was caused by the Northeast Compact.

# CHAPTER III

## MODEL DEVELOPMENT

According to economic theory and Wohlgenant and Mullen's "Modeling the Farm-Retail Price Spread for Beef," the following are variables that are hypothesized to impact the farm-to-retail price spread: retail price for whole and two percent milk, marketing costs such as fuel and labor costs, and monthly production. In addition to the aforementioned variables, given the use of monthly data, seasonality is expected to impact the spread. The final variable considered in this study corresponds to potential structural changes that occur in the different Federal Marketing orders.

Taking into account economic theory, the retail price is expected to be positively related to the farm-to-retail price spread. If the retail price increases, the spread also will increase, all other factors held constant. Marketing costs such as fuel and labor costs also are anticipated to have a direct or positive relationship with the farm-to-retail price spread. When marketing costs increase, processors will likely increase their price, subsequently making retail prices paid by consumers rise. Increases in farm production also are expected to be positively related to the farm-to-retail price spread due to the inverse relationship of farm production to farm price. Structural change and seasonality are qualitative factors. Structural changes refer to various issues present in the eleven Federal Milk Marketing Orders. For example, in the Northeast region, the Northeast Dairy Compact was enacted in July 1997 and terminated September 30, 2001. These variables are discussed further in Chapter four. To investigate the impact of these qualitative variables on farm-to-retail price spreads, dummy variables were used.

There are two empirical specifications considered in this study when examining farm-to-retail price spreads of whole and two percent milk. The specifications are as follows:

1. *Markup Model*:

$$M_t = a_0 + a_1P_{rt} + a_2LC_t + a_3FC_t + a_4S1 + a_5S2 + a_6S3 + a_7SC1 + a_8SC2 + e_t$$

2. *Relative Price Model*:

$$M_t = b_1P_{rt} + b_2LC_t + b_3FC_t + b_4S1 + b_5S2 + b_6S3 + b_7S4 + b_8SC1 + a_9SC2 + b_{10}(P_rQ)_t + v_t$$

where:

$M_t$ = Retail price minus farm price in month t (dollars/gal.)

$P_{rt}$ = Retail Price in month t (dollars/gal.).

$LC_t$ = Labor Costs in month t (Employment Cost Index).

$FC_t$ = Fuel Costs in month t (cents/gal.).

S1 = Season 1

S2 = Season 2

S3 = Season 3

S4 = Season 4

SC1 = Time Period 1

SC2 = Time Period 2

$Q_t$= Milk Production in month t (millions of pounds).

$e_t$ and $v_t$ are additive disturbance terms, an explicit recognition that the markup model and the relative price model are stochastic representations.

# CHAPTER IV

# DATA DESCRIPTION

Data were collected for the one hundred six month period for each of the seven cities. The time period for the data is January 1994 through October 2002. The data for the variables were collected from different sources. The farm and retail prices are measured in dollars per gallon of milk. The farm and retail prices for the seven cities and the United States monthly production of milk were obtained from the United States Department of Agriculture's Agricultural Marketing Service. Labor and fuel costs for this study were obtained from the Bureau of Labor Statistics and the Department of Energy respectively. In order to measure seasonality and the effects of structural changes on the farm-to-retail price spread, dummy variables were created.

## *Dependent Variable: Spread*

The farm-to-retail price spread is the difference between the farm price and the retail price. The spread is measured in dollars per gallon. In this study, the spread was evaluated for whole and two percent milk in seven cities. The farm-to-retail price spread varied for whole and two percent milk by month and by city. Figures 1-7 represent the trend of farm and retail prices in each of the seven cities for whole and two percent milk. For example in Atlanta for whole milk, the minimum farm to retail price spread was fifty-five cents while the minimum farm to retail price spread for two percent milk in Atlanta was sixty-one cents. The maximum farm to retail price spread for whole milk in Atlanta was $1.84 while the maximum for two percent milk was $1.97. The descriptive statistics for the farm-to-retail price spread for each of the seven cities can be seen in

Table 1. Table 1 shows that the farm-to-retail price spread on average was higher for two percent milk in comparison to whole milk in every city except Chicago. The table also shows whole milk farm to retail price spread varied from the mean less than two percent milk farm to retail price spread in the seven selected cities.

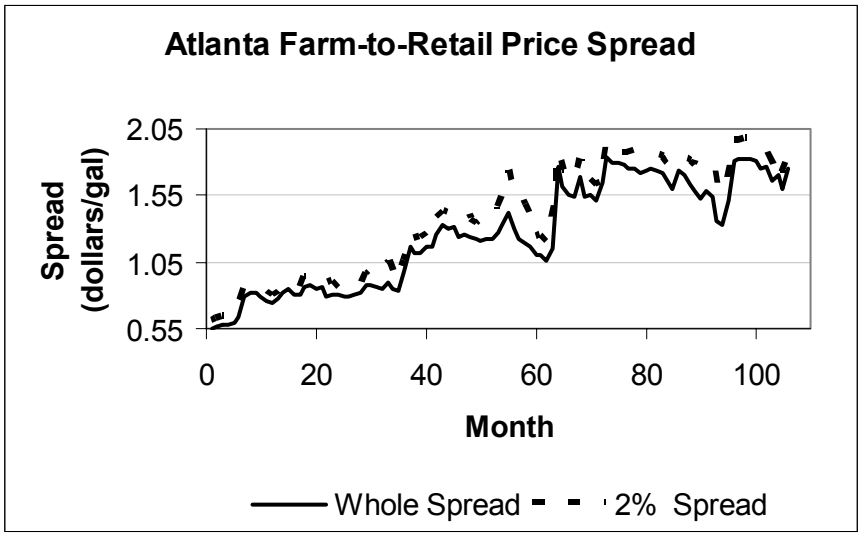


**Figure 1. Farm-to-retail price spreads in Atlanta**

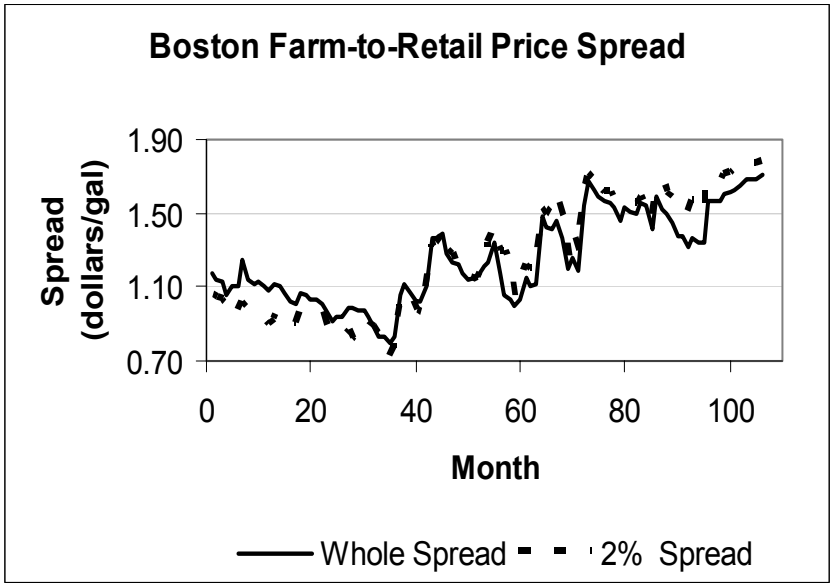


**Figure 2. Farm-to-retail price spreads in Boston**

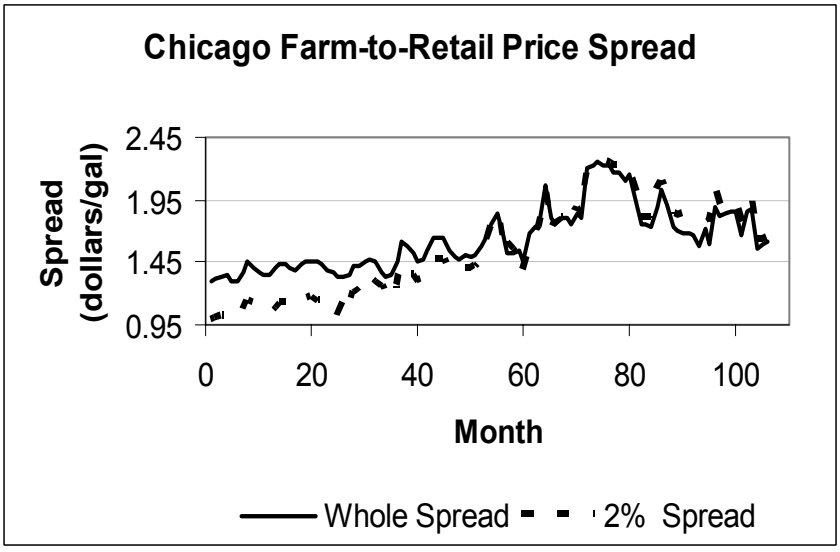


**Figure 3. Farm-to-retail price spreads in Chicago**

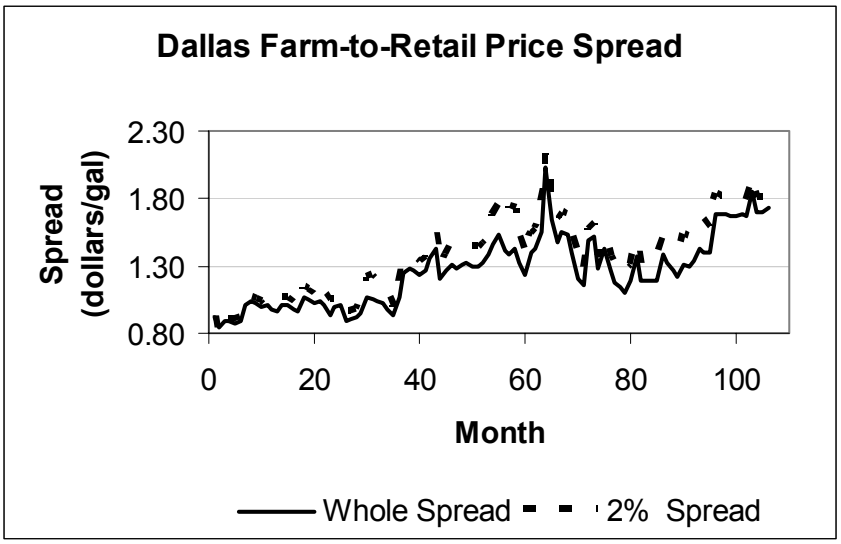


**Figure 4. Farm-to-retail price spreads in Dallas**

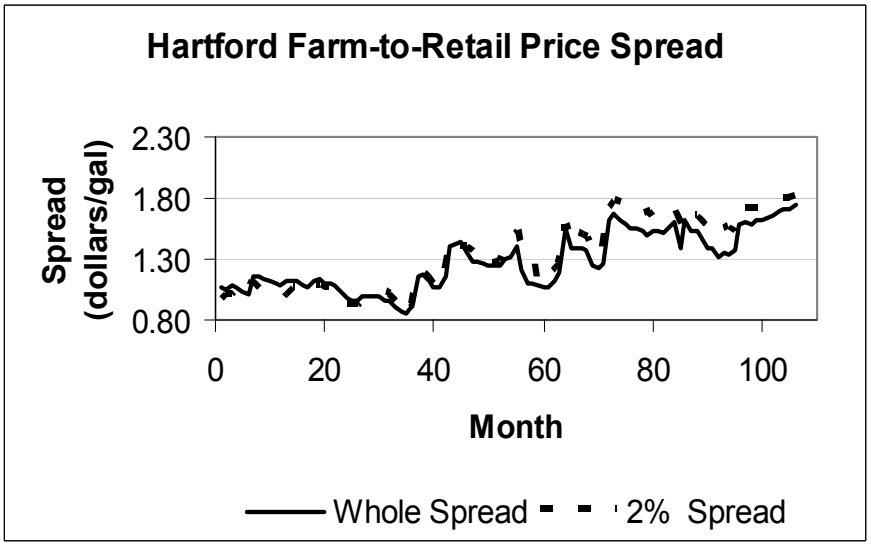


**Figure 5. Farm-to-retail price spreads in Hartford**

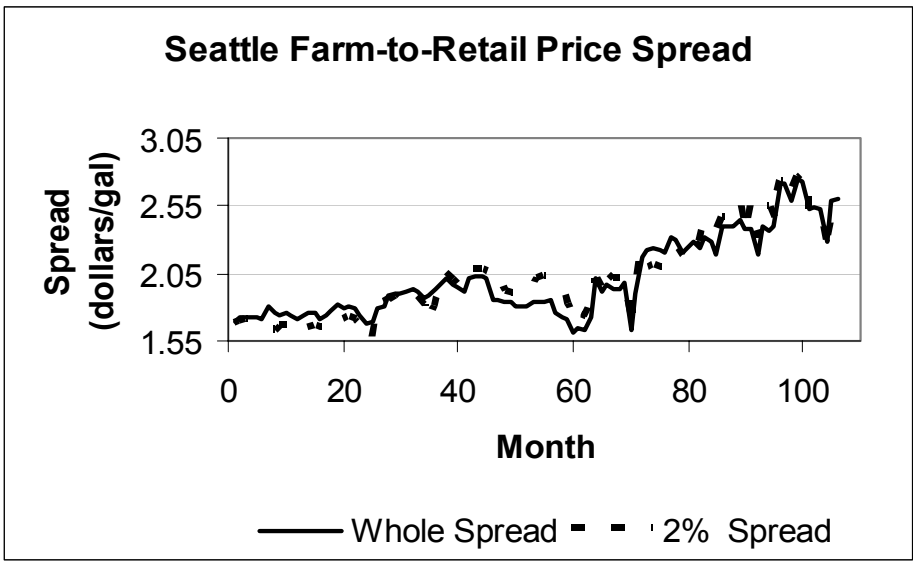


**Figure 6. Farm-to-retail price spreads in Seattle**

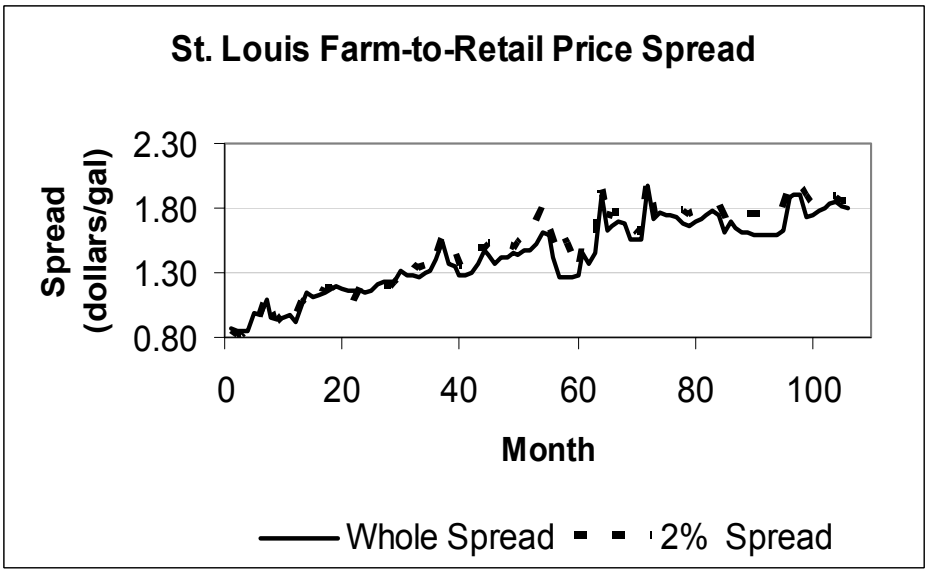


**Figure 7. Farm-to-retail price spreads in St. Louis**

**Table 1. Descriptive Statistics for Farm-to-Retail Price Spreads of Whole Milk and 2% Milk in the Seven Selected Cities**

**Whole Milk Farm-to-Retail Price Spread**

| | N | Mean | St. Dev | Variance | Minimum | Maximum | CV[1] |
|---|---|---|---|---|---|---|---|
| **Atlanta** | 106 | 1.26 | 0.3964 | 0.1571 | 0.55 | 1.84 | 31.56 |
| **Boston** | 106 | 1.25 | 0.2442 | 0.0596 | 0.80 | 1.72 | 19.50 |
| **Chicago** | 106 | 1.63 | 0.2506 | 0.0628 | 1.29 | 2.25 | 15.34 |
| **Dallas** | 106 | 1.26 | 0.2553 | 0.0652 | 0.85 | 2.03 | 20.23 |
| **Hartford** | 106 | 1.28 | 0.2357 | 0.0556 | 0.86 | 1.74 | 18.44 |
| **Seattle** | 106 | 2.01 | 0.2994 | 0.0897 | 1.61 | 2.75 | 14.88 |
| **St. Louis** | 106 | 1.43 | 0.2863 | 0.0819 | 0.86 | 1.97 | 19.96 |

**2% Milk Farm-to-Retail Price Spread**

| | N | Mean | St. Dev | Variance | Minimum | Maximum | CV[1] |
|---|---|---|---|---|---|---|---|
| **Atlanta** | 106 | 1.38 | 0.4237 | 0.1795 | 0.61 | 1.97 | 30.60 |
| **Boston** | 106 | 1.27 | 0.3157 | 0.0995 | 0.72 | 1.79 | 24.94 |
| **Chicago** | 106 | 1.55 | 0.3807 | 0.1449 | 0.98 | 2.27 | 24.64 |
| **Dallas** | 106 | 1.38 | 0.2943 | 0.0866 | 0.80 | 2.13 | 21.30 |
| **Hartford** | 106 | 1.34 | 0.2975 | 0.0885 | 0.84 | 1.81 | 22.28 |
| **Seattle** | 106 | 2.02 | 0.3187 | 0.1016 | 1.56 | 2.80 | 15.77 |
| **St. Louis** | 106 | 1.50 | 0.3204 | 0.1027 | 0.81 | 2.00 | 21.43 |

[1] CV refers to coefficient of variation, the ratio of the standard deviation relative to the mean times 100. The relevant unit of measurement for the CV is percent.

## *Independent (Explanatory) Variables*

*Farm Price*

The farm price was calculated using the announced cooperative prices for Class I milk per hundred weights for 3.5 percent butter fat. Cooperative prices for Class I milk were obtained from the United States Department of Agriculture's Agricultural Marketing Service. The Class I prices then were adjusted to 3.25% butterfat for whole milk and 2% butterfat for two percent milk. These adjusted prices subsequently were converted to gallon prices. See Figures 8-21 for the trend of farm prices in the seven cities for whole and two percent milk. Table 2 shows the descriptive statistics for farm prices in the seven selected cities. In all cites, on average, dairy farmers were paid less for two percent milk when compared to the amount paid for whole milk.

*Retail Price*

The retail prices for the seven selected cities were obtained from the United States Department of Agriculture's Agricultural Marketing Service's website. The website is www.ams.usda.gov. According to the website, the retail prices are "as collected by Federal milk order market administrators based on a survey conducted one day between the first and the tenth of each month, excluding Fridays and weekends…." The unit of measurement for the retail price is dollars per gallon. The retail prices varied from city to city. Take for instance Atlanta and Boston. In Atlanta, the minimum retail price for whole and two percent milk was $1.98 while the maximum retail prices were $3.29 for whole milk and $3.22 for two percent milk. In Boston, the minimum retail prices for whole and two percent milk were $2.33 and $2.14 respectively while the

maximum retail prices were $3.08 for whole milk and $3.05 for two percent milk. See Figures 8-21 for retail price variation over the period January 1994 to October 2002 as well as Table 3 for descriptive statistics. As demonstrated in Table 3, retail price for two percent milk in five of the seven cities was higher than the retail price of whole milk, on average. The mean price for whole and two percent milk in Atlanta and Dallas were the same.

*Labor Costs*

Labor costs for each of the seven cities involved in the study were obtained from the Economic Time Series Page (www.economic-charts.com) which uses the Bureau of Labor Statistics as its source of information. To measure labor costs, the employment cost index was used as a proxy. The employment cost index is a seasonally adjusted index for total compensation of all civilian workers was used in the United States. The average index for labor, throughout the United States, was 139.10. See Table 4 for descriptive statistics.

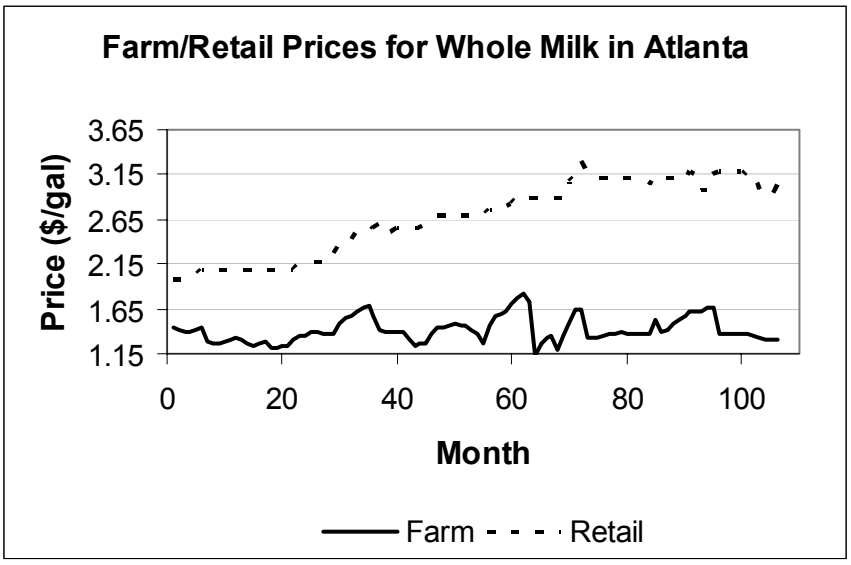


**Figure 8. Farm/retail prices for whole milk in Atlanta**

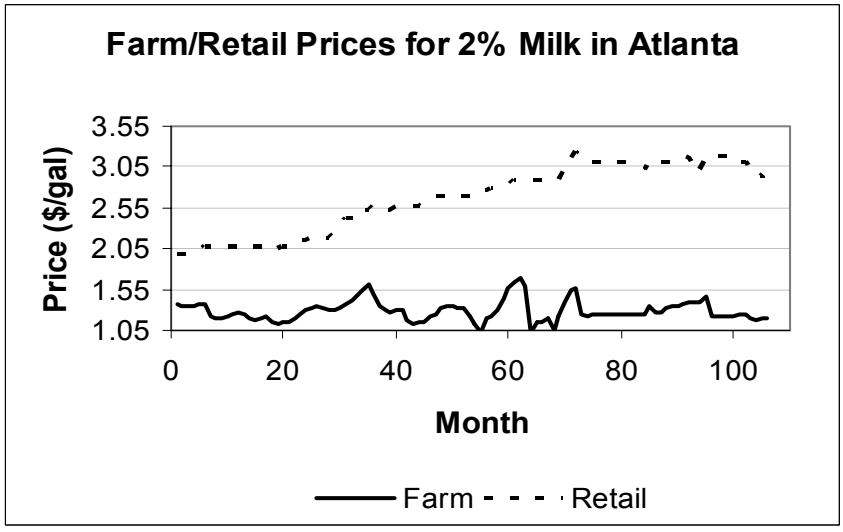


**Figure 9. Farm/retail prices for 2% milk in Atlanta**

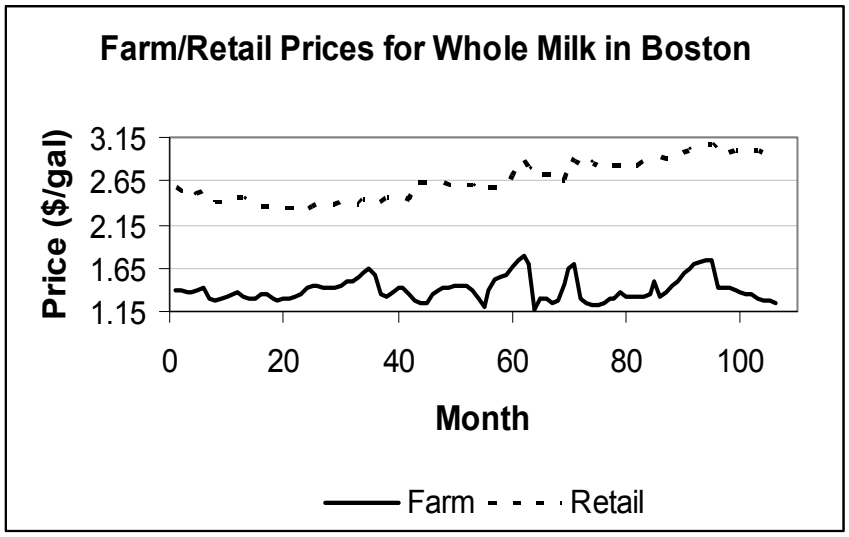


**Figure 10. Farm/retail prices for whole milk in Boston**

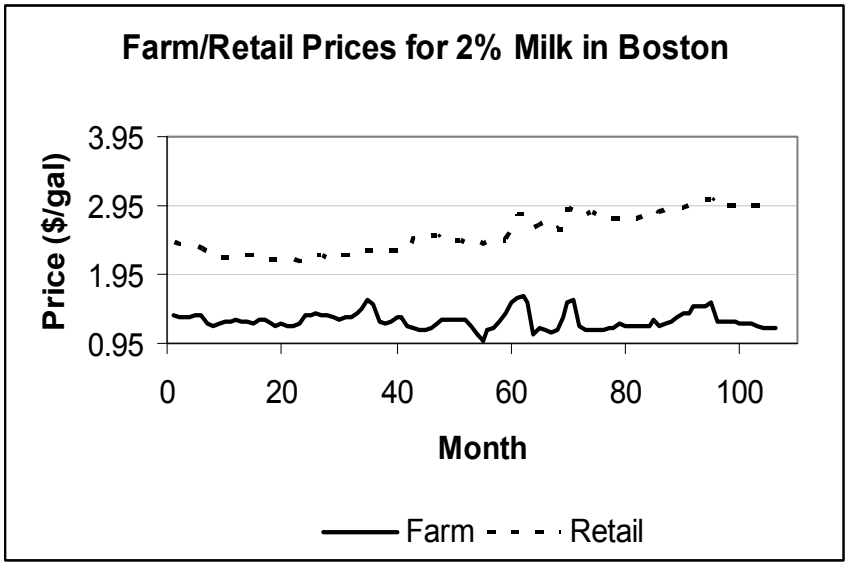


**Figure 11. Farm/retail prices for 2% milk in Boston**

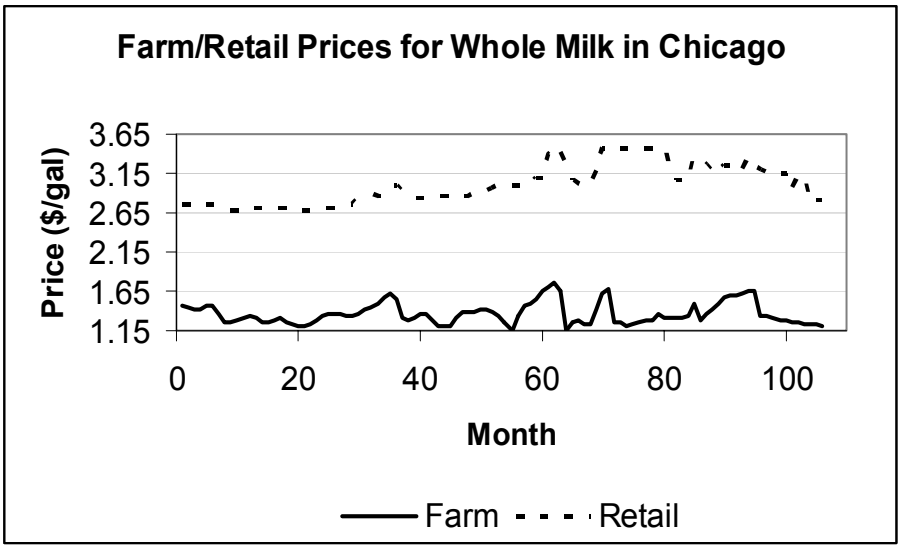


**Figure 12. Farm/retail prices for whole milk in Chicago**

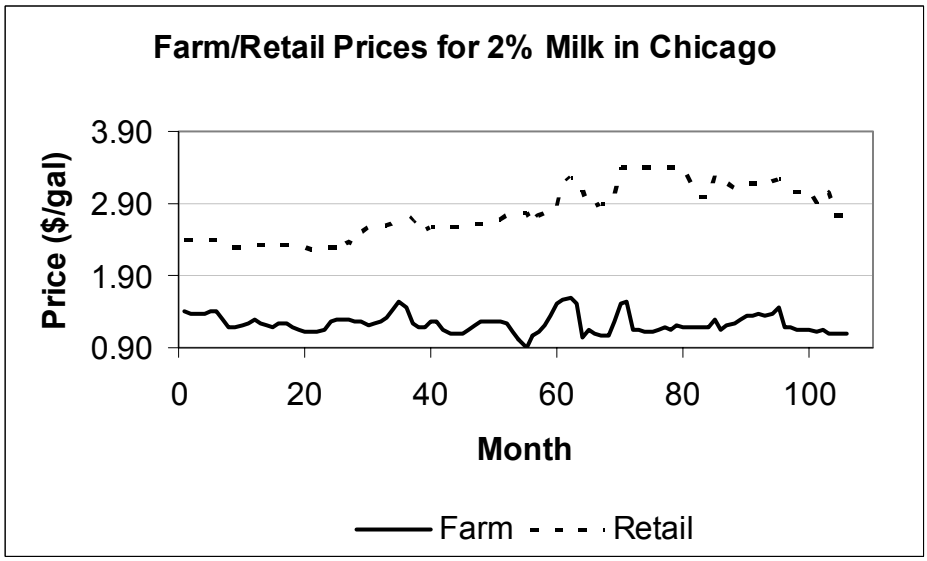


**Figure 13. Farm/retail prices for 2% milk in Chicago**

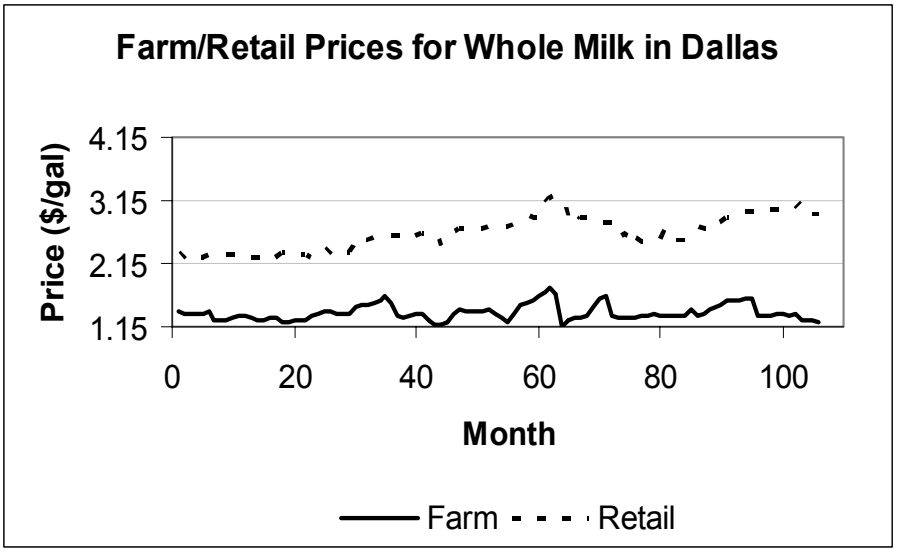


**Figure 14. Farm/retail prices for whole milk in Dallas**

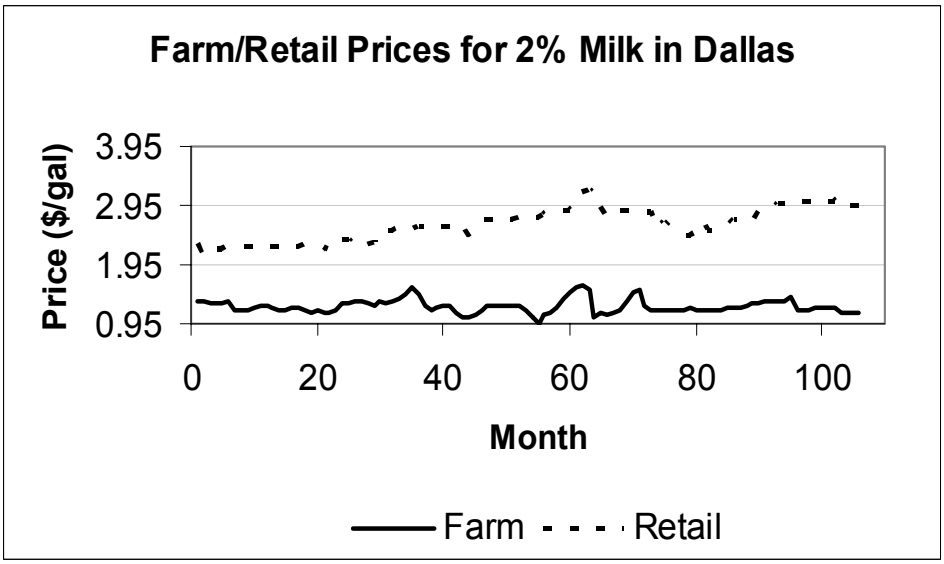


**Figure 15. Farm/retail prices for 2% milk in Dallas**

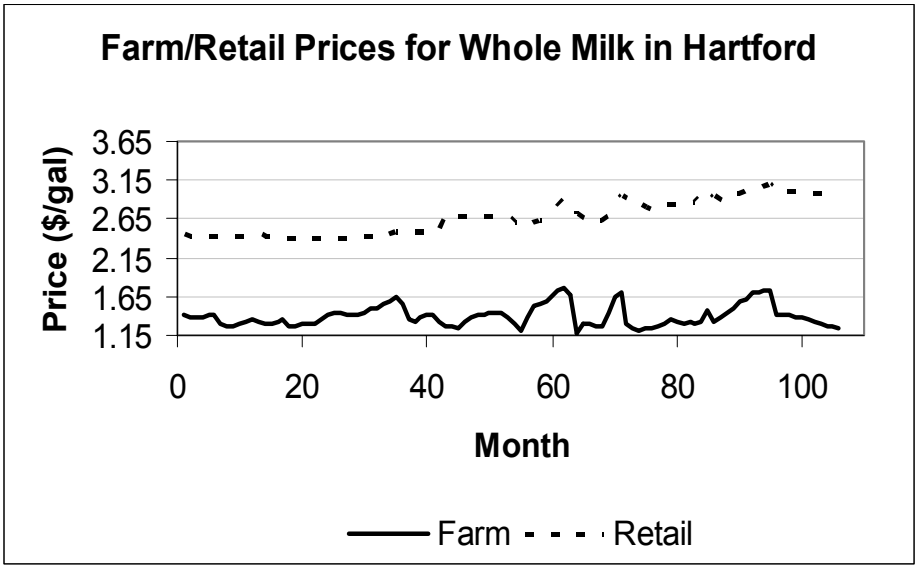


**Figure 16. Farm/retail prices for whole milk in Hartford**

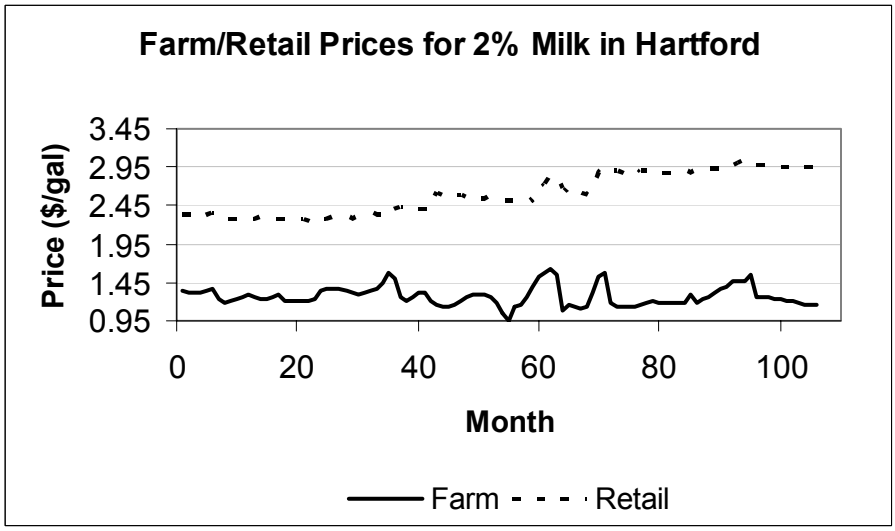


**Figure 17. Farm/retail prices for 2% milk in Hartford**

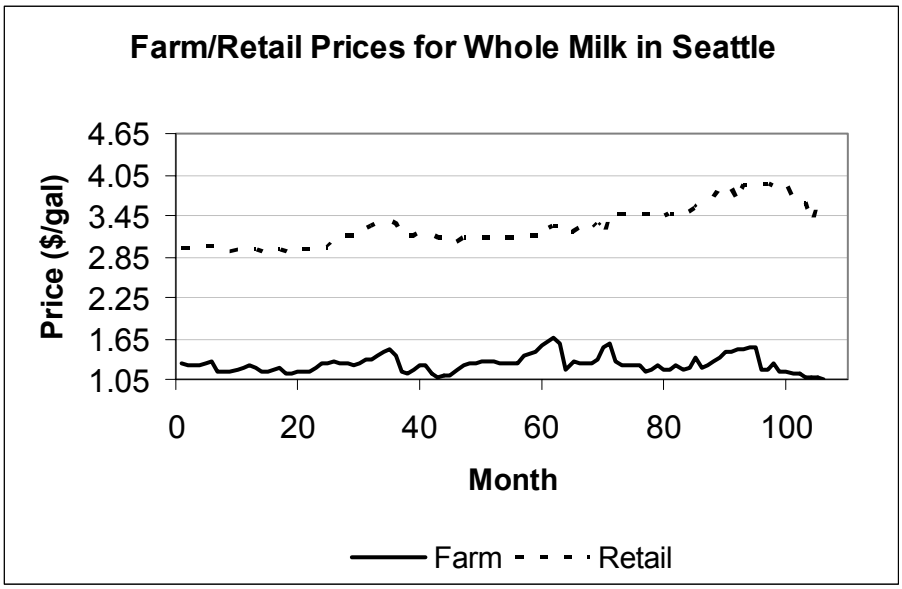


**Figure 18. Farm/retail prices for whole milk in Seattle**

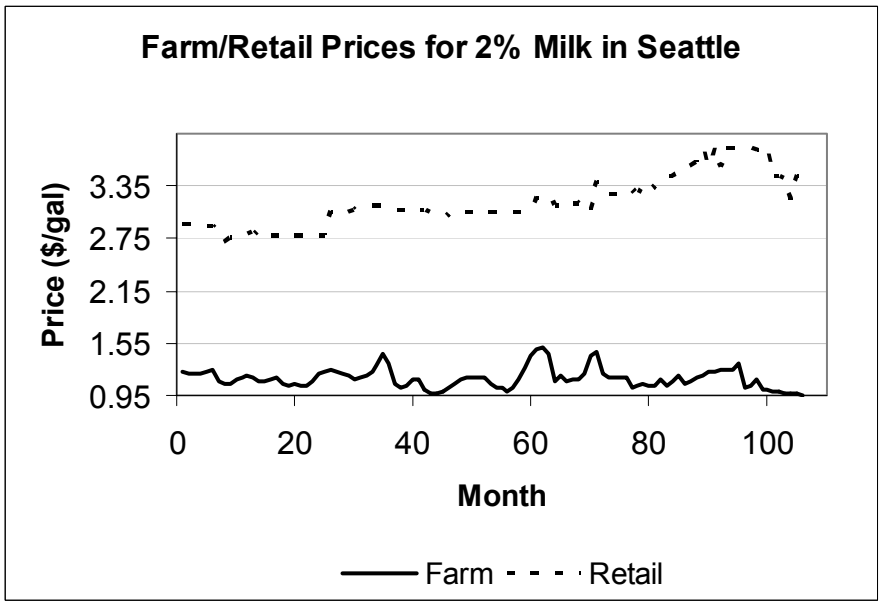


**Figure 19. Farm/retail prices for 2% milk in Seattle**

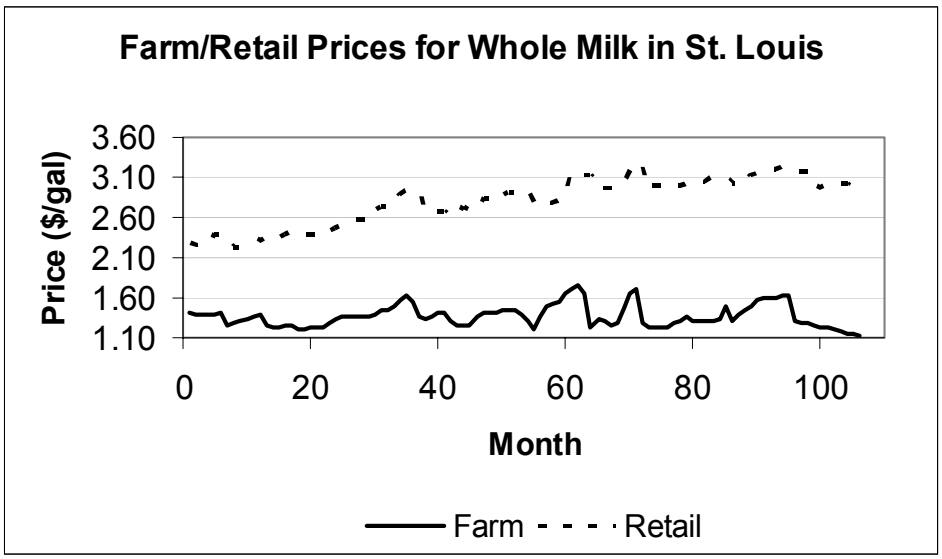


**Figure 20. Farm/retail prices for whole milk in St. Louis**

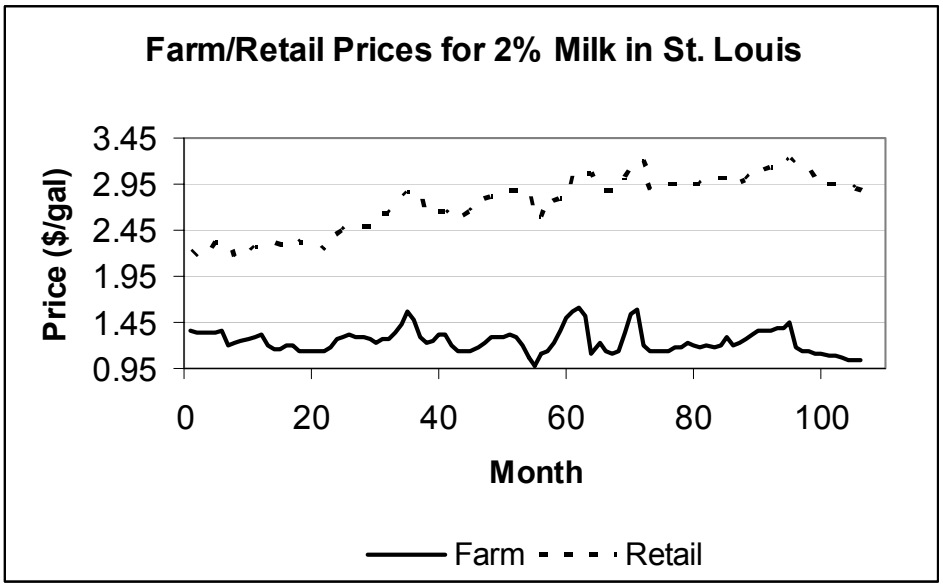


**Figure 21. Farm/retail prices for 2% milk in St. Louis**

## Table 2. Descriptive Statistics for Farm Prices of Whole and 2% Milk

**Whole Milk Farm Price**

| | N | Mean | St. Dev | Variance | Minimum | Maximum | CV[1] |
|---|---|---|---|---|---|---|---|
| **Atlanta** | 106 | 1.41 | 0.1397 | 0.0195 | 1.13 | 1.83 | 9.91 |
| **Boston** | 106 | 1.41 | 0.1372 | 0.0188 | 1.18 | 1.78 | 9.73 |
| **Chicago** | 106 | 1.36 | 0.1359 | 0.0185 | 1.15 | 1.75 | 9.99 |
| **Dallas** | 106 | 1.37 | 0.1248 | 0.0156 | 1.16 | 1.76 | 9.11 |
| **Hartford** | 106 | 1.40 | 0.1363 | 0.0186 | 1.18 | 1.77 | 9.74 |
| **Seattle** | 106 | 1.28 | 0.1263 | 0.0159 | 1.05 | 1.66 | 9.87 |
| **St. Louis** | 106 | 1.37 | 0.1391 | 0.0193 | 1.13 | 1.75 | 10.15 |

**2% Farm Price**

| | N | Mean | St. Dev | Variance | Minimum | Maximum | CV[1] |
|---|---|---|---|---|---|---|---|
| **Atlanta** | 106 | 1.28 | 0.1234 | 0.0152 | 1.03 | 1.68 | 9.64 |
| **Boston** | 106 | 1.28 | 0.1248 | 0.0155 | 0.97 | 1.63 | 9.75 |
| **Chicago** | 106 | 1.23 | 0.128 | 0.0164 | 0.91 | 1.60 | 10.41 |
| **Dallas** | 106 | 1.25 | 0.1136 | 0.0129 | 0.96 | 1.61 | 9.09 |
| **Hartford** | 106 | 1.27 | 0.1247 | 0.0156 | 0.96 | 1.63 | 9.82 |
| **Seattle** | 106 | 1.15 | 0.1137 | 0.0129 | 1.95 | 1.51 | 9.89 |
| **St. Louis** | 106 | 1.24 | 0.1276 | 0.0163 | 0.96 | 1.60 | 10.29 |

[1] CV refers to coefficient of variation, the ratio of the standard deviation relative to the mean times 100. The relevant unit of measurement for the CV is percent.

**Table 3. Descriptive Statistics for Retail Prices of Whole and 2% Milk**

**Whole Milk Retail Price**

| | N | Mean | St. Dev | Variance | Minimum | Maximum | CV[1] |
|---|---|---|---|---|---|---|---|
| **Atlanta** | 106 | 2.67 | 0.4174 | 0.1742 | 1.98 | 3.29 | 15.64 |
| **Boston** | 106 | 2.66 | 0.2339 | 0.0547 | 2.33 | 3.08 | 8.80 |
| **Chicago** | 106 | 2.99 | 0.2605 | 0.0678 | 2.66 | 3.49 | 8.71 |
| **Dallas** | 106 | 2.63 | 0.2759 | 0.0761 | 2.22 | 3.22 | 10.47 |
| **Hartford** | 106 | 2.68 | 0.2260 | 0.0511 | 2.38 | 3.10 | 8.45 |
| **Seattle** | 106 | 3.29 | 0.2963 | 0.0878 | 2.92 | 3.92 | 9.01 |
| **St. Louis** | 106 | 2.80 | 0.3004 | 0.0902 | 2.24 | 3.26 | 10.71 |

**2% Milk Retail Price**

| | N | Mean | St. Dev | Variance | Minimum | Maximum | CV[1] |
|---|---|---|---|---|---|---|---|
| **Atlanta** | 106 | 2.67 | 0.4182 | 0.1749 | 1.98 | 3.22 | 15.66 |
| **Boston** | 106 | 2.54 | 0.2939 | 0.0864 | 2.14 | 3.05 | 11.55 |
| **Chicago** | 106 | 2.78 | 0.3693 | 0.1364 | 2.26 | 3.39 | 13.30 |
| **Dallas** | 106 | 2.63 | 0.2844 | 0.0809 | 2.12 | 3.22 | 10.82 |
| **Hartford** | 106 | 2.61 | 0.2698 | 0.0728 | 2.25 | 3.07 | 10.36 |
| **Seattle** | 106 | 3.17 | 0.2988 | 0.0893 | 2.72 | 3.82 | 9.42 |
| **St. Louis** | 106 | 2.74 | 0.3083 | 0.0951 | 2.16 | 3.23 | 11.25 |

[1] CV refers to coefficient of variation, the ratio of the standard deviation relative to the mean times 100. The relevant unit of measurement for the CV is percent.

*Fuel Costs*

The data for fuel costs were obtained from the Economic Time Series Page which uses the Department of Energy as its source of information for fuel costs. The type of fuel cost obtained for this study was for all grades all formulations/area retail gasoline prices. Fuel cost is measured in cents per gallon. The costs of fuel varied by region. Fuel costs were highest in Boston, while Atlanta had the lowest fuel costs See Table 4 for descriptive statistics.

*Monthly Production*

Data for monthly milk production came from the United States Department of Agriculture's National Agricultural Statistics Service. The milk production numbers used in this study are numbers for the total milk production of the United States. Therefore, the data for monthly milk production in each city is the same. The data for monthly milk production are measured in millions of pounds. The United States produced between eleven and fifteen billion pound of milk every year over the 106

**Table 4. Descriptive Statistics for Monthly Labor Costs, Monthly Fuel Costs, and Monthly Production**

**Monthly Labor Cost Index All Cities**

| | N | Mean | St. Dev | Variance | Minimum | Maximum | CV[1] |
|---|---|---|---|---|---|---|---|
| All Cities | 106 | 139.10 | 12.086 | 146.08 | 121.20 | 162.30 | 8.69 |

**Monthly Fuel Cost By City**

| | N | Mean | St. Dev | Variance | Minimum | Maximum | CV[1] |
|---|---|---|---|---|---|---|---|
| Atlanta | 106 | 120.80 | 16.877 | 284.85 | 91.90 | 161.10 | 13.97 |
| Boston | 106 | 130.95 | 18.118 | 328.27 | 101.10 | 176.50 | 13.84 |
| Chicago | 106 | 123.01 | 19.105 | 365.02 | 91.90 | 181.80 | 15.53 |
| Dallas | 106 | 125.70 | 17.895 | 320.23 | 96.20 | 173.80 | 14.24 |
| Hartford | 106 | 130.95 | 18.118 | 328.27 | 101.10 | 176.50 | 13.84 |
| Seattle | 106 | 139.13 | 19.821 | 392.85 | 110.80 | 185.60 | 14.25 |
| St. Louis | 106 | 123.01 | 19.105 | 365.02 | 91.90 | 181.80 | 15.53 |

**U.S. Monthly Milk Production**

| | N | Mean | St. Dev | Variance | Minimum | Maximum | CV[1] |
|---|---|---|---|---|---|---|---|
| All Cities | 106 | 13341 | 704.54 | 496380 | 11645 | 15105 | 5.28 |

[1] CV refers to coefficient of variation, the ratio of the standard deviation relative to the mean times 100. The relevant unit of measurement for the CV is percent.

month period. See Table 4 for descriptive statistics.

*Seasonality and Structural Change*

Seasonality and structural change, as qualitative factors, were measured using dummy variables (0-1 indicator variable). For this study, each year was broken down into four seasons. Season 1 was January through March. Season 2 was April through June. Season 3 was July through September, and Season 4 was October through December. For example, if the historical data occurred during season 1, a value of one (1) was assigned for those months and a zero for the remaining months; the same can be said for seasons 2, 3, and 4.

A dairy compact is an agreement between two or more states in a Federal Milk Order to institute a pricing program for fluid milk sold in that particular region. The Northeast Dairy Compact, which affected six states (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont), was in effect from July 1997 to September 2001. Because of the Northeast Dairy Compact, the data sample was partitioned into three mutually exhaustive and exclusive time periods. The first included the time period from January 1994 to June 1997, before the compact. The second occurred during the period of July 1997 to September 2001, during the compact. The third corresponded to the period from October 2001 to October 2002, after the compact. As with the seasons, if the historical data occurred during these three periods, a value of one was assigned to that time period and zero to the remaining periods. See Tables 5 and 6 for descriptive statistics pertaining to spreads, retail prices, and farm prices of

whole and two percent milk for each of the three periods in each of the seven selected cities.

As shown in Table 5 for whole milk, the farm to retail price spread, farm price, and retail price for each city increased from time period one, January 1994 through June 1997, when compared to time period two, July 1997 through September 2001. There seems to be a pattern in the cities when considering time period two and time period three, October 2001 through October 2002. All cities except Chicago experienced an increase in the farm-to-retail price spread and retail price and a decrease in farm price when comparing time period two and time period three. In Chicago, the values of all three variables decreased from time period two to time period three.

Table 6 shows a different pattern for two percent milk. In all cities except Seattle, the farm-to-retail price spread and retail price increased and the farm price decreased in time period two when compared to time period one. In Seattle, the farm-to-retail price spread and retail price increased in time period two; however, the farm price remained the same. The farm-to-retail price spread and retail price increased while the farm price decreased in time period three when compared to time period two in Atlanta, Dallas, and Seattle. Boston experienced an increase in value of all variables in time period three over time period two. The farm-to-retail price spread in Chicago and St. Louis increased while farm price and retail price decreased from time period two values in time period three. As with Atlanta, Dallas, and Seattle, Hartford's farm-to-retail price spread and retail price increased, but the farm price remained the same.

**Table 5. Descriptive Statistics of Spreads, Farm Prices, and Retail Prices for Whole Milk in Seven Selected Cites for Three Distinct Time Periods**

**Whole Milk**

| | *1/94 to 6/97* *Time Period 1* (42 months) | *7/97 to 9/01* *Time Period 2* (51 months) | *10/01 to 10/02* *Time Period 3* (13 months) |
|---|---|---|---|
| **Atlanta** | | | |
| *Spread* | 0.8426 | 1.4822 | 1.7054 |
| *Farm Price* | 1.3774 | 1.4475 | 1.3954 |
| *Retail Price* | 2.2200 | 2.9296 | 3.1008 |
| **Boston** | | | |
| *Spread* | 1.0288 | 1.2429 | 1.5915 |
| *Farm Price* | 1.3912 | 1.5231 | 1.4069 |
| *Retail Price* | 2.4200 | 2.7661 | 2.9985 |
| **Chicago** | | | |
| *Spread* | 1.1407 | 1.7873 | 1.7515 |
| *Farm Price* | 1.3452 | 1.3798 | 1.3177 |
| *Retail Price* | 2.756 | 3.1671 | 3.0692 |
| **Dallas** | | | |
| *Spread* | 1.0267 | 1.3555 | 1.6608 |
| *Farm Price* | 1.3486 | 1.3973 | 1.3485 |
| *Retail Price* | 2.3752 | 2.7527 | 3.0092 |
| **Hartford** | | | |
| *Spread* | 1.0548 | 1.2669 | 1.6085 |
| *Farm Price* | 1.3821 | 1.5204 | 1.4000 |
| *Retail Price* | 2.4369 | 2.7873 | 3.0085 |
| **Seattle** | | | |
| *Spread* | 1.8155 | 2.0341 | 2.5646 |
| *Farm Price* | 1.2474 | 1.321 | 1.2023 |
| *Retail Price* | 3.0629 | 3.3551 | 3.7669 |
| **St. Louis** | | | |
| *Spread* | 1.1514 | 1.5771 | 1.7915 |
| *Farm Price* | 1.3529 | 1.4061 | 1.2838 |
| *Retail Price* | 2.5043 | 2.9831 | 3.0754 |

**Table 6. Descriptive Statistics of Spreads, Farm Prices, and Retail Prices for 2% Milk in Seven Selected Cities for Three Distinct Time Periods**

**Two Percent Milk**

| | *1/94 to 6/97* *Time Period 1* (42 months) | *7/97 to 9/01* *Time Period 2* (51 months) | *10/01 to 10/02* *Time Period 3* (13 months) |
|---|---|---|---|
| **Atlanta** | | | |
| *Spread* | 0.9272 | 1.642 | 1.8497 |
| *Farm Price* | 1.2919 | 1.2896 | 1.2510 |
| *Retail Price* | 2.2190 | 2.9316 | 3.1008 |
| **Boston** | | | |
| *Spread* | 0.9363 | 1.4258 | 1.7017 |
| *Farm Price* | 1.3055 | 1.2591 | 1.2660 |
| *Retail Price* | 2.2418 | 2.6849 | 2.9677 |
| **Chicago** | | | |
| *Spread* | 1.1577 | 1.7907 | 1.8321 |
| *Farm Price* | 1.2604 | 1.2218 | 1.1772 |
| *Retail Price* | 2.4181 | 3.0125 | 3.0092 |
| **Dallas** | | | |
| *Spread* | 1.0951 | 1.5120 | 1.8028 |
| *Farm Price* | 1.2646 | 1.2401 | 1.2064 |
| *Retail Price* | 2.3598 | 2.7522 | 3.0092 |
| **Hartford** | | | |
| *Spread* | 1.0267 | 1.4916 | 1.7195 |
| *Farm Price* | 1.2969 | 1.2506 | 1.2574 |
| *Retail Price* | 2.3236 | 2.7422 | 2.9769 |
| **Seattle** | | | |
| *Spread* | 1.7631 | 2.0987 | 2.5540 |
| *Farm Price* | 1.1626 | 1.1637 | 1.0598 |
| *Retail Price* | 2.9257 | 3.2624 | 3.6138 |
| **St. Louis** | | | |
| *Spread* | 1.1618 | 1.6729 | 1.8797 |
| *Farm Price* | 1.2680 | 1.2504 | 1.1418 |
| *Retail Price* | 2.4298 | 2.9233 | 3.0215 |

# CHAPTER V

## EMPIRICAL RESULTS

The econometric software, SHAZAM, was used to obtain econometric results for this study. There were two specifications, the mark-up and relative price spread specifications, considered to analyze the factors affecting the farm-to-retail price spread of whole and two percent milk. The models also were adjusted for first-order serial correlation. The best specification was chosen based on the lowest Schwarz and Akaike criteria. Given the lower Schwarz and Akaike values, the mark-up model was consistently the better model to use in the analysis of whole and two percent milk in the seven selected cities (See Table 7). This specification is given by the following:

$$M_t = a_0 + a_1P_r + a_2LC + a_3FC + a_4S1 + a_5S2 + a_6S3 + a_7SC1 + SC2 + e_t$$

where:

$M_t$ = Retail price minus farm price in month t (dollars/gal.)

$P_{rt}$ = Retail Price in month t (dollars/gal.)

$LC_t$= Labor Cost in month t (Employment Cost Index)

$FC_t$ = Fuel Cost in month t (cents/gal.)

S1 = Season 1

S2 = Season 2

S3 = Season 3

SC1 = Time Period 1 (January 1994 to June 1997)

SC2 = Time Period 2 (July 1997 to September 2001)

$Q_t$ = Milk Production in month t (millions of pounds)

The level of significance chosen for this analysis is 0.05. That is, to determine statistical significance of the impacts of factors on farm to retail price spreads, we employ a type I error rate of 0.05.

**Table 7. Schwarz/Akaike Comparison for the Relative Price and Mark-up Models**

**Relative Price Model**

| | Atlanta | | Boston | | Chicago | | Dallas | |
|---|---|---|---|---|---|---|---|---|
| | Whole | 2% | Whole | 2% | Whole | 2% | Whole | 2% |
| Schwarz | 9.99E-03 | 9.16E-03 | 9.23E-03 | 8.31E-03 | 1.01E-02 | 9.33E-03 | 8.67E-03 | 7.91E-03 |
| Akaike | 7.77E-03 | 7.12E-03 | 7.18E-03 | 6.46E-03 | 7.83E-03 | 7.26E-03 | 6.74E-03 | 6.15E-03 |

| | Hartford | | Seattle | | St. Louis | | | |
|---|---|---|---|---|---|---|---|---|
| | *Whole* | *2%* | *Whole* | *2%* | *Whole* | *2%* | | |
| Schwarz | 8.89E-03 | 7.82E-03 | 7.39E-03 | 6.82E-03 | 9.33E-03 | 8.21E-03 | | |
| Akaike | 6.91E-03 | 6.08E-03 | 5.75E-03 | 5.30E-03 | 7.26E-03 | 6.38E-03 | | |

**Mark-up Pricing Model**

| | Atlanta | | Boston | | Chicago | | Dallas | |
|---|---|---|---|---|---|---|---|---|
| | ***Whole*** | ***2%*** | ***Whole*** | ***2%*** | ***Whole*** | ***2%*** | ***Whole*** | ***2%*** |
| **Schwarz** | **9.61E-03** | **8.78E-03** | **8.86E-03** | **7.95E-03** | **9.67E-03** | **8.94E-03** | **8.38E-03** | **7.60E-03** |
| **Akaike** | **7.66E-03** | **7.00E-03** | **7.07E-03** | **6.34E-03** | **7.71E-03** | **7.13E-03** | **6.68E-03** | **6.06E-03** |

| | Hartford | | Seattle | | St. Louis | | | |
|---|---|---|---|---|---|---|---|---|
| | ***Whole*** | ***2%*** | ***Whole*** | ***2%*** | ***Whole*** | ***2%*** | | |
| **Schwarz** | **8.51E-03** | **7.48E-03** | **7.11E-03** | **6.53E-03** | **9.00E-03** | **7.87E-03** | | |
| **Akaike** | **6.79E-03** | **5.97E-03** | **5.67E-03** | **5.21E-03** | **7.18E-03** | **6.28E-03** | | |

The empirical results of the mark-up model by city are exhibited in Table 8. Common drivers of the respective price spreads are retail price, seasonality and differences across time periods. The impact of changes in retail prices on price spreads are slightly higher for two percent milk compared to whole milk.

### *Atlanta*

The mark-up pricing model accounts for 95.8 % of the variation associated with the farm-to-retail price spread whole milk in Atlanta. The statistically significant variable is retail price. The change in the farm-to-retail price spread with respect to unit changes in retail price is 0.5898.

The mark-up pricing model explains 96.6 % of the variation associated with the farm-to-retail price spread of two percent milk in Atlanta. The statistically significant variables associated with the farm to retail price spread are retail price and seasonality. The change in farm to retail price spread with respect to unit changes in retail price is 0.6880.

### *Boston*

The mark-up pricing model accounts for 89.9 % of the variation associated with the farm-to-retail price spread of whole milk in Boston. The only statistically significant variable associated with the farm to retail price spread for whole milk in Boston, after correcting for serial correlation, deals with the difference in the price spread before and after the Northeast Dairy Compact. The price spread for whole milk is lower by twenty-four cents per gallon before the compact relative to after the compact.

**Table 8. Empirical Results by City**

| Atlanta Whole | | R^2 = | 0.9584 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | **0.58987** | **4.0245** | **0.0001** |
| **Lbcst** | 5.63E-03 | 0.84623 | 0.3995 |
| **Fuelcst** | 2.38E-03 | 1.5002 | 0.1368 |
| **S1** | 2.54E-02 | 0.90197 | 0.3693 |
| **S2** | 5.46E-02 | 1.6994 | 0.0925 |
| **S3** | 5.42E-02 | 1.9002 | 0.0604 |
| **SC1** | -0.14406 | -1.0904 | 0.2782 |
| **SC2** | -5.27E-02 | -0.57572 | 0.5661 |
| **Constant** | -1.3416 | -1.9957 | 0.0488 |

| Atlanta 2% | | R^2 = | 0.9668 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | **0.68802** | **4.919** | **0** |
| **Lbcst** | 3.66E-03 | 0.5893 | 0.557 |
| **Fuelcst** | 2.03E-03 | 1.402 | 0.164 |
| **S1** | 2.61E-02 | 0.9637 | 0.338 |
| **S2** | **6.42E-02** | **2.097** | **0.039** |
| **S3** | **6.65E-02** | **2.422** | **0.017** |
| **SC1** | -0.18487 | -1.495 | 0.138 |
| **SC2** | -5.99E-02 | -0.6999 | 0.486 |
| **Constant** | -1.1459 | -1.586 | 0.066 |

| Boston Whole | | R^2 = | 0.899 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | 0.12873 | 0.72704 | 0.469 |
| **Lbcst** | 6.42E-03 | 1.2456 | 0.2159 |
| **Fuelcst** | 1.32E-03 | 0.85554 | 0.3944 |
| **S1** | 2.76E-02 | 1.02 | 0.3103 |
| **S2** | 2.56E-02 | 0.83875 | 0.4037 |
| **S3** | 3.76E-02 | 1.4089 | 0.1621 |
| **SC1** | -0.24225 | -1.8851 | 0.0624 |
| **SC2** | -5.58E-02 | -0.66618 | 0.5069 |
| **Constant** | -4.47E-02 | -6.73E-02 | 0.9465 |

| Boston 2% | | R^2 = | 0.9457 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | **0.33327** | **2.3981** | **0.0184** |
| **Lbcst** | 7.34E-03 | 1.5519 | 0.1239 |
| **Fuelcst** | 1.31E-03 | 0.97145 | 0.3337 |
| **S1** | 3.12E-02 | 1.1988 | 0.2335 |
| **S2** | 3.45E-02 | 1.1893 | 0.2372 |
| **S3** | 4.42E-02 | 1.7269 | 0.0874 |
| **SC1** | **-0.26569** | **-2.2461** | **0.027** |
| **SC2** | -7.36E-02 | -0.98577 | 0.3267 |
| **Constant** | -0.65817 | -1.212 | 0.2284 |

| Chicago Whole | | R^2 = | 0.8953 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | **0.63869** | **6.722** | **0** |
| **Lbcst** | -6.89E-04 | -0.1512 | 0.88 |
| **Fuelcst** | 1.38E-03 | 1.229 | 0.222 |
| **S1** | 2.03E-02 | 0.7101 | 0.479 |
| **S2** | 4.16E-02 | 1.272 | 0.207 |
| **S3** | 5.42E-02 | 1.933 | 0.056 |
| **SC1** | -0.1763 | -1.347 | 0.181 |
| **SC2** | -8.54E-02 | -0.9753 | 0.332 |
| **Constant** | -0.27256 | -0.4333 | 0.666 |

| Chicago 2% | | R^2 = | 0.9581 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | **0.712** | **8.8694** | **0** |
| **Lbcst** | 3.49E-03 | 0.76507 | 0.4461 |
| **Fuelcst** | 1.29E-03 | 1.21 | 0.2292 |
| **S1** | 2.07E-02 | 0.75381 | 0.4528 |
| **S2** | 4.97E-02 | 1.5858 | 0.1161 |
| **S3** | **6.46E-02** | **2.3783** | **0.0194** |
| **SC1** | -0.14314 | -1.1601 | 0.2489 |
| **SC2** | -3.00E-02 | -0.36253 | 0.7177 |
| **Constant** | -1.0411 | -1.8321 | 0.07 |

**Table 8. Continued**

| Dallas Whole | | R^2 = | 0.9127 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | **0.83784** | **8.8424** | **0** |
| **Lbcst** | -5.25E-03 | -1.1518 | 0.2522 |
| **Fuelcst** | 2.46E-03 | 1.72 | 0.0886 |
| **S1** | 1.90E-02 | 0.71934 | 0.4737 |
| **S2** | 4.10E-02 | 1.357 | 0.1779 |
| **S3** | **6.10E-02** | **2.3346** | **0.0216** |
| **SC1** | -0.22178 | -1.8285 | 0.0705 |
| **SC2** | -0.15189 | -1.9565 | 0.0533 |
| **Constant** | -0.39243 | -0.69925 | 0.4861 |

| Dallas 2% | | R^2 = | 0.9404 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | **0.89754** | **10.17** | **0** |
| **Lbcst** | -4.20E-03 | -0.9644 | 0.337 |
| **Fuelcst** | 2.06E-02 | 1.513 | 0.134 |
| **S1** | 1.65E-02 | 0.6543 | 0.514 |
| **S2** | 4.36E-02 | 1.516 | 0.133 |
| **S3** | **6.59E-02** | **2.649** | **0.009** |
| **SC1** | **-0.23327** | **-2.027** | **0.045** |
| **SC2** | -0.1357 | -1.845 | 0.068 |
| **Constant** | -0.5253 | -0.9924 | 0.323 |

| Hartford Whole | | R^2 = | 0.8959 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | -0.10229 | -0.47235 | 0.6377 |
| **Lbcst** | 7.99E-03 | 1.5731 | 0.1189 |
| **Fuelcst** | 1.72E-03 | 1.1667 | 0.2462 |
| **S1** | 6.73E-03 | 0.25572 | 0.7987 |
| **S2** | 1.49E-02 | 0.49155 | 0.6241 |
| **S3** | 3.35E-02 | 1.2667 | 0.2083 |
| **SC1** | **-0.30144** | **-2.3611** | **0.0202** |
| **SC2** | -7.65E-02 | -0.95106 | 0.3439 |
| **Constant** | 0.36364 | 0.56111 | 0.576 |

| Hartford 2% | | R^2 = | 0.9426 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | 4.26E-02 | 0.24491 | 0.807 |
| **Lbcst** | **1.09E-02** | **2.2542** | **0.0264** |
| **Fuelcst** | 1.81E-03 | 1.3437 | 0.1822 |
| **S1** | 1.81E-02 | 0.72868 | 0.468 |
| **S2** | 2.81E-02 | 0.9948 | 0.3223 |
| **S3** | 4.00E-02 | 1.6099 | 0.1107 |
| **SC1** | **-0.29467** | **-2.5179** | **0.0134** |
| **SC2** | -5.98E-02 | -0.80667 | 0.4218 |
| **Constant** | -0.40348 | -0.73242 | 0.4657 |

| Seattle Whole | | R^2 = | 0.9461 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | **0.76846** | **7.9134** | **0** |
| **Lbcst** | -5.49E-04 | -0.12594 | 0.9 |
| **Fuelcst** | **2.44E-03** | **2.2945** | **0.0239** |
| **S1** | 2.36E-02 | 0.96956 | 0.3347 |
| **S2** | 3.79E-02 | 1.3707 | 0.1736 |
| **S3** | **5.94E-02** | **2.4673** | **0.0154** |
| **SC1** | -0.15288 | -1.4023 | 0.164 |
| **SC2** | **-0.16052** | **-2.2703** | **0.0254** |
| **Constant** | -0.66827 | -1.2869 | 0.2012 |

| Seattle 2% | | R^2 = | 0.9563 |
|---|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | **0.85521** | **10.72** | **0** |
| **Lbcst** | -1.49E-03 | -0.378 | 0.706 |
| **Fuelcst** | **2.26E-03** | **2.24** | **0.027** |
| **S1** | 2.58E-02 | 1.099 | 0.274 |
| **S2** | 4.21E-02 | 1.588 | 0.115 |
| **S3** | **6.12E-02** | **2.649** | **0.009** |
| **SC1** | -0.195 | -1.894 | 0.061 |
| **SC2** | **-0.15525** | **-2.342** | **0.021** |
| **Constant** | -0.67706 | -1.407 | 0.163 |

**Table 8. Continued**

| St. Louis Whole | R^2 = | 0.9253 |
|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | **0.57336** | **5.0883** | **0** |
| **Lbcst** | 4.59E-03 | 0.94655 | 0.3462 |
| **Fuelcst** | 1.34E-03 | 1.2352 | 0.2197 |
| **S1** | 1.30E-02 | 0.47625 | 0.635 |
| **S2** | 3.13E-02 | 0.99305 | 0.3232 |
| **S3** | 4.46E-02 | 1.6036 | 0.1121 |
| **SC1** | -0.14798 | -1.1936 | 0.2355 |
| **SC2** | -9.12E-02 | -1.0937 | 0.2768 |
| **Constant** | -0.89729 | -1.5836 | 0.1165 |

| St. Louis 2% | R^2 = | 0.9479 |
|---|---|---|
| | *Est. Coeff.* | *T-Ratio* | *P-Value* |
| **Pricer** | **0.62002** | **6.607** | **0** |
| **Lbcst** | 4.98E-03 | 1.164 | 0.247 |
| **Fuelcst** | 1.05E-03 | 1.051 | 0.296 |
| **S1** | 2.15E-02 | 0.8415 | 0.402 |
| **S2** | 4.66E-02 | 1.59 | 0.115 |
| **S3** | **6.11E-02** | **2.376** | **0.019** |
| **SC1** | -0.18256 | -1.616 | 0.109 |
| **SC2** | -8.35E-02 | -1.117 | 0.267 |
| **Constant** | -0.94644 | -1.847 | 0.068 |

The mark-up pricing model explained 94.57 % of the variation associated with the farm-to-retail price spread of two percent milk in Boston. The variables shown to be significant in the mark-up model are the retail price and the difference in the price spread before and after the Northeast Dairy Compact. The change in farm-to-retail price spread with respect to a unit change in retail price is 0.3332. The price spread is lower by twenty-six cents per gallon before the compact relative to after the compact.

### *Chicago*

The mark-up pricing model explains 89.5 % of the variation of farm-to-retail price spread for whole milk in Chicago. The only variable that is statistically significant is retail price. A unit change in retail price gives rise to a sixty-four cent per gallon change in the farm-to-retail price spread for whole milk.

The mark-up pricing model explains 95.8 % of the variation associated with the farm-to-retail price spread of two percent milk in Chicago. The statistically significant variables are retail price and seasonality. A unit change in retail price leads to a seventy-one cent per gallon change in the farm-to-retail price spread for two percent milk.

### *Dallas*

The mark-up pricing model accounts for 91.2 % of the variation in the farm-to-retail price spread for Dallas whole milk. The statistically significant variables associated with this model are retail price, seasonality, and differences in the price spread for various time periods. The marginal effect of a change in retail price is 0.8378. The price spread of whole milk is lower by twenty-two cents per gallon from January 1994 to June 1997 relative to October 2001 to October 2002. The price spread also is

lower by fifteen cents per gallon from July 1997 to September 2001 relative to October 2001 to October 2002.

The mark-up specification explains 94 % of the variation of the farm-to-retail price spread of two percent milk in Dallas. The variables that are statistically significant to this specification are retail price and differences in price spread across different time periods. The marginal effect of a change in retail price for the two percent milk price spread is 0.8975. Price spreads are higher by twenty-three cents and thirteen cents per gallon from October 2001 to October 2002 relative to January 1994 to June 1997 and relative to July 1997 to September 2001 respectively. Price spreads are higher by sixty-six cents per gallon in the third quarter of the year relative to the fourth quarter

***Hartford***

The mark-up pricing model accounts for 89.5 % of the variation in the farm-to-retail price spread for whole milk in Hartford. The price spread is lower by thirty cents per gallon from January 1994 to June 1997 relative to October 2001 to October 2002.

The mark-up specification explains 94.2 % of the variation of the farm-to-retail price spread of two percent milk in Hartford. The variables that are statistically significant to this specification are labor costs and the differences in the price spread before and after the Northeast Dairy Compact. A unit change in labor costs yields a change of one cent per gallon in the price spread. The price spread is lower by twenty-nine cents per gallon before the existence of the Compact compared to after the termination of the Compact.

### *Seattle*

The mark-up pricing model explains 94.6 % of the variation of farm-to-retail price spread for whole milk in Seattle. The variables that are statistically significant include retail price, fuel costs, seasonality, and differences in time periods. A unit change in retail price leads to a seventy-seven cent per gallon change in whole milk. A unit change in fuel cost gives rise to a twenty-four cent per gallon change in the price spread. The price spread is lower by sixteen cents per gallon from July 1997 to September 2001 relative to October 2001 to October 2002.

The mark-up pricing model explains 95.6 % of the variation associated with the farm-to-retail price spread of two percent milk in Seattle. The statistically significant variables are retail price, fuel costs, seasonality, and differences by time periods. These results are similar to the case for whole milk. The price spread for two percent milk is significantly higher by nineteen cents per gallon from October 2001 to October 2002 relative to January 1994 to June 1997 and by fifteen cents per gallon from October 2001 to October 2002 relative to July 1997 to September 2001.

### *St. Louis*

The mark-up pricing model explains 92.5 % of the variation of the farm-to-retail price spread for whole milk in St. Louis. The variable that is statistically significant is retail price. A unit change in retail price leads to a fifty-seven cents per gallon change in the price spread for whole milk.

The mark-up pricing model explains 94.7 % of the variation associated with the farm-to-retail price spread of two percent milk in St. Louis. The statistically significant

variables are retail price and seasonality. A unit change in retail price leads to a sixty-two cent per gallon change in the price spread for two percent milk.

### *Elasticity of Price Transmission by City*

The elasticity of price transmission is defined as the percentage change in retail price due to a one percent change in farm price. Based on the empirical results of the mark-up model, we calculate the elasticity of price transmission for whole milk and for two percent milk by city. The following was used to calculate the elasticity of price transmission for the seven cities in this study:

$$\mathbf{EPT_t} = \frac{1}{(1 - CRP)} * \frac{FP_t}{RP_t}$$

where:

$EPT_t$ = Elasticity of Price Transmission in time period t

CRP = Coefficient Associated with Retail Price in the Markup Pricing Model

$FP_t$ = Farm Price in time period t

$RP_t$ = Retail Price in time period t

The elasticity of price transmission is dependent upon the level of the farm price, the level of the retail price, and the coefficient associated with the retail price variable in the mark-up model. This elasticity varies from month to month because the ratio of the farm price to retail price varies from month to month. In Table 9, we report the magnitude of elasticity of price transmission for whole milk and two percent milk based on farm level and retail level prices reported in October 2002, the last observation of our data series.

**Table 9. Elasticities of Price Transmission for Whole Milk and 2% Milk by City Based on Farm and Retail Prices in October 2002**

| | Whole Milk | 2% Milk |
|---|---|---|
| **Atlanta** | 0.90 | 0.93 |
| **Boston** | 0.48 | 0.58 |
| **Chicago** | 1.17 | 1.37 |
| **Dallas** | 2.54 | 3.66 |
| **Hartford** | 0.37 | 0.39 |
| **Seattle** | 1.24 | 1.88 |
| **St. Louis** | 0.90 | 0.93 |

In all cases, the elasticities of price transmission were higher for two percent milk than for whole milk. These measures of sensitivity of price transmission were lowest in the Northeast compared to other regions of the United States. The elasticities of price transmission were the same for Atlanta and St. Louis, 0.90 for whole milk and 0.93 for two percent milk. The elasticities of price transmission were above one and less than two for Chicago and Seattle and between two and four for Dallas. In Chicago, Seattle and Dallas, retail prices are extremely sensitive to changes in farm prices. In Figures 22-28, we plot the elasticities of price transmission for whole milk in Atlanta, Boston, Chicago, Dallas, Hartford, Seattle, and St. Louis.

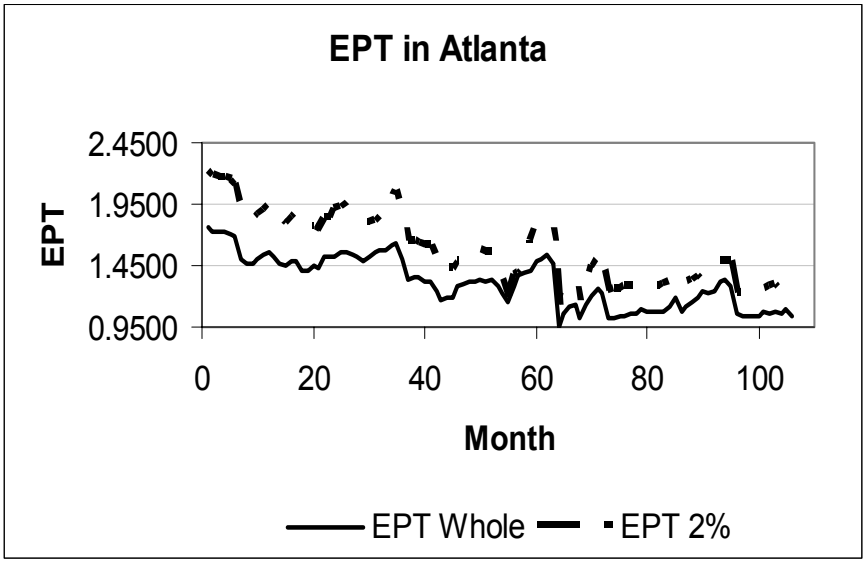


**Figure 22. Elasticity of price transmission for whole and 2% milk in Atlanta**

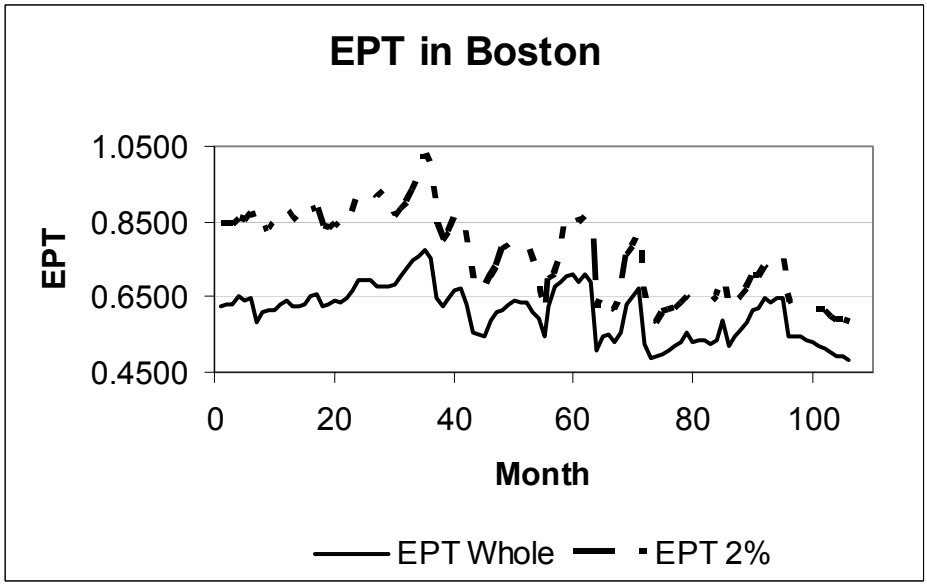


**Figure 23. Elasticity of price transmission for whole and 2% milk in Boston**

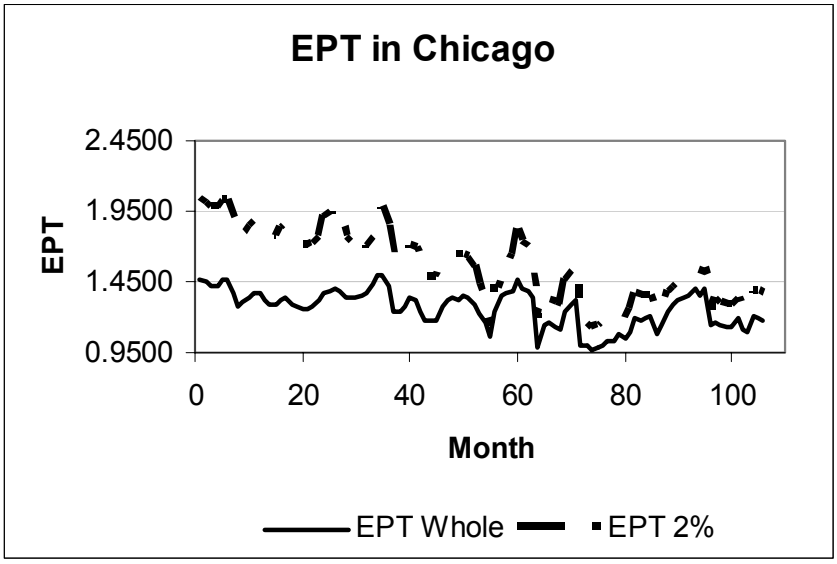


**Figure 24. Elasticity of price transmission for whole and 2% milk in Chicago**

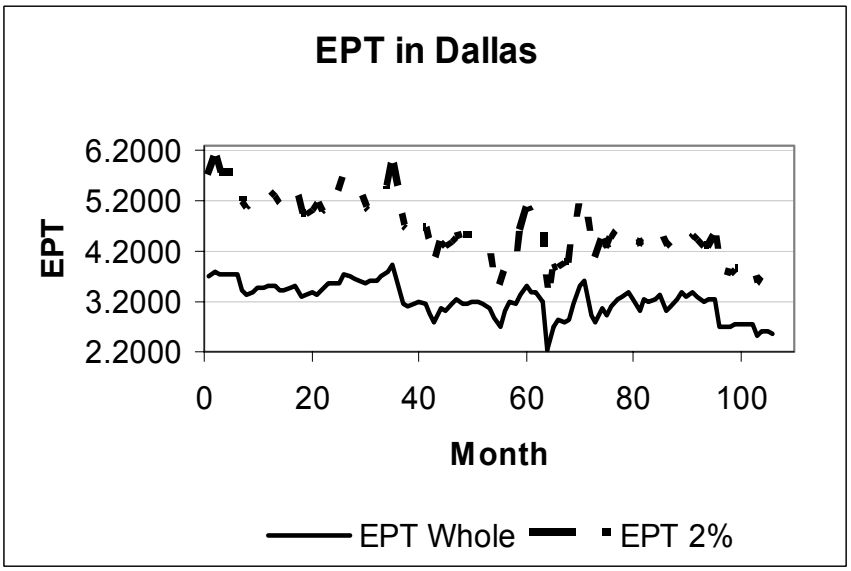


**Figure 25. Elasticity of price transmission for whole and 2% milk in Dallas**

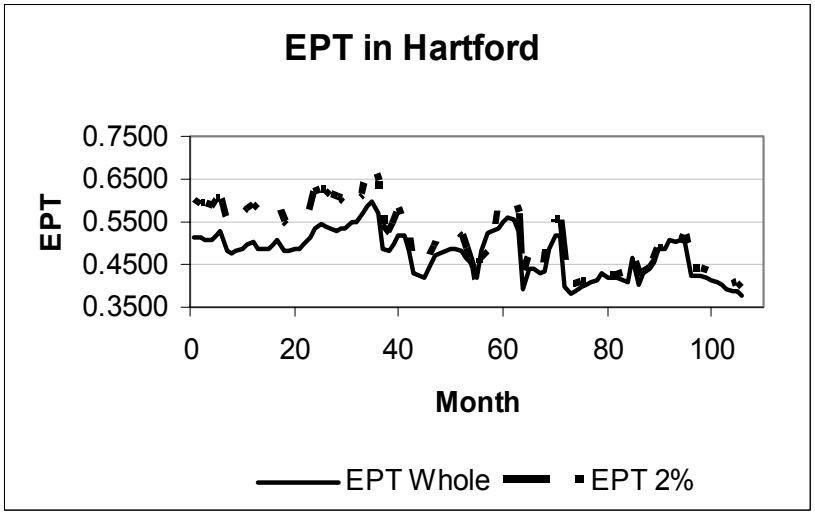


**Figure 26. Elasticity of price transmission for whole and 2% milk in Hartford**

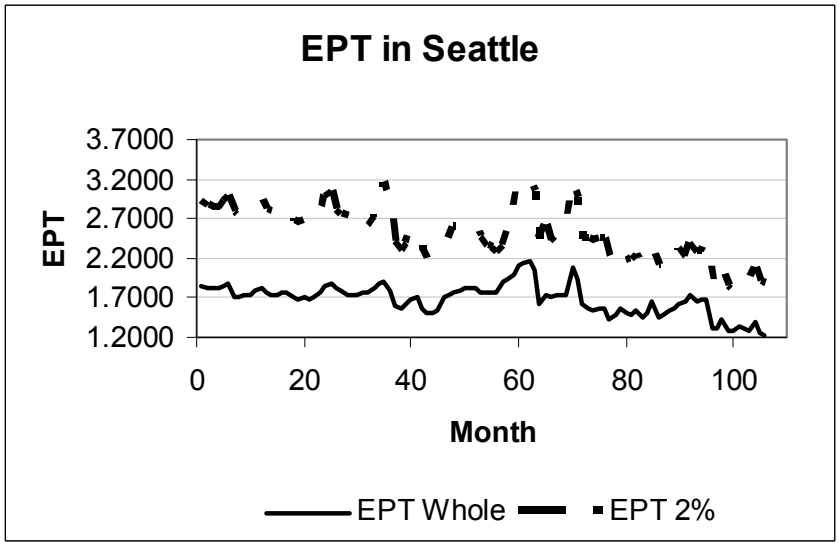


**Figure 27. Elasticity of price transmission for whole and 2% milk in Seattle**

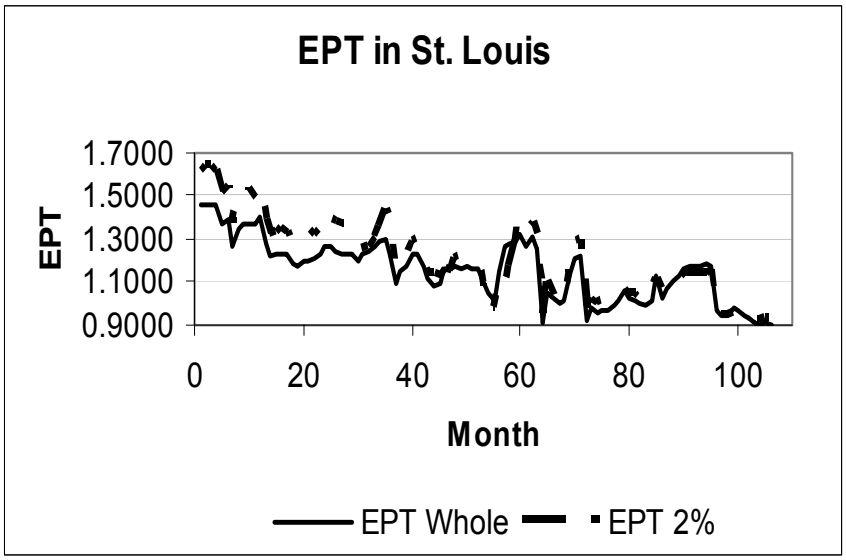


**Figure 28. Elasticity of price transmission for whole and 2% milk in St. Louis**

# CHAPTER VI

## SUMMARY AND CONCLUDING REMARKS

A quantitative analysis of farm-to-retail price spreads was undertaken for the cities of Atlanta, Boston, Chicago, Dallas, Hartford, Seattle, and St. Louis. The data for the analysis covered the period from January 1994 to October 2002, a total of 106 monthly observations. Key time periods were January 1994 to June 1997, July 1997 to September 2001, and October 2001 to October 2002. The period from July 1997 to September 2001 corresponded to the existence to the Northeast Dairy Compact, relevant to the cities of Boston and Hartford. The Compact was terminated on September 30, 2001.

Principal findings from the analysis are the following. First, the better econometric specification based on Akaike and Schwarz Information Criterion was the mark-up model over the relative price spread model. Second, in most instances, the key drivers of price spreads for whole milk and two percent milk were retail prices and seasonality. In addition, the price spreads in the Northeast were significantly lower before and during the implementation of the Northeast Dairy Compact compared to the period corresponding to the termination of the program. Further, the seasonal pattern in the farm-to-retail price spreads was similar across regions. The price spreads for both whole milk and two percent milk were highest in the third quarter and lowest in the fourth quarter. Moreover, labor costs were a determinant of the price spreads only in the Northeast region of the United States. Finally, fuel costs were statistically significant

factors of the price spreads for whole milk and two percent milk in Atlanta, Dallas, and Seattle.

Elasticities of price transmission, measures of the sensitivity of retail prices to changes in farm prices, were higher in all regions for two percent milk compared to whole milk. The retail prices in Boston and Hartford were the least sensitive to changes in farm prices, while the retail prices in Dallas were the most sensitive to changes in farm prices. The range of the elasticities of price transmission for whole milk was from 0.37 (Hartford) to 2.54 (Dallas). The range of the elasticities of price transmission for two percent milk was from 0.39 (Hartford) to 3.66 (Dallas).

Knowledge of the determinants of the farm-to-retail price spreads for whole milk and two percent milk offers information to policy makers and dairy farmers that may improve decision-making. For example, our analysis was able to demonstrate the effect of the Northeast Dairy Compact on the price spreads for fluid milk. As well, our analysis provided information on the impact of labor cost and fuel costs on the price spreads for fluid milk. Finally, with the estimation of the elasticities of price transmission, policy makers and retailers are in a better position to understand the sensitivity of retail prices to changes in farm prices.

A viable extension of this work is to replicate our analysis for other cities to better discern geographic differences in price spreads for fluid milk. Another extension of this work is the use of seemingly unrelated regression methods to potentially improve the statistical efficiency of the parameter estimates.

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# APPENDIX

Data Associated with the Analysis of Farm-to-Retail Price Spreads in the Various Cities

where:

$FP_{it}$ = Farm Price in Time Period t in City i (dollars/gal.)

$RP_{it}$ = Retail Price in Time Period t in City i (dollars/gal.)

$Spread_{it}$ = Farm-to-Retail Price Spread in Time Period t in City i (dollars/gal.)

$LC_t$ = Value of Employment Cost Index in Time Period t (1899 =100)

$FC_{it}$= Fuel Cost in Time Period t in City i (dollars/gal.)

$Prod_t$ = Farm Production of milk in the United States in Time Period t (millions of pounds)

| | | Whole Milk Atlanta | | | | | | 2% Milk Atlanta | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Yr | Mn | Spread | FP | RP | LC | FC | Mn Prod | Spread | PF | RP | LC | FC | Mn Prod |
| **1994** | Jan | 0.55 | 1.43 | 1.98 | 121.2 | 95.8 | 12698 | 0.61 | 1.37 | 1.98 | 121.2 | 95.8 | 12698 |
| | Feb | 0.57 | 1.41 | 1.98 | 121.2 | 96.9 | 11645 | 0.63 | 1.35 | 1.98 | 121.2 | 96.9 | 11645 |
| | Mar | 0.58 | 1.40 | 1.98 | 121.2 | 97.0 | 13243 | 0.64 | 1.34 | 1.98 | 121.2 | 97.0 | 13243 |
| | Apr | 0.58 | 1.40 | 1.98 | 122.3 | 98.8 | 13104 | 0.64 | 1.34 | 1.98 | 122.3 | 98.8 | 13104 |
| | May | 0.60 | 1.42 | 2.02 | 122.3 | 100.0 | 13711 | 0.66 | 1.36 | 2.02 | 122.3 | 100.0 | 13711 |
| | Jun | 0.64 | 1.44 | 2.08 | 122.3 | 102.5 | 13072 | 0.70 | 1.38 | 2.08 | 122.3 | 102.5 | 13072 |
| | Jul | 0.80 | 1.28 | 2.08 | 123.3 | 104.8 | 13021 | 0.86 | 1.22 | 2.08 | 123.3 | 104.8 | 13021 |
| | Aug | 0.82 | 1.26 | 2.08 | 123.3 | 109.1 | 12828 | 0.89 | 1.19 | 2.08 | 123.3 | 109.1 | 12828 |
| | Sep | 0.82 | 1.26 | 2.08 | 123.3 | 109.3 | 12336 | 0.89 | 1.19 | 2.08 | 123.3 | 109.3 | 12336 |
| | Oct | 0.79 | 1.29 | 2.08 | 124.0 | 107.4 | 12747 | 0.86 | 1.22 | 2.08 | 124.0 | 107.4 | 12747 |
| | Nov | 0.77 | 1.31 | 2.08 | 124.0 | 108.9 | 12319 | 0.83 | 1.25 | 2.08 | 124.0 | 108.9 | 12319 |
| | Dec | 0.74 | 1.34 | 2.08 | 124.0 | 111.4 | 12878 | 0.81 | 1.27 | 2.08 | 124.0 | 111.4 | 12878 |
| **1995** | Jan | 0.78 | 1.30 | 2.08 | 124.9 | 110.5 | 13170 | 0.84 | 1.24 | 2.08 | 124.9 | 110.5 | 13170 |
| | Feb | 0.82 | 1.26 | 2.08 | 124.9 | 109.7 | 12126 | 0.88 | 1.20 | 2.08 | 124.9 | 109.7 | 12126 |
| | Mar | 0.85 | 1.23 | 2.08 | 124.9 | 109.1 | 13622 | 0.91 | 1.17 | 2.08 | 124.9 | 109.1 | 13622 |
| | Apr | 0.81 | 1.27 | 2.08 | 125.8 | 112.5 | 13330 | 0.88 | 1.20 | 2.08 | 125.8 | 112.5 | 13330 |
| | May | 0.80 | 1.28 | 2.08 | 125.8 | 120.9 | 13868 | 0.87 | 1.21 | 2.08 | 125.8 | 120.9 | 13868 |
| | Jun | 0.87 | 1.21 | 2.08 | 125.8 | 123.1 | 13267 | 0.94 | 1.14 | 2.08 | 125.8 | 123.1 | 13267 |
| | Jul | 0.88 | 1.21 | 2.09 | 126.5 | 119.7 | 13141 | 0.92 | 1.13 | 2.05 | 126.5 | 119.7 | 13141 |
| | Aug | 0.85 | 1.23 | 2.08 | 126.5 | 116.2 | 12751 | 0.93 | 1.15 | 2.08 | 126.5 | 116.2 | 12751 |
| | Sep | 0.86 | 1.23 | 2.09 | 126.5 | 113.9 | 12316 | 0.95 | 1.14 | 2.09 | 126.5 | 113.9 | 12316 |
| | Oct | 0.79 | 1.30 | 2.09 | 127.3 | 111.3 | 12674 | 0.89 | 1.20 | 2.09 | 127.3 | 111.3 | 12674 |
| | Nov | 0.80 | 1.35 | 2.15 | 127.3 | 107.9 | 12232 | 0.92 | 1.23 | 2.15 | 127.3 | 107.9 | 12232 |
| | Dec | 0.80 | 1.35 | 2.15 | 127.3 | 107.1 | 12795 | 0.86 | 1.29 | 2.15 | 127.3 | 107.1 | 12795 |
| **1996** | Jan | 0.79 | 1.39 | 2.18 | 128.3 | 109.1 | 13068 | 0.86 | 1.32 | 2.18 | 128.3 | 109.1 | 13068 |
| | Feb | 0.78 | 1.40 | 2.18 | 128.3 | 109.4 | 12411 | 0.84 | 1.34 | 2.18 | 128.3 | 109.4 | 12411 |
| | Mar | 0.80 | 1.38 | 2.18 | 128.3 | 113.9 | 13509 | 0.86 | 1.32 | 2.18 | 128.3 | 113.9 | 13509 |
| | Apr | 0.81 | 1.37 | 2.18 | 129.2 | 124.0 | 13211 | 0.88 | 1.30 | 2.18 | 129.2 | 124.0 | 13211 |
| | May | 0.88 | 1.38 | 2.26 | 129.2 | 128.2 | 13561 | 0.98 | 1.28 | 2.26 | 129.2 | 128.2 | 13561 |
| | Jun | 0.88 | 1.48 | 2.36 | 129.2 | 126.5 | 12815 | 1.03 | 1.33 | 2.36 | 129.2 | 126.5 | 12815 |
| | Jul | 0.87 | 1.55 | 2.42 | 130.1 | 123.4 | 12773 | 1.04 | 1.38 | 2.42 | 130.1 | 123.4 | 12773 |
| | Aug | 0.84 | 1.58 | 2.42 | 130.1 | 121.6 | 12594 | 1.01 | 1.41 | 2.42 | 130.1 | 121.6 | 12594 |
| | Sep | 0.89 | 1.63 | 2.52 | 130.1 | 120.8 | 12197 | 1.06 | 1.46 | 2.52 | 130.1 | 120.8 | 12197 |
| | Oct | 0.85 | 1.67 | 2.52 | 131.0 | 121.7 | 12684 | 0.99 | 1.53 | 2.52 | 131.0 | 121.7 | 12684 |
| | Nov | 0.84 | 1.68 | 2.52 | 131.0 | 125.1 | 12288 | 0.91 | 1.61 | 2.52 | 131.0 | 125.1 | 12288 |
| | Dec | 0.98 | 1.58 | 2.56 | 131.0 | 126.3 | 12895 | 1.06 | 1.50 | 2.56 | 131.0 | 126.3 | 12895 |
| **1997** | Jan | 1.17 | 1.42 | 2.59 | 131.9 | 126.3 | 13106 | 1.25 | 1.34 | 2.59 | 131.9 | 126.3 | 13106 |
| | Feb | 1.12 | 1.40 | 2.52 | 131.9 | 125.8 | 12104 | 1.23 | 1.29 | 2.52 | 131.9 | 125.8 | 12104 |
| | Mar | 1.12 | 1.40 | 2.52 | 131.9 | 123.8 | 13649 | 1.24 | 1.28 | 2.52 | 131.9 | 123.8 | 13649 |
| | Apr | 1.17 | 1.39 | 2.56 | 132.9 | 122.3 | 13379 | 1.27 | 1.29 | 2.56 | 132.9 | 122.3 | 13379 |
| | May | 1.17 | 1.39 | 2.56 | 132.9 | 120.6 | 13870 | 1.26 | 1.30 | 2.56 | 132.9 | 120.6 | 13870 |
| | Jun | 1.26 | 1.30 | 2.56 | 132.9 | 119.7 | 13325 | 1.38 | 1.18 | 2.56 | 132.9 | 119.7 | 13325 |
| | Jul | 1.32 | 1.24 | 2.56 | 133.9 | 117.9 | 13265 | 1.44 | 1.12 | 2.56 | 133.9 | 117.9 | 13265 |
| | Aug | 1.30 | 1.26 | 2.56 | 133.9 | 122.2 | 13000 | 1.42 | 1.14 | 2.56 | 133.9 | 122.2 | 13000 |
| | Sep | 1.32 | 1.27 | 2.59 | 133.9 | 123.4 | 12362 | 1.44 | 1.15 | 2.59 | 133.9 | 123.4 | 12362 |
| | Oct | 1.25 | 1.37 | 2.62 | 135.2 | 120.2 | 12768 | 1.41 | 1.21 | 2.62 | 135.2 | 120.2 | 12768 |
| | Nov | 1.26 | 1.43 | 2.69 | 135.2 | 117.7 | 12325 | 1.44 | 1.25 | 2.69 | 135.2 | 117.7 | 12325 |
| | Dec | 1.24 | 1.45 | 2.69 | 135.2 | 114.4 | 12938 | 1.37 | 1.32 | 2.69 | 135.2 | 114.4 | 12938 |
| **1998** | Jan | 1.23 | 1.46 | 2.69 | 136.2 | 110.6 | 13287 | 1.35 | 1.34 | 2.69 | 136.2 | 110.6 | 13287 |
| | Feb | 1.21 | 1.48 | 2.69 | 136.2 | 107.0 | 12188 | 1.36 | 1.33 | 2.69 | 136.2 | 107.0 | 12188 |
| | Mar | 1.23 | 1.46 | 2.69 | 136.2 | 104.2 | 13689 | 1.37 | 1.32 | 2.69 | 136.2 | 104.2 | 13689 |
| | Apr | 1.22 | 1.47 | 2.69 | 137.3 | 105.0 | 13515 | 1.38 | 1.31 | 2.69 | 137.3 | 105.0 | 13515 |
| | May | 1.27 | 1.42 | 2.69 | 137.3 | 105.1 | 14014 | 1.46 | 1.23 | 2.69 | 137.3 | 105.1 | 14014 |
| | Jun | 1.33 | 1.36 | 2.69 | 137.3 | 103.8 | 13292 | 1.56 | 1.13 | 2.69 | 137.3 | 103.8 | 13292 |
| | Jul | 1.42 | 1.27 | 2.69 | 138.7 | 103.0 | 13167 | 1.73 | 1.03 | 2.76 | 138.7 | 103.0 | 13167 |
| | Aug | 1.31 | 1.45 | 2.76 | 138.7 | 100.7 | 12941 | 1.57 | 1.19 | 2.76 | 138.7 | 100.7 | 12941 |
| | Sep | 1.22 | 1.57 | 2.79 | 138.7 | 99.1 | 12411 | 1.57 | 1.22 | 2.79 | 138.7 | 99.1 | 12411 |
| | Oct | 1.19 | 1.60 | 2.79 | 139.7 | 100.9 | 12961 | 1.49 | 1.30 | 2.79 | 139.7 | 100.9 | 12961 |
| | Nov | 1.16 | 1.63 | 2.79 | 139.7 | 99.6 | 12611 | 1.36 | 1.43 | 2.79 | 139.7 | 99.6 | 12611 |
| | Dec | 1.10 | 1.72 | 2.82 | 139.7 | 94.9 | 13365 | 1.25 | 1.57 | 2.82 | 139.7 | 94.9 | 13365 |
| **1999** | Jan | 1.11 | 1.78 | 2.89 | 140.2 | 93.5 | 13628 | 1.25 | 1.64 | 2.89 | 140.2 | 93.5 | 13628 |
| | Feb | 1.06 | 1.83 | 2.89 | 140.2 | 91.9 | 12607 | 1.21 | 1.68 | 2.89 | 140.2 | 91.9 | 12607 |
| | Mar | 1.15 | 1.74 | 2.89 | 140.2 | 95.9 | 14270 | 1.30 | 1.59 | 2.89 | 140.2 | 95.9 | 14270 |
| | Apr | 1.76 | 1.13 | 2.89 | 141.7 | 107.5 | 13938 | 1.86 | 1.03 | 2.89 | 141.7 | 107.5 | 13938 |

| | | Whole Milk Atlanta | | | | | | 2% Milk Atlanta | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Yr** | **Mn** | **Spread** | **FP** | **RP** | **LC** | **FC** | **Mn Prod** | **Spread** | **PF** | **RP** | **LC** | **FC** | **Mn Prod** |
| | May | 1.62 | 1.27 | 2.89 | 141.7 | 109.4 | 14458 | 1.74 | 1.15 | 2.89 | 141.7 | 109.4 | 14458 |
| | Jun | 1.56 | 1.33 | 2.89 | 141.7 | 108.3 | 13633 | 1.73 | 1.16 | 2.89 | 141.7 | 108.3 | 13633 |
| | Jul | 1.54 | 1.35 | 2.89 | 143.0 | 112.7 | 13444 | 1.68 | 1.21 | 2.89 | 143.0 | 112.7 | 13444 |
| | Aug | 1.68 | 1.21 | 2.89 | 143.0 | 118.3 | 13357 | 1.83 | 1.06 | 2.89 | 143.0 | 118.3 | 13357 |
| | Sep | 1.54 | 1.35 | 2.89 | 143.0 | 122.8 | 12970 | 1.68 | 1.21 | 2.89 | 143.0 | 122.8 | 12970 |
| | Oct | 1.55 | 1.51 | 3.06 | 144.6 | 124.0 | 13412 | 1.67 | 1.39 | 3.06 | 144.6 | 124.0 | 13412 |
| | Nov | 1.51 | 1.65 | 3.16 | 144.6 | 124.8 | 13140 | 1.63 | 1.53 | 3.16 | 144.6 | 124.8 | 13140 |
| | Dec | 1.64 | 1.65 | 3.29 | 144.6 | 127.9 | 13854 | 1.67 | 1.55 | 3.22 | 144.6 | 127.9 | 13854 |
| **2000** | Jan | 1.84 | 1.34 | 3.18 | 146.4 | 129.3 | 14263 | 1.94 | 1.24 | 3.18 | 146.4 | 129.3 | 14263 |
| | Feb | 1.80 | 1.32 | 3.12 | 146.4 | 138.0 | 13606 | 1.89 | 1.23 | 3.12 | 146.4 | 138.0 | 13606 |
| | Mar | 1.79 | 1.33 | 3.12 | 146.4 | 152.3 | 14761 | 1.88 | 1.24 | 3.12 | 146.4 | 152.3 | 14761 |
| | Apr | 1.77 | 1.35 | 3.12 | 147.9 | 146.6 | 14390 | 1.87 | 1.25 | 3.12 | 147.9 | 146.6 | 14390 |
| | May | 1.75 | 1.37 | 3.12 | 147.9 | 147.1 | 14791 | 1.87 | 1.25 | 3.12 | 147.9 | 147.1 | 14791 |
| | Jun | 1.76 | 1.36 | 3.12 | 147.9 | 156.0 | 14008 | 1.88 | 1.24 | 3.12 | 147.9 | 156.0 | 14008 |
| | Jul | 1.72 | 1.40 | 3.12 | 149.3 | 155.6 | 14117 | 1.86 | 1.26 | 3.12 | 149.3 | 155.6 | 14117 |
| | Aug | 1.74 | 1.38 | 3.12 | 149.3 | 146.5 | 13798 | 1.87 | 1.25 | 3.12 | 149.3 | 146.5 | 13798 |
| | Sep | 1.74 | 1.38 | 3.12 | 149.3 | 150.9 | 13246 | 1.87 | 1.25 | 3.12 | 149.3 | 150.9 | 13246 |
| | Oct | 1.74 | 1.38 | 3.12 | 150.6 | 149.6 | 13708 | 1.87 | 1.25 | 3.12 | 150.6 | 149.6 | 13708 |
| | Nov | 1.72 | 1.37 | 3.09 | 150.6 | 147.9 | 13212 | 1.84 | 1.25 | 3.09 | 150.6 | 147.9 | 13212 |
| | Dec | 1.64 | 1.38 | 3.02 | 150.6 | 141.7 | 13758 | 1.78 | 1.24 | 3.02 | 150.6 | 141.7 | 13758 |
| **2001** | Jan | 1.60 | 1.52 | 3.12 | 152.3 | 143.1 | 13998 | 1.78 | 1.34 | 3.12 | 152.3 | 143.1 | 13998 |
| | Feb | 1.74 | 1.38 | 3.12 | 152.3 | 145.5 | 12894 | 1.86 | 1.26 | 3.12 | 152.3 | 145.5 | 12894 |
| | Mar | 1.70 | 1.42 | 3.12 | 152.3 | 140.1 | 14375 | 1.85 | 1.27 | 3.12 | 152.3 | 140.1 | 14375 |
| | Apr | 1.64 | 1.48 | 3.12 | 153.8 | 152.9 | 14078 | 1.81 | 1.31 | 3.12 | 153.8 | 152.9 | 14078 |
| | May | 1.59 | 1.53 | 3.12 | 153.8 | 161.1 | 14646 | 1.78 | 1.34 | 3.12 | 153.8 | 161.1 | 14646 |
| | Jun | 1.52 | 1.57 | 3.09 | 153.8 | 154.1 | 13957 | 1.84 | 1.35 | 3.19 | 153.8 | 154.1 | 13957 |
| | Jul | 1.58 | 1.61 | 3.19 | 155.4 | 135.8 | 13877 | 1.81 | 1.38 | 3.19 | 155.4 | 135.8 | 13877 |
| | Aug | 1.55 | 1.61 | 3.16 | 155.4 | 134.1 | 13564 | 1.78 | 1.38 | 3.16 | 155.4 | 134.1 | 13564 |
| | Sep | 1.36 | 1.63 | 2.99 | 155.4 | 141.9 | 13129 | 1.60 | 1.39 | 2.99 | 155.4 | 141.9 | 13129 |
| | Oct | 1.34 | 1.65 | 2.99 | 156.9 | 126.6 | 13611 | 1.60 | 1.39 | 2.99 | 156.9 | 126.6 | 13611 |
| | Nov | 1.51 | 1.65 | 3.16 | 156.9 | 112.0 | 13305 | 1.70 | 1.46 | 3.16 | 156.9 | 112.0 | 13305 |
| | Dec | 1.81 | 1.38 | 3.19 | 156.9 | 106.5 | 13902 | 1.96 | 1.23 | 3.19 | 156.9 | 106.5 | 13902 |
| **2002** | Jan | 1.82 | 1.37 | 3.19 | 158.2 | 111.0 | 14245 | 1.96 | 1.23 | 3.19 | 158.2 | 111.0 | 14245 |
| | Feb | 1.82 | 1.37 | 3.19 | 158.2 | 110.2 | 13190 | 1.97 | 1.22 | 3.19 | 158.2 | 110.2 | 13190 |
| | Mar | 1.82 | 1.37 | 3.19 | 158.2 | 122.6 | 14821 | 1.96 | 1.23 | 3.19 | 158.2 | 122.6 | 14821 |
| | Apr | 1.81 | 1.37 | 3.18 | 159.8 | 139.9 | 14564 | 1.95 | 1.23 | 3.18 | 159.8 | 139.9 | 14564 |
| | May | 1.74 | 1.38 | 3.12 | 159.8 | 138.3 | 15105 | 1.88 | 1.24 | 3.12 | 159.8 | 138.3 | 15105 |
| | Jun | 1.76 | 1.36 | 3.12 | 159.8 | 135.4 | 14285 | 1.88 | 1.24 | 3.12 | 159.8 | 135.4 | 14285 |
| | Jul | 1.67 | 1.32 | 2.99 | 161.1 | 135.8 | 14230 | 1.78 | 1.21 | 2.99 | 161.1 | 135.8 | 14230 |
| | Aug | 1.71 | 1.31 | 3.02 | 161.1 | 136.4 | 14154 | 1.84 | 1.18 | 3.02 | 161.1 | 136.4 | 14154 |
| | Sep | 1.61 | 1.31 | 2.92 | 161.1 | 136.9 | 13490 | 1.72 | 1.20 | 2.92 | 161.1 | 136.9 | 13490 |
| | Oct | 1.75 | 1.30 | 3.05 | 162.3 | 144.4 | 13935 | 1.85 | 1.20 | 3.05 | 162.3 | 144.4 | 13935 |

| | | Boston Whole Milk | | | | | | Boston 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Yr | Mn | Spread | FP | RP | LC | FC | Mn Prod | Spread | FP | RP | LC | FC | Mn Prod |
| **1994** | Jan | 1.17 | 1.41 | 2.58 | 121.2 | 103.4 | 12698 | 1.06 | 1.35 | 2.41 | 121.2 | 103.4 | 12698 |
| | Feb | 1.14 | 1.39 | 2.53 | 121.2 | 103.3 | 11645 | 1.04 | 1.33 | 2.37 | 121.2 | 103.3 | 11645 |
| | Mar | 1.13 | 1.38 | 2.51 | 121.2 | 103.7 | 13243 | 1.03 | 1.32 | 2.35 | 121.2 | 103.7 | 13243 |
| | Apr | 1.05 | 1.38 | 2.43 | 122.3 | 103.5 | 13104 | 0.98 | 1.32 | 2.30 | 122.3 | 103.5 | 13104 |
| | May | 1.10 | 1.41 | 2.51 | 122.3 | 105.5 | 13711 | 1.02 | 1.35 | 2.37 | 122.3 | 105.5 | 13711 |
| | Jun | 1.10 | 1.43 | 2.53 | 122.3 | 108.3 | 13072 | 0.98 | 1.36 | 2.34 | 122.3 | 108.3 | 13072 |
| | Jul | 1.25 | 1.30 | 2.55 | 123.3 | 110.8 | 13021 | 1.03 | 1.23 | 2.26 | 123.3 | 110.8 | 13021 |
| | Aug | 1.14 | 1.27 | 2.41 | 123.3 | 115.3 | 12828 | 0.99 | 1.20 | 2.19 | 123.3 | 115.3 | 12828 |
| | Sep | 1.12 | 1.29 | 2.41 | 123.3 | 115.6 | 12336 | 0.98 | 1.22 | 2.20 | 123.3 | 115.6 | 12336 |
| | Oct | 1.13 | 1.32 | 2.45 | 124.0 | 113.9 | 12747 | 0.95 | 1.25 | 2.20 | 124.0 | 113.9 | 12747 |
| | Nov | 1.11 | 1.34 | 2.45 | 124.0 | 116.5 | 12319 | 0.93 | 1.27 | 2.20 | 124.0 | 116.5 | 12319 |
| | Dec | 1.08 | 1.37 | 2.45 | 124.0 | 122.6 | 12878 | 0.90 | 1.30 | 2.20 | 124.0 | 122.6 | 12878 |
| **1995** | Jan | 1.12 | 1.33 | 2.45 | 124.9 | 122.3 | 13170 | 0.93 | 1.27 | 2.20 | 124.9 | 122.3 | 13170 |
| | Feb | 1.10 | 1.31 | 2.41 | 124.9 | 121.7 | 12126 | 0.97 | 1.25 | 2.22 | 124.9 | 121.7 | 12126 |
| | Mar | 1.07 | 1.31 | 2.38 | 124.9 | 120.5 | 13622 | 0.97 | 1.25 | 2.22 | 124.9 | 120.5 | 13622 |
| | Apr | 1.02 | 1.34 | 2.36 | 125.8 | 121.0 | 13330 | 0.91 | 1.28 | 2.19 | 125.8 | 121.0 | 13330 |
| | May | 1.01 | 1.35 | 2.36 | 125.8 | 127.7 | 13868 | 0.90 | 1.29 | 2.19 | 125.8 | 127.7 | 13868 |
| | Jun | 1.07 | 1.29 | 2.36 | 125.8 | 131.4 | 13267 | 0.96 | 1.22 | 2.18 | 125.8 | 131.4 | 13267 |
| | Jul | 1.06 | 1.28 | 2.34 | 126.5 | 130.6 | 13141 | 0.96 | 1.21 | 2.17 | 126.5 | 130.6 | 13141 |
| | Aug | 1.03 | 1.31 | 2.34 | 126.5 | 128.4 | 12751 | 0.94 | 1.23 | 2.17 | 126.5 | 128.4 | 12751 |
| | Sep | 1.04 | 1.29 | 2.33 | 126.5 | 127.2 | 12316 | 0.97 | 1.21 | 2.18 | 126.5 | 127.2 | 12316 |
| | Oct | 1.01 | 1.32 | 2.33 | 127.3 | 125.3 | 12674 | 0.97 | 1.21 | 2.18 | 127.3 | 125.3 | 12674 |
| | Nov | 0.97 | 1.36 | 2.33 | 127.3 | 121.4 | 12232 | 0.89 | 1.25 | 2.14 | 127.3 | 121.4 | 12232 |
| | Dec | 0.92 | 1.41 | 2.33 | 127.3 | 121.6 | 12795 | 0.83 | 1.35 | 2.18 | 127.3 | 121.6 | 12795 |
| **1996** | Jan | 0.93 | 1.44 | 2.37 | 128.3 | 123.6 | 13068 | 0.82 | 1.36 | 2.18 | 128.3 | 123.6 | 13068 |
| | Feb | 0.94 | 1.44 | 2.38 | 128.3 | 122.5 | 12411 | 0.85 | 1.38 | 2.23 | 128.3 | 122.5 | 12411 |
| | Mar | 0.98 | 1.43 | 2.41 | 128.3 | 123.4 | 13509 | 0.87 | 1.37 | 2.24 | 128.3 | 123.4 | 13509 |
| | Apr | 0.99 | 1.41 | 2.40 | 129.2 | 131.3 | 13211 | 0.82 | 1.35 | 2.17 | 129.2 | 131.3 | 13211 |
| | May | 0.97 | 1.42 | 2.39 | 129.2 | 138.2 | 13561 | 0.84 | 1.33 | 2.17 | 129.2 | 138.2 | 13561 |
| | Jun | 0.97 | 1.44 | 2.41 | 129.2 | 137.0 | 12815 | 0.94 | 1.29 | 2.23 | 129.2 | 137.0 | 12815 |
| | Jul | 0.94 | 1.49 | 2.43 | 130.1 | 133.9 | 12773 | 0.92 | 1.32 | 2.24 | 130.1 | 133.9 | 12773 |
| | Aug | 0.87 | 1.51 | 2.38 | 130.1 | 131.7 | 12594 | 0.89 | 1.34 | 2.23 | 130.1 | 131.7 | 12594 |
| | Sep | 0.83 | 1.56 | 2.39 | 130.1 | 131.3 | 12197 | 0.84 | 1.39 | 2.23 | 130.1 | 131.3 | 12197 |
| | Oct | 0.83 | 1.60 | 2.43 | 131.0 | 132.0 | 12684 | 0.82 | 1.46 | 2.28 | 131.0 | 132.0 | 12684 |
| | Nov | 0.80 | 1.65 | 2.45 | 131.0 | 134.7 | 12288 | 0.72 | 1.58 | 2.30 | 131.0 | 134.7 | 12288 |
| | Dec | 0.83 | 1.58 | 2.41 | 131.0 | 138.6 | 12895 | 0.77 | 1.51 | 2.28 | 131.0 | 138.6 | 12895 |
| **1997** | Jan | 1.06 | 1.36 | 2.42 | 131.9 | 139.1 | 13106 | 0.99 | 1.28 | 2.27 | 131.9 | 139.1 | 13106 |
| | Feb | 1.12 | 1.33 | 2.45 | 131.9 | 138.0 | 12104 | 1.08 | 1.22 | 2.30 | 131.9 | 138.0 | 12104 |
| | Mar | 1.07 | 1.38 | 2.45 | 131.9 | 134.4 | 13649 | 1.04 | 1.26 | 2.30 | 131.9 | 134.4 | 13649 |
| | Apr | 1.02 | 1.43 | 2.45 | 132.9 | 132.0 | 13379 | 0.97 | 1.33 | 2.30 | 132.9 | 132.0 | 13379 |
| | May | 1.02 | 1.43 | 2.45 | 132.9 | 130.1 | 13870 | 0.96 | 1.34 | 2.30 | 132.9 | 130.1 | 13870 |
| | Jun | 1.10 | 1.34 | 2.44 | 132.9 | 130.3 | 13325 | 1.08 | 1.21 | 2.29 | 132.9 | 130.3 | 13325 |
| | Jul | 1.37 | 1.27 | 2.64 | 133.9 | 127.9 | 13265 | 1.33 | 1.16 | 2.49 | 133.9 | 127.9 | 13265 |
| | Aug | 1.37 | 1.26 | 2.63 | 133.9 | 134.2 | 13000 | 1.34 | 1.15 | 2.49 | 133.9 | 134.2 | 13000 |
| | Sep | 1.38 | 1.25 | 2.63 | 133.9 | 137.7 | 12362 | 1.41 | 1.13 | 2.54 | 133.9 | 137.7 | 12362 |
| | Oct | 1.28 | 1.34 | 2.62 | 135.2 | 134.6 | 12768 | 1.33 | 1.17 | 2.50 | 135.2 | 134.6 | 12768 |
| | Nov | 1.23 | 1.40 | 2.63 | 135.2 | 131.5 | 12325 | 1.28 | 1.22 | 2.50 | 135.2 | 131.5 | 12325 |
| | Dec | 1.22 | 1.41 | 2.63 | 135.2 | 127.5 | 12938 | 1.18 | 1.28 | 2.46 | 135.2 | 127.5 | 12938 |
| **1998** | Jan | 1.18 | 1.42 | 2.60 | 136.2 | 123.5 | 13287 | 1.17 | 1.30 | 2.47 | 136.2 | 123.5 | 13287 |
| | Feb | 1.14 | 1.45 | 2.59 | 136.2 | 119.4 | 12188 | 1.16 | 1.30 | 2.46 | 136.2 | 119.4 | 12188 |
| | Mar | 1.16 | 1.44 | 2.60 | 136.2 | 113.7 | 13689 | 1.14 | 1.30 | 2.44 | 136.2 | 113.7 | 13689 |
| | Apr | 1.16 | 1.44 | 2.60 | 137.3 | 112.8 | 13515 | 1.15 | 1.28 | 2.43 | 137.3 | 112.8 | 13515 |
| | May | 1.21 | 1.39 | 2.60 | 137.3 | 112.6 | 14014 | 1.23 | 1.20 | 2.43 | 137.3 | 112.6 | 14014 |
| | Jun | 1.23 | 1.31 | 2.54 | 137.3 | 112.3 | 13292 | 1.35 | 1.07 | 2.42 | 137.3 | 112.3 | 13292 |
| | Jul | 1.34 | 1.21 | 2.55 | 138.7 | 110.5 | 13167 | 1.42 | 0.97 | 2.39 | 138.7 | 110.5 | 13167 |
| | Aug | 1.17 | 1.40 | 2.57 | 138.7 | 108.8 | 12941 | 1.30 | 1.13 | 2.43 | 138.7 | 108.8 | 12941 |
| | Sep | 1.06 | 1.52 | 2.58 | 138.7 | 107.2 | 12411 | 1.30 | 1.17 | 2.47 | 138.7 | 107.2 | 12411 |
| | Oct | 1.03 | 1.55 | 2.58 | 139.7 | 108.5 | 12961 | 1.21 | 1.26 | 2.47 | 139.7 | 108.5 | 12961 |
| | Nov | 1.00 | 1.58 | 2.58 | 139.7 | 107.4 | 12611 | 1.06 | 1.39 | 2.45 | 139.7 | 107.4 | 12611 |
| | Dec | 1.04 | 1.67 | 2.71 | 139.7 | 105.1 | 13365 | 1.08 | 1.53 | 2.61 | 139.7 | 105.1 | 13365 |
| **1999** | Jan | 1.15 | 1.74 | 2.89 | 140.2 | 103.6 | 13628 | 1.23 | 1.59 | 2.82 | 140.2 | 103.6 | 13628 |
| | Feb | 1.11 | 1.78 | 2.89 | 140.2 | 101.1 | 12607 | 1.20 | 1.63 | 2.83 | 140.2 | 101.1 | 12607 |
| | Mar | 1.12 | 1.69 | 2.81 | 140.2 | 102.5 | 14270 | 1.20 | 1.55 | 2.75 | 140.2 | 102.5 | 14270 |
| | Apr | 1.49 | 1.18 | 2.67 | 141.7 | 113.8 | 13938 | 1.53 | 1.08 | 2.61 | 141.7 | 113.8 | 13938 |

| | | Boston Whole Milk | | | | | | Boston 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Yr | Mn | Spread | FP | RP | LC | FC | Mn Prod | Spread | FP | RP | LC | FC | Mn Prod |
| | May | 1.42 | 1.30 | 2.72 | 141.7 | 116.7 | 14458 | 1.49 | 1.18 | 2.67 | 141.7 | 116.7 | 14458 |
| | Jun | 1.42 | 1.30 | 2.72 | 141.7 | 116.6 | 13633 | 1.56 | 1.13 | 2.69 | 141.7 | 116.6 | 13633 |
| | Jul | 1.46 | 1.26 | 2.72 | 143.0 | 120.5 | 13444 | 1.61 | 1.12 | 2.73 | 143.0 | 120.5 | 13444 |
| | Aug | 1.37 | 1.27 | 2.64 | 143.0 | 128.0 | 13357 | 1.48 | 1.13 | 2.61 | 143.0 | 128.0 | 13357 |
| | Sep | 1.20 | 1.46 | 2.66 | 143.0 | 132.3 | 12970 | 1.27 | 1.33 | 2.60 | 143.0 | 132.3 | 12970 |
| | Oct | 1.25 | 1.66 | 2.91 | 144.6 | 135.8 | 13412 | 1.39 | 1.54 | 2.93 | 144.6 | 135.8 | 13412 |
| | Nov | 1.19 | 1.70 | 2.89 | 144.6 | 135.8 | 13140 | 1.30 | 1.58 | 2.88 | 144.6 | 135.8 | 13140 |
| | Dec | 1.54 | 1.29 | 2.83 | 144.6 | 137.8 | 13854 | 1.62 | 1.20 | 2.82 | 144.6 | 137.8 | 13854 |
| **2000** | Jan | 1.68 | 1.24 | 2.92 | 146.4 | 139.1 | 14263 | 1.70 | 1.14 | 2.84 | 146.4 | 139.1 | 14263 |
| | Feb | 1.63 | 1.22 | 2.85 | 146.4 | 143.3 | 13606 | 1.74 | 1.13 | 2.87 | 146.4 | 143.3 | 13606 |
| | Mar | 1.59 | 1.24 | 2.83 | 146.4 | 157.7 | 14761 | 1.64 | 1.14 | 2.78 | 146.4 | 157.7 | 14761 |
| | Apr | 1.57 | 1.24 | 2.81 | 147.9 | 154.7 | 14390 | 1.62 | 1.14 | 2.76 | 147.9 | 154.7 | 14390 |
| | May | 1.55 | 1.29 | 2.84 | 147.9 | 155.0 | 14791 | 1.62 | 1.17 | 2.79 | 147.9 | 155.0 | 14791 |
| | Jun | 1.53 | 1.30 | 2.83 | 147.9 | 166.1 | 14008 | 1.57 | 1.18 | 2.75 | 147.9 | 166.1 | 14008 |
| | Jul | 1.46 | 1.36 | 2.82 | 149.3 | 167.4 | 14117 | 1.55 | 1.22 | 2.77 | 149.3 | 167.4 | 14117 |
| | Aug | 1.53 | 1.32 | 2.85 | 149.3 | 163.0 | 13798 | 1.57 | 1.19 | 2.76 | 149.3 | 163.0 | 13798 |
| | Sep | 1.50 | 1.32 | 2.82 | 149.3 | 163.9 | 13246 | 1.56 | 1.19 | 2.75 | 149.3 | 163.9 | 13246 |
| | Oct | 1.50 | 1.32 | 2.82 | 150.6 | 162.4 | 13708 | 1.56 | 1.19 | 2.75 | 150.6 | 162.4 | 13708 |
| | Nov | 1.56 | 1.31 | 2.87 | 150.6 | 161.9 | 13212 | 1.59 | 1.19 | 2.78 | 150.6 | 161.9 | 13212 |
| | Dec | 1.54 | 1.34 | 2.88 | 150.6 | 158.5 | 13758 | 1.54 | 1.20 | 2.74 | 150.6 | 158.5 | 13758 |
| **2001** | Jan | 1.41 | 1.49 | 2.90 | 152.3 | 154.7 | 13998 | 1.46 | 1.30 | 2.76 | 152.3 | 154.7 | 13998 |
| | Feb | 1.60 | 1.32 | 2.92 | 152.3 | 153.1 | 12894 | 1.66 | 1.20 | 2.86 | 152.3 | 153.1 | 12894 |
| | Mar | 1.52 | 1.38 | 2.90 | 152.3 | 149.7 | 14375 | 1.66 | 1.23 | 2.89 | 152.3 | 149.7 | 14375 |
| | Apr | 1.50 | 1.44 | 2.94 | 153.8 | 156.9 | 14078 | 1.62 | 1.27 | 2.89 | 153.8 | 156.9 | 14078 |
| | May | 1.44 | 1.51 | 2.95 | 153.8 | 175.5 | 14646 | 1.59 | 1.31 | 2.90 | 153.8 | 175.5 | 14646 |
| | Jun | 1.38 | 1.60 | 2.98 | 153.8 | 176.5 | 13957 | 1.53 | 1.39 | 2.92 | 153.8 | 176.5 | 13957 |
| | Jul | 1.38 | 1.63 | 3.01 | 155.4 | 161.8 | 13877 | 1.56 | 1.40 | 2.96 | 155.4 | 161.8 | 13877 |
| | Aug | 1.32 | 1.70 | 3.02 | 155.4 | 150.2 | 13564 | 1.50 | 1.47 | 2.97 | 155.4 | 150.2 | 13564 |
| | Sep | 1.37 | 1.71 | 3.08 | 155.4 | 149.1 | 13129 | 1.57 | 1.48 | 3.05 | 155.4 | 149.1 | 13129 |
| | Oct | 1.34 | 1.74 | 3.08 | 156.9 | 140.8 | 13611 | 1.58 | 1.47 | 3.05 | 156.9 | 140.8 | 13611 |
| | Nov | 1.34 | 1.74 | 3.08 | 156.9 | 126.7 | 13305 | 1.50 | 1.55 | 3.05 | 156.9 | 126.7 | 13305 |
| | Dec | 1.57 | 1.42 | 2.99 | 156.9 | 116.6 | 13902 | 1.69 | 1.27 | 2.96 | 156.9 | 116.6 | 13902 |
| **2002** | Jan | 1.57 | 1.42 | 2.99 | 158.2 | 119.2 | 14245 | 1.68 | 1.28 | 2.96 | 158.2 | 119.2 | 14245 |
| | Feb | 1.56 | 1.42 | 2.98 | 158.2 | 119.5 | 13190 | 1.68 | 1.26 | 2.94 | 158.2 | 119.5 | 13190 |
| | Mar | 1.60 | 1.39 | 2.99 | 158.2 | 128.5 | 14821 | 1.71 | 1.25 | 2.96 | 158.2 | 128.5 | 14821 |
| | Apr | 1.61 | 1.38 | 2.99 | 159.8 | 144.1 | 14564 | 1.72 | 1.24 | 2.96 | 159.8 | 144.1 | 14564 |
| | May | 1.63 | 1.36 | 2.99 | 159.8 | 146.0 | 15105 | 1.74 | 1.22 | 2.96 | 159.8 | 146.0 | 15105 |
| | Jun | 1.65 | 1.34 | 2.99 | 159.8 | 144.4 | 14285 | 1.73 | 1.23 | 2.96 | 159.8 | 144.4 | 14285 |
| | Jul | 1.68 | 1.31 | 2.99 | 161.1 | 144.4 | 14230 | 1.77 | 1.19 | 2.96 | 161.1 | 144.4 | 14230 |
| | Aug | 1.69 | 1.28 | 2.97 | 161.1 | 148.3 | 14154 | 1.77 | 1.17 | 2.94 | 161.1 | 148.3 | 14154 |
| | Sep | 1.69 | 1.28 | 2.97 | 161.1 | 148.5 | 13490 | 1.77 | 1.17 | 2.94 | 161.1 | 148.5 | 13490 |
| | Oct | 1.72 | 1.25 | 2.97 | 162.3 | 150.0 | 13935 | 1.79 | 1.15 | 2.94 | 162.3 | 150.0 | 13935 |

| | | Chicago Whole Milk | | | | | | Chicago 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Yr** | **Mn** | **Spread** | **FP** | **RP** | **LC** | **FC** | **Mn Prod** | **Spread** | **FP** | **RP** | **LC** | **FC** | **Mn Prod** |
| **1994** | Jan | 1.29 | 1.47 | 2.76 | 121.2 | 96.6 | 12698 | 0.98 | 1.41 | 2.39 | 121.2 | 96.6 | 12698 |
| | Feb | 1.32 | 1.44 | 2.76 | 121.2 | 98.7 | 11645 | 1.01 | 1.38 | 2.39 | 121.2 | 98.7 | 11645 |
| | Mar | 1.34 | 1.42 | 2.76 | 121.2 | 98.6 | 13243 | 1.03 | 1.36 | 2.39 | 121.2 | 98.6 | 13243 |
| | Apr | 1.34 | 1.42 | 2.76 | 122.3 | 101.6 | 13104 | 1.03 | 1.36 | 2.39 | 122.3 | 101.6 | 13104 |
| | May | 1.31 | 1.45 | 2.76 | 122.3 | 103.9 | 13711 | 1.00 | 1.39 | 2.39 | 122.3 | 103.9 | 13711 |
| | Jun | 1.31 | 1.45 | 2.76 | 122.3 | 107.5 | 13072 | 1.00 | 1.39 | 2.39 | 122.3 | 107.5 | 13072 |
| | Jul | 1.37 | 1.35 | 2.72 | 123.3 | 110.6 | 13021 | 1.08 | 1.28 | 2.36 | 123.3 | 110.6 | 13021 |
| | Aug | 1.45 | 1.24 | 2.69 | 123.3 | 116.6 | 12828 | 1.15 | 1.17 | 2.32 | 123.3 | 116.6 | 12828 |
| | Sep | 1.41 | 1.25 | 2.66 | 123.3 | 113.5 | 12336 | 1.11 | 1.18 | 2.29 | 123.3 | 113.5 | 12336 |
| | Oct | 1.37 | 1.29 | 2.66 | 124.0 | 108.4 | 12747 | 1.07 | 1.22 | 2.29 | 124.0 | 108.4 | 12747 |
| | Nov | 1.35 | 1.31 | 2.66 | 124.0 | 107.9 | 12319 | 1.05 | 1.24 | 2.29 | 124.0 | 107.9 | 12319 |
| | Dec | 1.35 | 1.34 | 2.69 | 124.0 | 105.2 | 12878 | 1.04 | 1.28 | 2.32 | 124.0 | 105.2 | 12878 |
| **1995** | Jan | 1.40 | 1.29 | 2.69 | 124.9 | 106.1 | 13170 | 1.09 | 1.23 | 2.32 | 124.9 | 106.1 | 13170 |
| | Feb | 1.43 | 1.26 | 2.69 | 124.9 | 105.9 | 12126 | 1.12 | 1.20 | 2.32 | 124.9 | 105.9 | 12126 |
| | Mar | 1.44 | 1.25 | 2.69 | 124.9 | 106.7 | 13622 | 1.13 | 1.19 | 2.32 | 124.9 | 106.7 | 13622 |
| | Apr | 1.40 | 1.29 | 2.69 | 125.8 | 113.1 | 13330 | 1.10 | 1.22 | 2.32 | 125.8 | 113.1 | 13330 |
| | May | 1.39 | 1.30 | 2.69 | 125.8 | 119.7 | 13868 | 1.08 | 1.24 | 2.32 | 125.8 | 119.7 | 13868 |
| | Jun | 1.44 | 1.25 | 2.69 | 125.8 | 120.2 | 13267 | 1.14 | 1.18 | 2.32 | 125.8 | 120.2 | 13267 |
| | Jul | 1.46 | 1.23 | 2.69 | 126.5 | 114.3 | 13141 | 1.16 | 1.16 | 2.32 | 126.5 | 114.3 | 13141 |
| | Aug | 1.46 | 1.20 | 2.66 | 126.5 | 111.6 | 12751 | 1.17 | 1.12 | 2.29 | 126.5 | 111.6 | 12751 |
| | Sep | 1.46 | 1.20 | 2.66 | 126.5 | 111.2 | 12316 | 1.14 | 1.12 | 2.26 | 126.5 | 111.2 | 12316 |
| | Oct | 1.44 | 1.22 | 2.66 | 127.3 | 107.8 | 12674 | 1.14 | 1.12 | 2.26 | 127.3 | 107.8 | 12674 |
| | Nov | 1.39 | 1.27 | 2.66 | 127.3 | 105.8 | 12232 | 1.10 | 1.16 | 2.26 | 127.3 | 105.8 | 12232 |
| | Dec | 1.36 | 1.33 | 2.69 | 127.3 | 108.5 | 12795 | 1.03 | 1.26 | 2.29 | 127.3 | 108.5 | 12795 |
| **1996** | Jan | 1.34 | 1.35 | 2.69 | 128.3 | 111.0 | 13068 | 1.01 | 1.28 | 2.29 | 128.3 | 111.0 | 13068 |
| | Feb | 1.33 | 1.36 | 2.69 | 128.3 | 110.8 | 12411 | 1.12 | 1.30 | 2.42 | 128.3 | 110.8 | 12411 |
| | Mar | 1.35 | 1.34 | 2.69 | 128.3 | 117.0 | 13509 | 1.03 | 1.29 | 2.32 | 128.3 | 117.0 | 13509 |
| | Apr | 1.43 | 1.33 | 2.76 | 129.2 | 124.7 | 13211 | 1.22 | 1.27 | 2.49 | 129.2 | 124.7 | 13211 |
| | May | 1.42 | 1.34 | 2.76 | 129.2 | 126.9 | 13561 | 1.24 | 1.25 | 2.49 | 129.2 | 126.9 | 13561 |
| | Jun | 1.46 | 1.36 | 2.82 | 129.2 | 124.7 | 12815 | 1.35 | 1.21 | 2.56 | 129.2 | 124.7 | 12815 |
| | Jul | 1.48 | 1.41 | 2.89 | 130.1 | 122.1 | 12773 | 1.38 | 1.24 | 2.62 | 130.1 | 122.1 | 12773 |
| | Aug | 1.46 | 1.43 | 2.89 | 130.1 | 120.4 | 12594 | 1.30 | 1.26 | 2.56 | 130.1 | 120.4 | 12594 |
| | Sep | 1.37 | 1.49 | 2.86 | 130.1 | 121.9 | 12197 | 1.27 | 1.32 | 2.59 | 130.1 | 121.9 | 12197 |
| | Oct | 1.33 | 1.56 | 2.89 | 131.0 | 122.8 | 12684 | 1.20 | 1.42 | 2.62 | 131.0 | 122.8 | 12684 |
| | Nov | 1.35 | 1.61 | 2.96 | 131.0 | 128.0 | 12288 | 1.15 | 1.54 | 2.69 | 131.0 | 128.0 | 12288 |
| | Dec | 1.46 | 1.53 | 2.99 | 131.0 | 127.3 | 12895 | 1.26 | 1.46 | 2.72 | 131.0 | 127.3 | 12895 |
| **1997** | Jan | 1.61 | 1.31 | 2.92 | 131.9 | 126.5 | 13106 | 1.43 | 1.23 | 2.66 | 131.9 | 126.5 | 13106 |
| | Feb | 1.58 | 1.28 | 2.86 | 131.9 | 124.3 | 12104 | 1.34 | 1.18 | 2.52 | 131.9 | 124.3 | 12104 |
| | Mar | 1.52 | 1.30 | 2.82 | 131.9 | 120.0 | 13649 | 1.34 | 1.18 | 2.52 | 131.9 | 120.0 | 13649 |
| | Apr | 1.46 | 1.36 | 2.82 | 132.9 | 119.1 | 13379 | 1.30 | 1.26 | 2.56 | 132.9 | 119.1 | 13379 |
| | May | 1.47 | 1.35 | 2.82 | 132.9 | 121.7 | 13870 | 1.31 | 1.25 | 2.56 | 132.9 | 121.7 | 13870 |
| | Jun | 1.55 | 1.27 | 2.82 | 132.9 | 122.5 | 13325 | 1.41 | 1.15 | 2.56 | 132.9 | 122.5 | 13325 |
| | Jul | 1.65 | 1.21 | 2.86 | 133.9 | 119.9 | 13265 | 1.47 | 1.09 | 2.56 | 133.9 | 119.9 | 13265 |
| | Aug | 1.65 | 1.21 | 2.86 | 133.9 | 125.8 | 13000 | 1.47 | 1.09 | 2.56 | 133.9 | 125.8 | 13000 |
| | Sep | 1.65 | 1.21 | 2.86 | 133.9 | 123.2 | 12362 | 1.47 | 1.09 | 2.56 | 133.9 | 123.2 | 12362 |
| | Oct | 1.55 | 1.31 | 2.86 | 135.2 | 118.0 | 12768 | 1.41 | 1.15 | 2.56 | 135.2 | 118.0 | 12768 |
| | Nov | 1.49 | 1.37 | 2.86 | 135.2 | 115.9 | 12325 | 1.43 | 1.19 | 2.62 | 135.2 | 115.9 | 12325 |
| | Dec | 1.48 | 1.38 | 2.86 | 135.2 | 111.1 | 12938 | 1.37 | 1.25 | 2.62 | 135.2 | 111.1 | 12938 |
| **1998** | Jan | 1.51 | 1.38 | 2.89 | 136.2 | 105.8 | 13287 | 1.40 | 1.26 | 2.66 | 136.2 | 105.8 | 13287 |
| | Feb | 1.48 | 1.41 | 2.89 | 136.2 | 104.8 | 12188 | 1.40 | 1.26 | 2.66 | 136.2 | 104.8 | 12188 |
| | Mar | 1.51 | 1.41 | 2.92 | 136.2 | 104.1 | 13689 | 1.43 | 1.26 | 2.69 | 136.2 | 104.1 | 13689 |
| | Apr | 1.59 | 1.37 | 2.96 | 137.3 | 106.0 | 13515 | 1.50 | 1.22 | 2.72 | 137.3 | 106.0 | 13515 |
| | May | 1.67 | 1.32 | 2.99 | 137.3 | 110.1 | 14014 | 1.63 | 1.13 | 2.76 | 137.3 | 110.1 | 14014 |
| | Jun | 1.75 | 1.24 | 2.99 | 137.3 | 109.8 | 13292 | 1.75 | 1.01 | 2.76 | 137.3 | 109.8 | 13292 |
| | Jul | 1.84 | 1.15 | 2.99 | 138.7 | 109.4 | 13167 | 1.85 | 0.91 | 2.76 | 138.7 | 109.4 | 13167 |
| | Aug | 1.66 | 1.33 | 2.99 | 138.7 | 104.9 | 12941 | 1.52 | 1.07 | 2.59 | 138.7 | 104.9 | 12941 |
| | Sep | 1.53 | 1.46 | 2.99 | 138.7 | 103.4 | 12411 | 1.61 | 1.11 | 2.72 | 138.7 | 103.4 | 12411 |
| | Oct | 1.53 | 1.49 | 3.02 | 139.7 | 104.1 | 12961 | 1.56 | 1.20 | 2.76 | 139.7 | 104.1 | 12961 |
| | Nov | 1.54 | 1.55 | 3.09 | 139.7 | 100.1 | 12611 | 1.50 | 1.36 | 2.86 | 139.7 | 100.1 | 12611 |
| | Dec | 1.45 | 1.64 | 3.09 | 139.7 | 93.4 | 13365 | 1.36 | 1.50 | 2.86 | 139.7 | 93.4 | 13365 |
| **1999** | Jan | 1.68 | 1.71 | 3.39 | 140.2 | 94.2 | 13628 | 1.56 | 1.56 | 3.12 | 140.2 | 94.2 | 13628 |
| | Feb | 1.74 | 1.75 | 3.49 | 140.2 | 91.9 | 12607 | 1.66 | 1.60 | 3.26 | 140.2 | 91.9 | 12607 |
| | Mar | 1.76 | 1.66 | 3.42 | 140.2 | 100.2 | 14270 | 1.74 | 1.52 | 3.26 | 140.2 | 100.2 | 14270 |
| | Apr | 2.07 | 1.15 | 3.22 | 141.7 | 112.5 | 13938 | 2.02 | 1.05 | 3.07 | 141.7 | 112.5 | 13938 |

| | | Chicago Whole Milk | | | | | | Chicago 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Yr** | **Mn** | **Spread** | **FP** | **RP** | **LC** | **FC** | **Mn Prod** | **Spread** | **FP** | **RP** | **LC** | **FC** | **Mn Prod** |
| | May | 1.80 | 1.26 | 3.06 | 141.7 | 112.7 | 14458 | 1.72 | 1.14 | 2.86 | 141.7 | 112.7 | 14458 |
| | Jun | 1.75 | 1.27 | 3.02 | 141.7 | 112.4 | 13633 | 1.78 | 1.09 | 2.87 | 141.7 | 112.4 | 13633 |
| | Jul | 1.80 | 1.22 | 3.02 | 143.0 | 116.7 | 13444 | 1.81 | 1.08 | 2.89 | 143.0 | 116.7 | 13444 |
| | Aug | 1.80 | 1.22 | 3.02 | 143.0 | 122.0 | 13357 | 1.82 | 1.07 | 2.89 | 143.0 | 122.0 | 13357 |
| | Sep | 1.75 | 1.41 | 3.16 | 143.0 | 127.7 | 12970 | 1.75 | 1.27 | 3.02 | 143.0 | 127.7 | 12970 |
| | Oct | 1.84 | 1.62 | 3.46 | 144.6 | 124.0 | 13412 | 1.89 | 1.50 | 3.39 | 144.6 | 124.0 | 13412 |
| | Nov | 1.80 | 1.66 | 3.46 | 144.6 | 126.9 | 13140 | 1.84 | 1.55 | 3.39 | 144.6 | 126.9 | 13140 |
| | Dec | 2.21 | 1.25 | 3.46 | 144.6 | 128.7 | 13854 | 2.23 | 1.16 | 3.39 | 144.6 | 128.7 | 13854 |
| **2000** | Jan | 2.21 | 1.25 | 3.46 | 146.4 | 132.3 | 14263 | 2.24 | 1.15 | 3.39 | 146.4 | 132.3 | 14263 |
| | Feb | 2.25 | 1.21 | 3.46 | 146.4 | 143.7 | 13606 | 2.27 | 1.12 | 3.39 | 146.4 | 143.7 | 13606 |
| | Mar | 2.23 | 1.23 | 3.46 | 146.4 | 152.3 | 14761 | 2.26 | 1.13 | 3.39 | 146.4 | 152.3 | 14761 |
| | Apr | 2.22 | 1.24 | 3.46 | 147.9 | 143.3 | 14390 | 2.25 | 1.14 | 3.39 | 147.9 | 143.3 | 14390 |
| | May | 2.17 | 1.29 | 3.46 | 147.9 | 152.2 | 14791 | 2.22 | 1.17 | 3.39 | 147.9 | 152.2 | 14791 |
| | Jun | 2.18 | 1.28 | 3.46 | 147.9 | 180.7 | 14008 | 2.23 | 1.16 | 3.39 | 147.9 | 180.7 | 14008 |
| | Jul | 2.10 | 1.36 | 3.46 | 149.3 | 154.3 | 14117 | 2.18 | 1.21 | 3.39 | 149.3 | 154.3 | 14117 |
| | Aug | 2.15 | 1.31 | 3.46 | 149.3 | 142.1 | 13798 | 2.21 | 1.18 | 3.39 | 149.3 | 142.1 | 13798 |
| | Sep | 1.96 | 1.30 | 3.26 | 149.3 | 156.6 | 13246 | 2.02 | 1.17 | 3.19 | 149.3 | 156.6 | 13246 |
| | Oct | 1.75 | 1.31 | 3.06 | 150.6 | 153.6 | 13708 | 1.80 | 1.19 | 2.99 | 150.6 | 153.6 | 13708 |
| | Nov | 1.76 | 1.30 | 3.06 | 150.6 | 153.1 | 13212 | 1.81 | 1.18 | 2.99 | 150.6 | 153.1 | 13212 |
| | Dec | 1.74 | 1.32 | 3.06 | 150.6 | 143.3 | 13758 | 1.81 | 1.18 | 2.99 | 150.6 | 143.3 | 13758 |
| **2001** | Jan | 1.90 | 1.49 | 3.39 | 152.3 | 148.6 | 13998 | 2.02 | 1.30 | 3.32 | 152.3 | 148.6 | 13998 |
| | Feb | 2.03 | 1.29 | 3.32 | 152.3 | 146.7 | 12894 | 2.10 | 1.16 | 3.26 | 152.3 | 146.7 | 12894 |
| | Mar | 1.91 | 1.35 | 3.26 | 152.3 | 140.4 | 14375 | 1.99 | 1.20 | 3.19 | 152.3 | 140.4 | 14375 |
| | Apr | 1.74 | 1.42 | 3.16 | 153.8 | 161.1 | 14078 | 1.84 | 1.25 | 3.09 | 153.8 | 161.1 | 14078 |
| | May | 1.70 | 1.48 | 3.18 | 153.8 | 181.8 | 14646 | 1.82 | 1.29 | 3.11 | 153.8 | 181.8 | 14646 |
| | Jun | 1.68 | 1.56 | 3.24 | 153.8 | 161.9 | 13957 | 1.84 | 1.34 | 3.18 | 153.8 | 161.9 | 13957 |
| | Jul | 1.68 | 1.58 | 3.26 | 155.4 | 134.0 | 13877 | 1.84 | 1.35 | 3.19 | 155.4 | 134.0 | 13877 |
| | Aug | 1.67 | 1.59 | 3.26 | 155.4 | 150.2 | 13564 | 1.83 | 1.36 | 3.19 | 155.4 | 150.2 | 13564 |
| | Sep | 1.57 | 1.61 | 3.18 | 155.4 | 166.1 | 13129 | 1.80 | 1.34 | 3.14 | 155.4 | 166.1 | 13129 |
| | Oct | 1.72 | 1.64 | 3.36 | 156.9 | 128.1 | 13611 | 1.83 | 1.37 | 3.2 | 156.9 | 128.1 | 13611 |
| | Nov | 1.59 | 1.65 | 3.24 | 156.9 | 116.0 | 13305 | 1.77 | 1.46 | 3.23 | 156.9 | 116.0 | 13305 |
| | Dec | 1.89 | 1.32 | 3.21 | 156.9 | 111.9 | 13902 | 2.03 | 1.18 | 3.21 | 156.9 | 111.9 | 13902 |
| **2002** | Jan | 1.81 | 1.33 | 3.14 | 158.2 | 112.9 | 14245 | 1.88 | 1.18 | 3.06 | 158.2 | 112.9 | 14245 |
| | Feb | 1.83 | 1.31 | 3.14 | 158.2 | 112.6 | 13190 | 1.90 | 1.16 | 3.06 | 158.2 | 112.6 | 13190 |
| | Mar | 1.85 | 1.29 | 3.14 | 158.2 | 128.9 | 14821 | 1.91 | 1.15 | 3.06 | 158.2 | 128.9 | 14821 |
| | Apr | 1.86 | 1.28 | 3.14 | 159.8 | 141.2 | 14564 | 1.92 | 1.14 | 3.06 | 159.8 | 141.2 | 14564 |
| | May | 1.67 | 1.26 | 2.93 | 159.8 | 141.0 | 15105 | 1.77 | 1.12 | 2.89 | 159.8 | 141.0 | 15105 |
| | Jun | 1.86 | 1.26 | 3.12 | 159.8 | 140.2 | 14285 | 1.95 | 1.14 | 3.09 | 159.8 | 140.2 | 14285 |
| | Jul | 1.87 | 1.22 | 3.09 | 161.1 | 143.2 | 14230 | 1.95 | 1.10 | 3.05 | 161.1 | 143.2 | 14230 |
| | Aug | 1.56 | 1.22 | 2.78 | 161.1 | 140.9 | 14154 | 1.64 | 1.10 | 2.74 | 161.1 | 140.9 | 14154 |
| | Sep | 1.60 | 1.21 | 2.81 | 161.1 | 141.8 | 13490 | 1.64 | 1.10 | 2.74 | 161.1 | 141.8 | 13490 |
| | Oct | 1.61 | 1.19 | 2.80 | 162.3 | 150.6 | 13935 | 1.64 | 1.09 | 2.73 | 162.3 | 150.6 | 13935 |

| | | Dallas Whole Milk | | | | | | Dallas 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Yr | Mn | Spread | FP | RP | LC | FC | Mn Prod | Spread | FP | RP | LC | FC | Mn Prod |
| **1994** | Jan | 0.93 | 1.39 | 2.32 | 121.2 | 99.8 | 12698 | 0.94 | 1.34 | 2.28 | 121.2 | 99.8 | 12698 |
| | Feb | 0.85 | 1.37 | 2.22 | 121.2 | 100.9 | 11645 | 0.80 | 1.32 | 2.12 | 121.2 | 100.9 | 11645 |
| | Mar | 0.89 | 1.36 | 2.25 | 121.2 | 100.8 | 13243 | 0.91 | 1.31 | 2.22 | 121.2 | 100.8 | 13243 |
| | Apr | 0.89 | 1.36 | 2.25 | 122.3 | 102.7 | 13104 | 0.91 | 1.31 | 2.22 | 122.3 | 102.7 | 13104 |
| | May | 0.88 | 1.37 | 2.25 | 122.3 | 104.7 | 13711 | 0.91 | 1.31 | 2.22 | 122.3 | 104.7 | 13711 |
| | Jun | 0.89 | 1.39 | 2.28 | 122.3 | 107.8 | 13072 | 0.92 | 1.33 | 2.25 | 122.3 | 107.8 | 13072 |
| | Jul | 1.02 | 1.26 | 2.28 | 123.3 | 110.6 | 13021 | 1.05 | 1.20 | 2.25 | 123.3 | 110.6 | 13021 |
| | Aug | 1.04 | 1.24 | 2.28 | 123.3 | 115.5 | 12828 | 1.08 | 1.17 | 2.25 | 123.3 | 115.5 | 12828 |
| | Sep | 1.03 | 1.25 | 2.28 | 123.3 | 114.4 | 12336 | 1.07 | 1.18 | 2.25 | 123.3 | 114.4 | 12336 |
| | Oct | 1.00 | 1.28 | 2.28 | 124.0 | 111.4 | 12747 | 1.04 | 1.21 | 2.25 | 124.0 | 111.4 | 12747 |
| | Nov | 1.01 | 1.31 | 2.32 | 124.0 | 111.9 | 12319 | 0.98 | 1.24 | 2.22 | 124.0 | 111.9 | 12319 |
| | Dec | 0.99 | 1.33 | 2.32 | 124.0 | 112.9 | 12878 | 1.01 | 1.27 | 2.28 | 124.0 | 112.9 | 12878 |
| **1995** | Jan | 0.98 | 1.29 | 2.27 | 124.9 | 113.0 | 13170 | 1.03 | 1.24 | 2.27 | 124.9 | 113.0 | 13170 |
| | Feb | 1.01 | 1.26 | 2.27 | 124.9 | 112.0 | 12126 | 1.07 | 1.20 | 2.27 | 124.9 | 112.0 | 12126 |
| | Mar | 1.02 | 1.25 | 2.27 | 124.9 | 111.9 | 13622 | 1.08 | 1.19 | 2.27 | 124.9 | 111.9 | 13622 |
| | Apr | 0.98 | 1.29 | 2.27 | 125.8 | 115.7 | 13330 | 1.05 | 1.22 | 2.27 | 125.8 | 115.7 | 13330 |
| | May | 0.97 | 1.30 | 2.27 | 125.8 | 122.5 | 13868 | 1.00 | 1.24 | 2.24 | 125.8 | 122.5 | 13868 |
| | Jun | 1.08 | 1.23 | 2.31 | 125.8 | 123.9 | 13267 | 1.15 | 1.16 | 2.31 | 125.8 | 123.9 | 13267 |
| | Jul | 1.05 | 1.23 | 2.28 | 126.5 | 120.1 | 13141 | 1.13 | 1.15 | 2.28 | 126.5 | 120.1 | 13141 |
| | Aug | 1.03 | 1.25 | 2.28 | 126.5 | 117.0 | 12751 | 1.11 | 1.17 | 2.28 | 126.5 | 117.0 | 12751 |
| | Sep | 1.04 | 1.24 | 2.28 | 126.5 | 115.8 | 12316 | 1.03 | 1.15 | 2.18 | 126.5 | 115.8 | 12316 |
| | Oct | 1.02 | 1.26 | 2.28 | 127.3 | 113.4 | 12674 | 1.12 | 1.16 | 2.28 | 127.3 | 113.4 | 12674 |
| | Nov | 0.94 | 1.31 | 2.25 | 127.3 | 110.9 | 12232 | 1.06 | 1.19 | 2.25 | 127.3 | 110.9 | 12232 |
| | Dec | 1.00 | 1.36 | 2.36 | 127.3 | 111.8 | 12795 | 1.06 | 1.30 | 2.36 | 127.3 | 111.8 | 12795 |
| **1996** | Jan | 1.01 | 1.38 | 2.39 | 128.3 | 113.7 | 13068 | 1.08 | 1.31 | 2.39 | 128.3 | 113.7 | 13068 |
| | Feb | 0.89 | 1.39 | 2.28 | 128.3 | 113.6 | 12411 | 0.95 | 1.33 | 2.28 | 128.3 | 113.6 | 12411 |
| | Mar | 0.91 | 1.37 | 2.28 | 128.3 | 118.3 | 13509 | 0.96 | 1.32 | 2.28 | 128.3 | 118.3 | 13509 |
| | Apr | 0.92 | 1.36 | 2.28 | 129.2 | 127.5 | 13211 | 0.98 | 1.30 | 2.28 | 129.2 | 127.5 | 13211 |
| | May | 0.96 | 1.36 | 2.32 | 129.2 | 132.4 | 13561 | 1.05 | 1.27 | 2.32 | 129.2 | 132.4 | 13561 |
| | Jun | 1.07 | 1.47 | 2.54 | 129.2 | 130.3 | 12815 | 1.22 | 1.32 | 2.54 | 129.2 | 130.3 | 12815 |
| | Jul | 1.06 | 1.48 | 2.54 | 130.1 | 127.3 | 12773 | 1.23 | 1.31 | 2.54 | 130.1 | 127.3 | 12773 |
| | Aug | 1.05 | 1.49 | 2.54 | 130.1 | 125.1 | 12594 | 1.22 | 1.32 | 2.54 | 130.1 | 125.1 | 12594 |
| | Sep | 1.03 | 1.53 | 2.56 | 130.1 | 124.7 | 12197 | 1.19 | 1.37 | 2.56 | 130.1 | 124.7 | 12197 |
| | Oct | 0.98 | 1.58 | 2.56 | 131.0 | 124.9 | 12684 | 1.12 | 1.44 | 2.56 | 131.0 | 124.9 | 12684 |
| | Nov | 0.93 | 1.63 | 2.56 | 131.0 | 127.8 | 12288 | 1.00 | 1.56 | 2.56 | 131.0 | 127.8 | 12288 |
| | Dec | 1.07 | 1.52 | 2.59 | 131.0 | 128.2 | 12895 | 1.14 | 1.45 | 2.59 | 131.0 | 128.2 | 12895 |
| **1997** | Jan | 1.26 | 1.33 | 2.59 | 131.9 | 128.3 | 13106 | 1.34 | 1.25 | 2.59 | 131.9 | 128.3 | 13106 |
| | Feb | 1.29 | 1.30 | 2.59 | 131.9 | 127.6 | 12104 | 1.39 | 1.20 | 2.59 | 131.9 | 127.6 | 12104 |
| | Mar | 1.27 | 1.32 | 2.59 | 131.9 | 125.1 | 13649 | 1.38 | 1.21 | 2.59 | 131.9 | 125.1 | 13649 |
| | Apr | 1.24 | 1.35 | 2.59 | 132.9 | 124.4 | 13379 | 1.34 | 1.25 | 2.59 | 132.9 | 124.4 | 13379 |
| | May | 1.27 | 1.35 | 2.62 | 132.9 | 124.5 | 13870 | 1.37 | 1.25 | 2.62 | 132.9 | 124.5 | 13870 |
| | Jun | 1.37 | 1.25 | 2.62 | 132.9 | 124.2 | 13325 | 1.49 | 1.13 | 2.62 | 132.9 | 124.2 | 13325 |
| | Jul | 1.43 | 1.19 | 2.62 | 133.9 | 122.0 | 13265 | 1.55 | 1.07 | 2.62 | 133.9 | 122.0 | 13265 |
| | Aug | 1.21 | 1.20 | 2.41 | 133.9 | 126.8 | 13000 | 1.33 | 1.08 | 2.41 | 133.9 | 126.8 | 13000 |
| | Sep | 1.27 | 1.21 | 2.48 | 133.9 | 127.6 | 12362 | 1.39 | 1.09 | 2.48 | 133.9 | 127.6 | 12362 |
| | Oct | 1.32 | 1.36 | 2.68 | 135.2 | 124.2 | 12768 | 1.48 | 1.20 | 2.68 | 135.2 | 124.2 | 12768 |
| | Nov | 1.29 | 1.42 | 2.71 | 135.2 | 121.6 | 12325 | 1.47 | 1.24 | 2.71 | 135.2 | 121.6 | 12325 |
| | Dec | 1.32 | 1.39 | 2.71 | 135.2 | 117.7 | 12938 | 1.45 | 1.26 | 2.71 | 135.2 | 117.7 | 12938 |
| **1998** | Jan | 1.33 | 1.38 | 2.71 | 136.2 | 113.2 | 13287 | 1.45 | 1.26 | 2.71 | 136.2 | 113.2 | 13287 |
| | Feb | 1.30 | 1.41 | 2.71 | 136.2 | 109.6 | 12188 | 1.45 | 1.26 | 2.71 | 136.2 | 109.6 | 12188 |
| | Mar | 1.30 | 1.41 | 2.71 | 136.2 | 106.4 | 13689 | 1.45 | 1.26 | 2.71 | 136.2 | 106.4 | 13689 |
| | Apr | 1.33 | 1.41 | 2.74 | 137.3 | 107.7 | 13515 | 1.48 | 1.26 | 2.74 | 137.3 | 107.7 | 13515 |
| | May | 1.38 | 1.36 | 2.74 | 137.3 | 110.5 | 14014 | 1.57 | 1.17 | 2.74 | 137.3 | 110.5 | 14014 |
| | Jun | 1.46 | 1.28 | 2.74 | 137.3 | 110.3 | 13292 | 1.69 | 1.05 | 2.74 | 137.3 | 110.3 | 13292 |
| | Jul | 1.54 | 1.20 | 2.74 | 138.7 | 109.4 | 13167 | 1.78 | 0.96 | 2.74 | 138.7 | 109.4 | 13167 |
| | Aug | 1.41 | 1.37 | 2.78 | 138.7 | 106.5 | 12941 | 1.67 | 1.11 | 2.78 | 138.7 | 106.5 | 12941 |
| | Sep | 1.39 | 1.50 | 2.89 | 138.7 | 104.9 | 12411 | 1.74 | 1.15 | 2.89 | 138.7 | 104.9 | 12411 |
| | Oct | 1.43 | 1.53 | 2.96 | 139.7 | 105.9 | 12961 | 1.73 | 1.23 | 2.96 | 139.7 | 105.9 | 12961 |
| | Nov | 1.33 | 1.56 | 2.89 | 139.7 | 103.6 | 12611 | 1.53 | 1.36 | 2.89 | 139.7 | 103.6 | 12611 |
| | Dec | 1.24 | 1.65 | 2.89 | 139.7 | 98.7 | 13365 | 1.39 | 1.50 | 2.89 | 139.7 | 98.7 | 13365 |
| **1999** | Jan | 1.41 | 1.71 | 3.12 | 140.2 | 98.0 | 13628 | 1.55 | 1.57 | 3.12 | 140.2 | 98.0 | 13628 |
| | Feb | 1.43 | 1.76 | 3.19 | 140.2 | 96.2 | 12607 | 1.58 | 1.61 | 3.19 | 140.2 | 96.2 | 12607 |
| | Mar | 1.55 | 1.67 | 3.22 | 140.2 | 102.2 | 14270 | 1.70 | 1.52 | 3.22 | 140.2 | 102.2 | 14270 |
| | Apr | 2.03 | 1.16 | 3.19 | 141.7 | 117.1 | 13938 | 2.13 | 1.06 | 3.19 | 141.7 | 117.1 | 13938 |

| | | Dallas Whole Milk | | | | | | Dallas 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Yr** | **Mn** | **Spread** | **FP** | **RP** | **LC** | **FC** | **Mn Prod** | **Spread** | **FP** | **RP** | **LC** | **FC** | **Mn Prod** |
| | May | 1.65 | 1.27 | 2.92 | 141.7 | 117.1 | 14458 | 1.77 | 1.15 | 2.92 | 141.7 | 117.1 | 14458 |
| | Jun | 1.48 | 1.28 | 2.76 | 141.7 | 115.4 | 13633 | 1.66 | 1.10 | 2.76 | 141.7 | 115.4 | 13633 |
| | Jul | 1.56 | 1.30 | 2.86 | 143.0 | 119.7 | 13444 | 1.70 | 1.16 | 2.86 | 143.0 | 119.7 | 13444 |
| | Aug | 1.54 | 1.32 | 2.86 | 143.0 | 126.0 | 13357 | 1.69 | 1.17 | 2.86 | 143.0 | 126.0 | 13357 |
| | Sep | 1.40 | 1.46 | 2.86 | 143.0 | 129.5 | 12970 | 1.53 | 1.33 | 2.86 | 143.0 | 129.5 | 12970 |
| | Oct | 1.21 | 1.61 | 2.82 | 144.6 | 128.5 | 13412 | 1.33 | 1.49 | 2.82 | 144.6 | 128.5 | 13412 |
| | Nov | 1.17 | 1.65 | 2.82 | 144.6 | 129.2 | 13140 | 1.29 | 1.53 | 2.82 | 144.6 | 129.2 | 13140 |
| | Dec | 1.49 | 1.33 | 2.82 | 144.6 | 131.3 | 13854 | 1.58 | 1.24 | 2.82 | 144.6 | 131.3 | 13854 |
| **2000** | Jan | 1.53 | 1.29 | 2.82 | 146.4 | 132.9 | 14263 | 1.63 | 1.19 | 2.82 | 146.4 | 132.9 | 14263 |
| | Feb | 1.29 | 1.27 | 2.56 | 146.4 | 141.5 | 13606 | 1.38 | 1.18 | 2.56 | 146.4 | 141.5 | 13606 |
| | Mar | 1.44 | 1.28 | 2.72 | 146.4 | 155.6 | 14761 | 1.50 | 1.19 | 2.69 | 146.4 | 155.6 | 14761 |
| | Apr | 1.27 | 1.29 | 2.56 | 147.9 | 150.6 | 14390 | 1.37 | 1.19 | 2.56 | 147.9 | 150.6 | 14390 |
| | May | 1.18 | 1.31 | 2.49 | 147.9 | 152.6 | 14791 | 1.29 | 1.20 | 2.49 | 147.9 | 152.6 | 14791 |
| | Jun | 1.15 | 1.31 | 2.46 | 147.9 | 166.6 | 14008 | 1.27 | 1.19 | 2.46 | 147.9 | 166.6 | 14008 |
| | Jul | 1.11 | 1.35 | 2.46 | 149.3 | 159.1 | 14117 | 1.26 | 1.20 | 2.46 | 149.3 | 159.1 | 14117 |
| | Aug | 1.19 | 1.33 | 2.52 | 149.3 | 150.6 | 13798 | 1.32 | 1.20 | 2.52 | 149.3 | 150.6 | 13798 |
| | Sep | 1.37 | 1.32 | 2.69 | 149.3 | 158.8 | 13246 | 1.50 | 1.19 | 2.69 | 149.3 | 158.8 | 13246 |
| | Oct | 1.19 | 1.33 | 2.52 | 150.6 | 157.1 | 13708 | 1.32 | 1.20 | 2.52 | 150.6 | 157.1 | 13708 |
| | Nov | 1.20 | 1.32 | 2.52 | 150.6 | 155.7 | 13212 | 1.33 | 1.19 | 2.52 | 150.6 | 155.7 | 13212 |
| | Dec | 1.20 | 1.32 | 2.52 | 150.6 | 148.3 | 13758 | 1.33 | 1.19 | 2.52 | 150.6 | 148.3 | 13758 |
| **2001** | Jan | 1.19 | 1.43 | 2.62 | 152.3 | 148.7 | 13998 | 1.38 | 1.24 | 2.62 | 152.3 | 148.7 | 13998 |
| | Feb | 1.39 | 1.33 | 2.72 | 152.3 | 149.0 | 12894 | 1.51 | 1.21 | 2.72 | 152.3 | 149.0 | 12894 |
| | Mar | 1.32 | 1.37 | 2.69 | 152.3 | 145.0 | 14375 | 1.47 | 1.22 | 2.69 | 152.3 | 145.0 | 14375 |
| | Apr | 1.26 | 1.43 | 2.69 | 153.8 | 159.1 | 14078 | 1.43 | 1.26 | 2.69 | 153.8 | 159.1 | 14078 |
| | May | 1.22 | 1.47 | 2.69 | 153.8 | 173.8 | 14646 | 1.41 | 1.28 | 2.69 | 153.8 | 173.8 | 14646 |
| | Jun | 1.31 | 1.51 | 2.82 | 153.8 | 165.8 | 13957 | 1.53 | 1.29 | 2.82 | 153.8 | 165.8 | 13957 |
| | Jul | 1.29 | 1.57 | 2.86 | 155.4 | 146.6 | 13877 | 1.52 | 1.34 | 2.86 | 155.4 | 146.6 | 13877 |
| | Aug | 1.35 | 1.57 | 2.92 | 155.4 | 146.1 | 13564 | 1.58 | 1.34 | 2.92 | 155.4 | 146.1 | 13564 |
| | Sep | 1.43 | 1.56 | 2.99 | 155.4 | 155.7 | 13129 | 1.66 | 1.33 | 2.99 | 155.4 | 155.7 | 13129 |
| | Oct | 1.40 | 1.59 | 2.99 | 156.9 | 135.7 | 13611 | 1.67 | 1.32 | 2.99 | 156.9 | 135.7 | 13611 |
| | Nov | 1.40 | 1.59 | 2.99 | 156.9 | 121.2 | 13305 | 1.59 | 1.40 | 2.99 | 156.9 | 121.2 | 13305 |
| | Dec | 1.69 | 1.33 | 3.02 | 156.9 | 112.7 | 13902 | 1.84 | 1.18 | 3.02 | 156.9 | 112.7 | 13902 |
| **2002** | Jan | 1.69 | 1.33 | 3.02 | 158.2 | 114.8 | 14245 | 1.83 | 1.19 | 3.02 | 158.2 | 114.8 | 14245 |
| | Feb | 1.69 | 1.33 | 3.02 | 158.2 | 115.5 | 13190 | 1.84 | 1.18 | 3.02 | 158.2 | 115.5 | 13190 |
| | Mar | 1.68 | 1.34 | 3.02 | 158.2 | 128.9 | 14821 | 1.82 | 1.20 | 3.02 | 158.2 | 128.9 | 14821 |
| | Apr | 1.68 | 1.34 | 3.02 | 159.8 | 143.9 | 14564 | 1.82 | 1.20 | 3.02 | 159.8 | 143.9 | 14564 |
| | May | 1.68 | 1.34 | 3.02 | 159.8 | 143.4 | 15105 | 1.82 | 1.20 | 3.02 | 159.8 | 143.4 | 15105 |
| | Jun | 1.68 | 1.34 | 3.02 | 159.8 | 142.4 | 14285 | 1.79 | 1.23 | 3.02 | 159.8 | 142.4 | 14285 |
| | Jul | 1.85 | 1.27 | 3.12 | 161.1 | 143.8 | 14230 | 1.97 | 1.15 | 3.12 | 161.1 | 143.8 | 14230 |
| | Aug | 1.70 | 1.26 | 2.96 | 161.1 | 143.8 | 14154 | 1.81 | 1.15 | 2.96 | 161.1 | 143.8 | 14154 |
| | Sep | 1.70 | 1.26 | 2.96 | 161.1 | 144.1 | 13490 | 1.81 | 1.15 | 2.96 | 161.1 | 144.1 | 13490 |
| | Oct | 1.74 | 1.22 | 2.96 | 162.3 | 148.6 | 13935 | 1.84 | 1.12 | 2.96 | 162.3 | 148.6 | 13935 |

| | | Hartford Whole Milk | | | | | | Hartford 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Mn | Spread | FP | RP | LC | FC | Mn Prod | Spread | FP | RP | LC | FC | Mn Prod |
| 1994 | Jan | 1.06 | 1.40 | 2.46 | 121.2 | 103.4 | 12698 | 0.98 | 1.34 | 2.32 | 121.2 | 103.4 | 12698 |
| | Feb | 1.05 | 1.38 | 2.43 | 121.2 | 103.3 | 11645 | 1.01 | 1.32 | 2.33 | 121.2 | 103.3 | 11645 |
| | Mar | 1.08 | 1.37 | 2.45 | 121.2 | 103.7 | 13243 | 1.01 | 1.31 | 2.32 | 121.2 | 103.7 | 13243 |
| | Apr | 1.07 | 1.37 | 2.44 | 122.3 | 103.5 | 13104 | 1.03 | 1.31 | 2.34 | 122.3 | 103.5 | 13104 |
| | May | 1.04 | 1.40 | 2.44 | 122.3 | 105.5 | 13711 | 0.99 | 1.34 | 2.33 | 122.3 | 105.5 | 13711 |
| | Jun | 1.01 | 1.42 | 2.43 | 122.3 | 108.3 | 13072 | 0.99 | 1.36 | 2.35 | 122.3 | 108.3 | 13072 |
| | Jul | 1.15 | 1.29 | 2.44 | 123.3 | 110.8 | 13021 | 1.12 | 1.23 | 2.35 | 123.3 | 110.8 | 13021 |
| | Aug | 1.15 | 1.27 | 2.42 | 123.3 | 115.3 | 12828 | 1.07 | 1.20 | 2.27 | 123.3 | 115.3 | 12828 |
| | Sep | 1.14 | 1.28 | 2.42 | 123.3 | 115.6 | 12336 | 1.07 | 1.21 | 2.28 | 123.3 | 115.6 | 12336 |
| | Oct | 1.12 | 1.31 | 2.43 | 124.0 | 113.9 | 12747 | 1.03 | 1.24 | 2.27 | 124.0 | 113.9 | 12747 |
| | Nov | 1.11 | 1.33 | 2.44 | 124.0 | 116.5 | 12319 | 1.01 | 1.27 | 2.28 | 124.0 | 116.5 | 12319 |
| | Dec | 1.09 | 1.36 | 2.45 | 124.0 | 122.6 | 12878 | 0.99 | 1.29 | 2.28 | 124.0 | 122.6 | 12878 |
| 1995 | Jan | 1.13 | 1.32 | 2.45 | 124.9 | 122.3 | 13170 | 1.01 | 1.26 | 2.27 | 124.9 | 122.3 | 13170 |
| | Feb | 1.13 | 1.30 | 2.43 | 124.9 | 121.7 | 12126 | 1.06 | 1.24 | 2.30 | 124.9 | 121.7 | 12126 |
| | Mar | 1.12 | 1.30 | 2.42 | 124.9 | 120.5 | 13622 | 1.07 | 1.24 | 2.31 | 124.9 | 120.5 | 13622 |
| | Apr | 1.09 | 1.34 | 2.43 | 125.8 | 121.0 | 13330 | 1.03 | 1.27 | 2.30 | 125.8 | 121.0 | 13330 |
| | May | 1.07 | 1.34 | 2.41 | 125.8 | 127.7 | 13868 | 1.01 | 1.28 | 2.29 | 125.8 | 127.7 | 13868 |
| | Jun | 1.13 | 1.28 | 2.41 | 125.8 | 131.4 | 13267 | 1.08 | 1.21 | 2.29 | 125.8 | 131.4 | 13267 |
| | Jul | 1.13 | 1.28 | 2.41 | 126.5 | 130.6 | 13141 | 1.09 | 1.20 | 2.29 | 126.5 | 130.6 | 13141 |
| | Aug | 1.11 | 1.30 | 2.41 | 126.5 | 128.4 | 12751 | 1.06 | 1.22 | 2.28 | 126.5 | 128.4 | 12751 |
| | Sep | 1.11 | 1.28 | 2.39 | 126.5 | 127.2 | 12316 | 1.07 | 1.20 | 2.27 | 126.5 | 127.2 | 12316 |
| | Oct | 1.08 | 1.31 | 2.39 | 127.3 | 125.3 | 12674 | 1.05 | 1.20 | 2.25 | 127.3 | 125.3 | 12674 |
| | Nov | 1.04 | 1.35 | 2.39 | 127.3 | 121.4 | 12232 | 1.03 | 1.24 | 2.27 | 127.3 | 121.4 | 12232 |
| | Dec | 0.97 | 1.41 | 2.38 | 127.3 | 121.6 | 12795 | 0.93 | 1.34 | 2.27 | 127.3 | 121.6 | 12795 |
| 1996 | Jan | 0.95 | 1.43 | 2.38 | 128.3 | 123.6 | 13068 | 0.92 | 1.36 | 2.28 | 128.3 | 123.6 | 13068 |
| | Feb | 0.97 | 1.43 | 2.40 | 128.3 | 122.5 | 12411 | 0.92 | 1.38 | 2.30 | 128.3 | 122.5 | 12411 |
| | Mar | 0.99 | 1.42 | 2.41 | 128.3 | 123.4 | 13509 | 0.95 | 1.36 | 2.31 | 128.3 | 123.4 | 13509 |
| | Apr | 1.00 | 1.40 | 2.40 | 129.2 | 131.3 | 13211 | 0.96 | 1.34 | 2.30 | 129.2 | 131.3 | 13211 |
| | May | 0.99 | 1.41 | 2.40 | 129.2 | 138.2 | 13561 | 0.97 | 1.32 | 2.29 | 129.2 | 138.2 | 13561 |
| | Jun | 0.99 | 1.43 | 2.42 | 129.2 | 137.0 | 12815 | 1.02 | 1.28 | 2.30 | 129.2 | 137.0 | 12815 |
| | Jul | 0.96 | 1.48 | 2.44 | 130.1 | 133.9 | 12773 | 1.03 | 1.31 | 2.34 | 130.1 | 133.9 | 12773 |
| | Aug | 0.96 | 1.50 | 2.46 | 130.1 | 131.7 | 12594 | 1.02 | 1.33 | 2.35 | 130.1 | 131.7 | 12594 |
| | Sep | 0.90 | 1.55 | 2.45 | 130.1 | 131.3 | 12197 | 0.96 | 1.38 | 2.34 | 130.1 | 131.3 | 12197 |
| | Oct | 0.87 | 1.59 | 2.46 | 131.0 | 132.0 | 12684 | 0.89 | 1.45 | 2.34 | 131.0 | 132.0 | 12684 |
| | Nov | 0.86 | 1.64 | 2.50 | 131.0 | 134.7 | 12288 | 0.84 | 1.57 | 2.41 | 131.0 | 134.7 | 12288 |
| | Dec | 0.93 | 1.57 | 2.50 | 131.0 | 138.6 | 12895 | 0.92 | 1.50 | 2.42 | 131.0 | 138.6 | 12895 |
| 1997 | Jan | 1.16 | 1.35 | 2.51 | 131.9 | 139.1 | 13106 | 1.16 | 1.27 | 2.43 | 131.9 | 139.1 | 13106 |
| | Feb | 1.17 | 1.32 | 2.49 | 131.9 | 138.0 | 12104 | 1.21 | 1.21 | 2.42 | 131.9 | 138.0 | 12104 |
| | Mar | 1.12 | 1.37 | 2.49 | 131.9 | 134.4 | 13649 | 1.16 | 1.25 | 2.41 | 131.9 | 134.4 | 13649 |
| | Apr | 1.07 | 1.42 | 2.49 | 132.9 | 132.0 | 13379 | 1.10 | 1.32 | 2.42 | 132.9 | 132.0 | 13379 |
| | May | 1.07 | 1.42 | 2.49 | 132.9 | 130.1 | 13870 | 1.07 | 1.33 | 2.40 | 132.9 | 130.1 | 13870 |
| | Jun | 1.16 | 1.33 | 2.49 | 132.9 | 130.3 | 13325 | 1.21 | 1.21 | 2.42 | 132.9 | 130.3 | 13325 |
| | Jul | 1.41 | 1.27 | 2.68 | 133.9 | 127.9 | 13265 | 1.46 | 1.15 | 2.61 | 133.9 | 127.9 | 13265 |
| | Aug | 1.43 | 1.25 | 2.68 | 133.9 | 134.2 | 13000 | 1.45 | 1.14 | 2.59 | 133.9 | 134.2 | 13000 |
| | Sep | 1.44 | 1.24 | 2.68 | 133.9 | 137.7 | 12362 | 1.41 | 1.13 | 2.54 | 133.9 | 137.7 | 12362 |
| | Oct | 1.35 | 1.33 | 2.68 | 135.2 | 134.6 | 12768 | 1.41 | 1.17 | 2.58 | 135.2 | 134.6 | 12768 |
| | Nov | 1.29 | 1.39 | 2.68 | 135.2 | 131.5 | 12325 | 1.37 | 1.21 | 2.58 | 135.2 | 131.5 | 12325 |
| | Dec | 1.28 | 1.40 | 2.68 | 135.2 | 127.5 | 12938 | 1.29 | 1.27 | 2.56 | 135.2 | 127.5 | 12938 |
| 1998 | Jan | 1.26 | 1.42 | 2.68 | 136.2 | 123.5 | 13287 | 1.26 | 1.29 | 2.55 | 136.2 | 123.5 | 13287 |
| | Feb | 1.24 | 1.44 | 2.68 | 136.2 | 119.4 | 12188 | 1.26 | 1.29 | 2.55 | 136.2 | 119.4 | 12188 |
| | Mar | 1.24 | 1.44 | 2.68 | 136.2 | 113.7 | 13689 | 1.26 | 1.29 | 2.55 | 136.2 | 113.7 | 13689 |
| | Apr | 1.25 | 1.43 | 2.68 | 137.3 | 112.8 | 13515 | 1.28 | 1.28 | 2.56 | 137.3 | 112.8 | 13515 |
| | May | 1.30 | 1.38 | 2.68 | 137.3 | 112.6 | 14014 | 1.37 | 1.19 | 2.56 | 137.3 | 112.6 | 14014 |
| | Jun | 1.31 | 1.30 | 2.61 | 137.3 | 112.3 | 13292 | 1.45 | 1.07 | 2.52 | 137.3 | 112.3 | 13292 |
| | Jul | 1.40 | 1.20 | 2.60 | 138.7 | 110.5 | 13167 | 1.54 | 0.96 | 2.50 | 138.7 | 110.5 | 13167 |
| | Aug | 1.21 | 1.39 | 2.60 | 138.7 | 108.8 | 12941 | 1.39 | 1.12 | 2.51 | 138.7 | 108.8 | 12941 |
| | Sep | 1.10 | 1.51 | 2.61 | 138.7 | 107.2 | 12411 | 1.37 | 1.16 | 2.53 | 138.7 | 107.2 | 12411 |
| | Oct | 1.10 | 1.54 | 2.64 | 139.7 | 108.5 | 12961 | 1.31 | 1.25 | 2.56 | 139.7 | 108.5 | 12961 |
| | Nov | 1.09 | 1.57 | 2.66 | 139.7 | 107.4 | 12611 | 1.11 | 1.38 | 2.49 | 139.7 | 107.4 | 12611 |
| | Dec | 1.08 | 1.66 | 2.74 | 139.7 | 105.1 | 13365 | 1.11 | 1.52 | 2.63 | 139.7 | 105.1 | 13365 |
| 1999 | Jan | 1.07 | 1.73 | 2.80 | 140.2 | 103.6 | 13628 | 1.15 | 1.58 | 2.73 | 140.2 | 103.6 | 13628 |
| | Feb | 1.12 | 1.77 | 2.89 | 140.2 | 101.1 | 12607 | 1.23 | 1.63 | 2.86 | 140.2 | 101.1 | 12607 |
| | Mar | 1.20 | 1.68 | 2.88 | 140.2 | 102.5 | 14270 | 1.27 | 1.54 | 2.81 | 140.2 | 102.5 | 14270 |
| | Apr | 1.55 | 1.18 | 2.73 | 141.7 | 113.8 | 13938 | 1.59 | 1.07 | 2.66 | 141.7 | 113.8 | 13938 |

| | | Hartford Whole Milk | | | | | | Hartford 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Mn | Spread | FP | RP | LC | FC | Mn Prod | Spread | FP | RP | LC | FC | Mn Prod |
| | May | 1.38 | 1.29 | 2.67 | 141.7 | 116.7 | 14458 | 1.43 | 1.17 | 2.60 | 141.7 | 116.7 | 14458 |
| | Jun | 1.39 | 1.29 | 2.68 | 141.7 | 116.6 | 13633 | 1.52 | 1.12 | 2.64 | 141.7 | 116.6 | 13633 |
| | Jul | 1.39 | 1.25 | 2.64 | 143.0 | 120.5 | 13444 | 1.50 | 1.11 | 2.61 | 143.0 | 120.5 | 13444 |
| | Aug | 1.36 | 1.27 | 2.63 | 143.0 | 128.0 | 13357 | 1.48 | 1.12 | 2.60 | 143.0 | 128.0 | 13357 |
| | Sep | 1.25 | 1.45 | 2.70 | 143.0 | 132.3 | 12970 | 1.35 | 1.32 | 2.67 | 143.0 | 132.3 | 12970 |
| | Oct | 1.22 | 1.65 | 2.87 | 144.6 | 135.8 | 13412 | 1.34 | 1.53 | 2.87 | 144.6 | 135.8 | 13412 |
| | Nov | 1.26 | 1.69 | 2.95 | 144.6 | 135.8 | 13140 | 1.39 | 1.57 | 2.96 | 144.6 | 135.8 | 13140 |
| | Dec | 1.63 | 1.28 | 2.91 | 144.6 | 137.8 | 13854 | 1.72 | 1.19 | 2.91 | 144.6 | 137.8 | 13854 |
| **2000** | Jan | 1.68 | 1.23 | 2.91 | 146.4 | 139.1 | 14263 | 1.78 | 1.13 | 2.91 | 146.4 | 139.1 | 14263 |
| | Feb | 1.62 | 1.22 | 2.84 | 146.4 | 143.3 | 13606 | 1.76 | 1.12 | 2.88 | 146.4 | 143.3 | 13606 |
| | Mar | 1.58 | 1.23 | 2.81 | 146.4 | 157.7 | 14761 | 1.73 | 1.13 | 2.86 | 146.4 | 157.7 | 14761 |
| | Apr | 1.56 | 1.23 | 2.79 | 147.9 | 154.7 | 14390 | 1.73 | 1.13 | 2.86 | 147.9 | 154.7 | 14390 |
| | May | 1.54 | 1.28 | 2.82 | 147.9 | 155.0 | 14791 | 1.74 | 1.16 | 2.90 | 147.9 | 155.0 | 14791 |
| | Jun | 1.53 | 1.30 | 2.83 | 147.9 | 166.1 | 14008 | 1.73 | 1.17 | 2.90 | 147.9 | 166.1 | 14008 |
| | Jul | 1.49 | 1.36 | 2.85 | 149.3 | 167.4 | 14117 | 1.66 | 1.21 | 2.87 | 149.3 | 167.4 | 14117 |
| | Aug | 1.52 | 1.32 | 2.84 | 149.3 | 163.0 | 13798 | 1.69 | 1.18 | 2.87 | 149.3 | 163.0 | 13798 |
| | Sep | 1.52 | 1.31 | 2.83 | 149.3 | 163.9 | 13246 | 1.69 | 1.18 | 2.87 | 149.3 | 163.9 | 13246 |
| | Oct | 1.52 | 1.31 | 2.83 | 150.6 | 162.4 | 13708 | 1.69 | 1.18 | 2.87 | 150.6 | 162.4 | 13708 |
| | Nov | 1.56 | 1.31 | 2.87 | 150.6 | 161.9 | 13212 | 1.66 | 1.18 | 2.84 | 150.6 | 161.9 | 13212 |
| | Dec | 1.61 | 1.33 | 2.94 | 150.6 | 158.5 | 13758 | 1.71 | 1.20 | 2.91 | 150.6 | 158.5 | 13758 |
| **2001** | Jan | 1.39 | 1.48 | 2.87 | 152.3 | 154.7 | 13998 | 1.58 | 1.29 | 2.87 | 152.3 | 154.7 | 13998 |
| | Feb | 1.62 | 1.32 | 2.94 | 152.3 | 153.1 | 12894 | 1.72 | 1.19 | 2.91 | 152.3 | 153.1 | 12894 |
| | Mar | 1.53 | 1.37 | 2.90 | 152.3 | 149.7 | 14375 | 1.68 | 1.22 | 2.90 | 152.3 | 149.7 | 14375 |
| | Apr | 1.52 | 1.44 | 2.96 | 153.8 | 156.9 | 14078 | 1.66 | 1.26 | 2.92 | 153.8 | 156.9 | 14078 |
| | May | 1.48 | 1.50 | 2.98 | 153.8 | 175.5 | 14646 | 1.63 | 1.30 | 2.93 | 153.8 | 175.5 | 14646 |
| | Jun | 1.38 | 1.60 | 2.98 | 153.8 | 176.5 | 13957 | 1.56 | 1.38 | 2.94 | 153.8 | 176.5 | 13957 |
| | Jul | 1.39 | 1.62 | 3.01 | 155.4 | 161.8 | 13877 | 1.58 | 1.39 | 2.97 | 155.4 | 161.8 | 13877 |
| | Aug | 1.31 | 1.69 | 3.00 | 155.4 | 150.2 | 13564 | 1.50 | 1.46 | 2.96 | 155.4 | 150.2 | 13564 |
| | Sep | 1.36 | 1.70 | 3.06 | 155.4 | 149.1 | 13129 | 1.55 | 1.47 | 3.02 | 155.4 | 149.1 | 13129 |
| | Oct | 1.34 | 1.73 | 3.07 | 156.9 | 140.8 | 13611 | 1.57 | 1.47 | 3.04 | 156.9 | 140.8 | 13611 |
| | Nov | 1.37 | 1.73 | 3.10 | 156.9 | 126.7 | 13305 | 1.53 | 1.54 | 3.07 | 156.9 | 126.7 | 13305 |
| | Dec | 1.59 | 1.41 | 3.00 | 156.9 | 116.6 | 13902 | 1.71 | 1.26 | 2.97 | 156.9 | 116.6 | 13902 |
| **2002** | Jan | 1.60 | 1.41 | 3.01 | 158.2 | 119.2 | 14245 | 1.71 | 1.27 | 2.98 | 158.2 | 119.2 | 14245 |
| | Feb | 1.59 | 1.41 | 3.00 | 158.2 | 119.5 | 13190 | 1.71 | 1.25 | 2.96 | 158.2 | 119.5 | 13190 |
| | Mar | 1.62 | 1.38 | 3.00 | 158.2 | 128.5 | 14821 | 1.72 | 1.24 | 2.96 | 158.2 | 128.5 | 14821 |
| | Apr | 1.62 | 1.37 | 2.99 | 159.8 | 144.1 | 14564 | 1.73 | 1.23 | 2.96 | 159.8 | 144.1 | 14564 |
| | May | 1.64 | 1.35 | 2.99 | 159.8 | 146.0 | 15105 | 1.74 | 1.22 | 2.96 | 159.8 | 146.0 | 15105 |
| | Jun | 1.65 | 1.34 | 2.99 | 159.8 | 144.4 | 14285 | 1.74 | 1.22 | 2.96 | 159.8 | 144.4 | 14285 |
| | Jul | 1.69 | 1.30 | 2.99 | 161.1 | 144.4 | 14230 | 1.78 | 1.18 | 2.96 | 161.1 | 144.4 | 14230 |
| | Aug | 1.72 | 1.27 | 2.99 | 161.1 | 148.3 | 14154 | 1.80 | 1.16 | 2.96 | 161.1 | 148.3 | 14154 |
| | Sep | 1.72 | 1.27 | 2.99 | 161.1 | 148.5 | 13490 | 1.80 | 1.16 | 2.96 | 161.1 | 148.5 | 13490 |
| | Oct | 1.74 | 1.25 | 2.99 | 162.3 | 150.0 | 13935 | 1.81 | 1.15 | 2.96 | 162.3 | 150.0 | 13935 |

| | | Seattle Whole Milk | | | | | | Seattle 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Mn | Spread | FP | RP | LC | FC | Mn Prod | Spread | FP | RP | LC | FC | Mn Prod |
| 1994 | Jan | 1.70 | 1.29 | 2.99 | 121.2 | 110.8 | 12698 | 1.68 | 1.23 | 2.91 | 121.2 | 110.8 | 12698 |
| | Feb | 1.72 | 1.27 | 2.99 | 121.2 | 110.8 | 11645 | 1.70 | 1.21 | 2.91 | 121.2 | 110.8 | 11645 |
| | Mar | 1.73 | 1.26 | 2.99 | 121.2 | 111.2 | 13243 | 1.71 | 1.20 | 2.91 | 121.2 | 111.2 | 13243 |
| | Apr | 1.73 | 1.26 | 2.99 | 122.3 | 112.3 | 13104 | 1.71 | 1.20 | 2.91 | 122.3 | 112.3 | 13104 |
| | May | 1.73 | 1.29 | 3.02 | 122.3 | 114.6 | 13711 | 1.66 | 1.23 | 2.89 | 122.3 | 114.6 | 13711 |
| | Jun | 1.71 | 1.31 | 3.02 | 122.3 | 117.0 | 13072 | 1.64 | 1.25 | 2.89 | 122.3 | 117.0 | 13072 |
| | Jul | 1.81 | 1.18 | 2.99 | 123.3 | 119.6 | 13021 | 1.63 | 1.12 | 2.75 | 123.3 | 119.6 | 13021 |
| | Aug | 1.76 | 1.16 | 2.92 | 123.3 | 122.3 | 12828 | 1.63 | 1.09 | 2.72 | 123.3 | 122.3 | 12828 |
| | Sep | 1.75 | 1.17 | 2.92 | 123.3 | 122.5 | 12336 | 1.66 | 1.10 | 2.76 | 123.3 | 122.5 | 12336 |
| | Oct | 1.76 | 1.20 | 2.96 | 124.0 | 122.9 | 12747 | 1.66 | 1.13 | 2.79 | 124.0 | 122.9 | 12747 |
| | Nov | 1.73 | 1.23 | 2.96 | 124.0 | 123.2 | 12319 | 1.63 | 1.16 | 2.79 | 124.0 | 123.2 | 12319 |
| | Dec | 1.71 | 1.25 | 2.96 | 124.0 | 125.7 | 12878 | 1.60 | 1.19 | 2.79 | 124.0 | 125.7 | 12878 |
| 1995 | Jan | 1.75 | 1.21 | 2.96 | 124.9 | 126.2 | 13170 | 1.67 | 1.15 | 2.82 | 124.9 | 126.2 | 13170 |
| | Feb | 1.75 | 1.17 | 2.92 | 124.9 | 124.4 | 12126 | 1.65 | 1.11 | 2.76 | 124.9 | 124.4 | 12126 |
| | Mar | 1.75 | 1.17 | 2.92 | 124.9 | 123.0 | 13622 | 1.65 | 1.11 | 2.76 | 124.9 | 123.0 | 13622 |
| | Apr | 1.72 | 1.20 | 2.92 | 125.8 | 124.3 | 13330 | 1.65 | 1.14 | 2.79 | 125.8 | 124.3 | 13330 |
| | May | 1.75 | 1.21 | 2.96 | 125.8 | 128.5 | 13868 | 1.64 | 1.15 | 2.79 | 125.8 | 128.5 | 13868 |
| | Jun | 1.77 | 1.15 | 2.92 | 125.8 | 129.1 | 13267 | 1.71 | 1.08 | 2.79 | 125.8 | 129.1 | 13267 |
| | Jul | 1.82 | 1.14 | 2.96 | 126.5 | 127.3 | 13141 | 1.72 | 1.07 | 2.79 | 126.5 | 127.3 | 13141 |
| | Aug | 1.79 | 1.17 | 2.96 | 126.5 | 124.8 | 12751 | 1.70 | 1.09 | 2.79 | 126.5 | 124.8 | 12751 |
| | Sep | 1.81 | 1.15 | 2.96 | 126.5 | 123.7 | 12316 | 1.72 | 1.07 | 2.79 | 126.5 | 123.7 | 12316 |
| | Oct | 1.78 | 1.18 | 2.96 | 127.3 | 124.1 | 12674 | 1.72 | 1.07 | 2.79 | 127.3 | 124.1 | 12674 |
| | Nov | 1.74 | 1.22 | 2.96 | 127.3 | 122.7 | 12232 | 1.69 | 1.10 | 2.79 | 127.3 | 122.7 | 12232 |
| | Dec | 1.69 | 1.27 | 2.96 | 127.3 | 121.9 | 12795 | 1.58 | 1.21 | 2.79 | 127.3 | 121.9 | 12795 |
| 1996 | Jan | 1.69 | 1.30 | 2.99 | 128.3 | 122.5 | 13068 | 1.56 | 1.23 | 2.79 | 128.3 | 122.5 | 13068 |
| | Feb | 1.79 | 1.30 | 3.09 | 128.3 | 122.8 | 12411 | 1.82 | 1.24 | 3.06 | 128.3 | 122.8 | 12411 |
| | Mar | 1.80 | 1.29 | 3.09 | 128.3 | 127.3 | 13509 | 1.83 | 1.23 | 3.06 | 128.3 | 127.3 | 13509 |
| | Apr | 1.89 | 1.27 | 3.16 | 129.2 | 141.3 | 13211 | 1.85 | 1.21 | 3.06 | 129.2 | 141.3 | 13211 |
| | May | 1.90 | 1.26 | 3.16 | 129.2 | 154.0 | 13561 | 1.89 | 1.17 | 3.06 | 129.2 | 154.0 | 13561 |
| | Jun | 1.90 | 1.29 | 3.19 | 129.2 | 151.5 | 12815 | 1.96 | 1.13 | 3.09 | 129.2 | 151.5 | 12815 |
| | Jul | 1.92 | 1.34 | 3.26 | 130.1 | 147.1 | 12773 | 1.95 | 1.17 | 3.12 | 130.1 | 147.1 | 12773 |
| | Aug | 1.94 | 1.35 | 3.29 | 130.1 | 142.1 | 12594 | 1.94 | 1.18 | 3.12 | 130.1 | 142.1 | 12594 |
| | Sep | 1.92 | 1.40 | 3.32 | 130.1 | 137.1 | 12197 | 1.88 | 1.24 | 3.12 | 130.1 | 137.1 | 12197 |
| | Oct | 1.87 | 1.45 | 3.32 | 131.0 | 133.3 | 12684 | 1.81 | 1.31 | 3.12 | 131.0 | 133.3 | 12684 |
| | Nov | 1.89 | 1.50 | 3.39 | 131.0 | 128.1 | 12288 | 1.69 | 1.43 | 3.12 | 131.0 | 128.1 | 12288 |
| | Dec | 1.93 | 1.39 | 3.32 | 131.0 | 126.5 | 12895 | 1.80 | 1.32 | 3.12 | 131.0 | 126.5 | 12895 |
| 1997 | Jan | 1.99 | 1.17 | 3.16 | 131.9 | 130.5 | 13106 | 2.00 | 1.09 | 3.09 | 131.9 | 130.5 | 13106 |
| | Feb | 2.02 | 1.14 | 3.16 | 131.9 | 134.5 | 12104 | 2.05 | 1.04 | 3.09 | 131.9 | 134.5 | 12104 |
| | Mar | 1.97 | 1.19 | 3.16 | 131.9 | 136.9 | 13649 | 2.01 | 1.08 | 3.09 | 131.9 | 136.9 | 13649 |
| | Apr | 1.95 | 1.24 | 3.19 | 132.9 | 141.0 | 13379 | 1.98 | 1.14 | 3.12 | 132.9 | 141.0 | 13379 |
| | May | 1.91 | 1.25 | 3.16 | 132.9 | 139.0 | 13870 | 1.94 | 1.15 | 3.09 | 132.9 | 139.0 | 13870 |
| | Jun | 2.01 | 1.15 | 3.16 | 132.9 | 135.2 | 13325 | 2.06 | 1.03 | 3.09 | 132.9 | 135.2 | 13325 |
| | Jul | 2.03 | 1.09 | 3.12 | 133.9 | 131.0 | 13265 | 2.08 | 0.98 | 3.06 | 133.9 | 131.0 | 13265 |
| | Aug | 2.02 | 1.10 | 3.12 | 133.9 | 136.2 | 13000 | 2.08 | 0.98 | 3.06 | 133.9 | 136.2 | 13000 |
| | Sep | 2.01 | 1.11 | 3.12 | 133.9 | 144.8 | 12362 | 2.07 | 0.99 | 3.06 | 133.9 | 144.8 | 12362 |
| | Oct | 1.86 | 1.20 | 3.06 | 135.2 | 144.1 | 12768 | 1.95 | 1.04 | 2.99 | 135.2 | 144.1 | 12768 |
| | Nov | 1.86 | 1.26 | 3.12 | 135.2 | 140.6 | 12325 | 1.98 | 1.08 | 3.06 | 135.2 | 140.6 | 12325 |
| | Dec | 1.84 | 1.28 | 3.12 | 135.2 | 135.8 | 12938 | 1.91 | 1.15 | 3.06 | 135.2 | 135.8 | 12938 |
| 1998 | Jan | 1.83 | 1.29 | 3.12 | 136.2 | 130.7 | 13287 | 1.89 | 1.17 | 3.06 | 136.2 | 130.7 | 13287 |
| | Feb | 1.81 | 1.31 | 3.12 | 136.2 | 122.5 | 12188 | 1.90 | 1.16 | 3.06 | 136.2 | 122.5 | 12188 |
| | Mar | 1.81 | 1.31 | 3.12 | 136.2 | 113.5 | 13689 | 1.89 | 1.17 | 3.06 | 136.2 | 113.5 | 13689 |
| | Apr | 1.80 | 1.32 | 3.12 | 137.3 | 116.4 | 13515 | 1.90 | 1.16 | 3.06 | 137.3 | 116.4 | 13515 |
| | May | 1.83 | 1.29 | 3.12 | 137.3 | 124.3 | 14014 | 1.96 | 1.10 | 3.06 | 137.3 | 124.3 | 14014 |
| | Jun | 1.84 | 1.28 | 3.12 | 137.3 | 123.2 | 13292 | 2.02 | 1.04 | 3.06 | 137.3 | 123.2 | 13292 |
| | Jul | 1.84 | 1.28 | 3.12 | 138.7 | 121.5 | 13167 | 2.02 | 1.04 | 3.06 | 138.7 | 121.5 | 13167 |
| | Aug | 1.85 | 1.27 | 3.12 | 138.7 | 119.5 | 12941 | 2.05 | 1.01 | 3.06 | 138.7 | 119.5 | 12941 |
| | Sep | 1.76 | 1.40 | 3.16 | 138.7 | 118.2 | 12411 | 2.01 | 1.05 | 3.06 | 138.7 | 118.2 | 12411 |
| | Oct | 1.73 | 1.43 | 3.16 | 139.7 | 117.7 | 12961 | 1.93 | 1.13 | 3.06 | 139.7 | 117.7 | 12961 |
| | Nov | 1.70 | 1.46 | 3.16 | 139.7 | 117.3 | 12611 | 1.82 | 1.27 | 3.09 | 139.7 | 117.3 | 12611 |
| | Dec | 1.61 | 1.55 | 3.16 | 139.7 | 115.9 | 13365 | 1.68 | 1.41 | 3.09 | 139.7 | 115.9 | 13365 |
| 1999 | Jan | 1.64 | 1.62 | 3.26 | 140.2 | 114.4 | 13628 | 1.74 | 1.47 | 3.21 | 140.2 | 114.4 | 13628 |
| | Feb | 1.63 | 1.66 | 3.29 | 140.2 | 112.1 | 12607 | 1.73 | 1.51 | 3.24 | 140.2 | 112.1 | 12607 |
| | Mar | 1.72 | 1.57 | 3.29 | 140.2 | 122.4 | 14270 | 1.81 | 1.43 | 3.24 | 140.2 | 122.4 | 14270 |
| | Apr | 2.01 | 1.21 | 3.22 | 141.7 | 155.0 | 13938 | 2.01 | 1.11 | 3.12 | 141.7 | 155.0 | 13938 |

| | | Seattle Whole Milk | | | | | | Seattle 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Mn | Spread | FP | RP | LC | FC | Mn Prod | Spread | FP | RP | LC | FC | Mn Prod |
| | May | 1.92 | 1.30 | 3.22 | 141.7 | 145.8 | 14458 | 1.94 | 1.18 | 3.12 | 141.7 | 145.8 | 14458 |
| | Jun | 1.97 | 1.29 | 3.26 | 141.7 | 136.7 | 13633 | 2.07 | 1.12 | 3.19 | 141.7 | 136.7 | 13633 |
| | Jul | 1.93 | 1.29 | 3.22 | 143.0 | 142.7 | 13444 | 2.02 | 1.14 | 3.16 | 143.0 | 142.7 | 13444 |
| | Aug | 1.93 | 1.29 | 3.22 | 143.0 | 151.1 | 13357 | 2.01 | 1.15 | 3.16 | 143.0 | 151.1 | 13357 |
| | Sep | 1.98 | 1.34 | 3.32 | 143.0 | 145.4 | 12970 | 2.02 | 1.20 | 3.22 | 143.0 | 145.4 | 12970 |
| | Oct | 1.63 | 1.53 | 3.16 | 144.6 | 141.3 | 13412 | 1.67 | 1.41 | 3.08 | 144.6 | 141.3 | 13412 |
| | Nov | 1.91 | 1.57 | 3.48 | 144.6 | 139.2 | 13140 | 1.95 | 1.46 | 3.41 | 144.6 | 139.2 | 13140 |
| | Dec | 2.17 | 1.31 | 3.48 | 144.6 | 140.9 | 13854 | 2.20 | 1.21 | 3.41 | 144.6 | 140.9 | 13854 |
| **2000** | Jan | 2.21 | 1.27 | 3.48 | 146.4 | 139.9 | 14263 | 2.09 | 1.17 | 3.26 | 146.4 | 139.9 | 14263 |
| | Feb | 2.23 | 1.25 | 3.48 | 146.4 | 146.7 | 13606 | 2.10 | 1.16 | 3.26 | 146.4 | 146.7 | 13606 |
| | Mar | 2.22 | 1.26 | 3.48 | 146.4 | 172.5 | 14761 | 2.10 | 1.16 | 3.26 | 146.4 | 172.5 | 14761 |
| | Apr | 2.21 | 1.27 | 3.48 | 147.9 | 174.0 | 14390 | 2.09 | 1.17 | 3.26 | 147.9 | 174.0 | 14390 |
| | May | 2.32 | 1.16 | 3.48 | 147.9 | 166.0 | 14791 | 2.21 | 1.05 | 3.26 | 147.9 | 166.0 | 14791 |
| | Jun | 2.29 | 1.19 | 3.48 | 147.9 | 163.7 | 14008 | 2.26 | 1.06 | 3.32 | 147.9 | 163.7 | 14008 |
| | Jul | 2.21 | 1.25 | 3.46 | 149.3 | 171.3 | 14117 | 2.19 | 1.10 | 3.29 | 149.3 | 171.3 | 14117 |
| | Aug | 2.25 | 1.21 | 3.46 | 149.3 | 169.5 | 13798 | 2.31 | 1.08 | 3.39 | 149.3 | 169.5 | 13798 |
| | Sep | 2.29 | 1.20 | 3.49 | 149.3 | 181.1 | 13246 | 2.25 | 1.07 | 3.32 | 149.3 | 181.1 | 13246 |
| | Oct | 2.23 | 1.26 | 3.49 | 150.6 | 180.6 | 13708 | 2.29 | 1.13 | 3.42 | 150.6 | 180.6 | 13708 |
| | Nov | 2.32 | 1.20 | 3.52 | 150.6 | 176.8 | 13212 | 2.39 | 1.07 | 3.46 | 150.6 | 176.8 | 13212 |
| | Dec | 2.28 | 1.24 | 3.52 | 150.6 | 169.5 | 13758 | 2.36 | 1.10 | 3.46 | 150.6 | 169.5 | 13758 |
| **2001** | Jan | 2.19 | 1.37 | 3.56 | 152.3 | 161.4 | 13998 | 2.31 | 1.18 | 3.49 | 152.3 | 161.4 | 13998 |
| | Feb | 2.40 | 1.22 | 3.62 | 152.3 | 163.4 | 12894 | 2.46 | 1.10 | 3.56 | 152.3 | 163.4 | 12894 |
| | Mar | 2.40 | 1.26 | 3.66 | 152.3 | 167.4 | 14375 | 2.48 | 1.11 | 3.59 | 152.3 | 167.4 | 14375 |
| | Apr | 2.40 | 1.32 | 3.72 | 153.8 | 173.4 | 14078 | 2.49 | 1.15 | 3.64 | 153.8 | 173.4 | 14078 |
| | May | 2.44 | 1.38 | 3.82 | 153.8 | 184.5 | 14646 | 2.59 | 1.19 | 3.78 | 153.8 | 184.5 | 14646 |
| | Jun | 2.37 | 1.45 | 3.82 | 153.8 | 185.6 | 13957 | 2.36 | 1.23 | 3.59 | 153.8 | 185.6 | 13957 |
| | Jul | 2.39 | 1.47 | 3.86 | 155.4 | 173.2 | 13877 | 2.55 | 1.24 | 3.79 | 155.4 | 173.2 | 13877 |
| | Aug | 2.18 | 1.48 | 3.66 | 155.4 | 157.3 | 13564 | 2.31 | 1.25 | 3.56 | 155.4 | 157.3 | 13564 |
| | Sep | 2.40 | 1.49 | 3.89 | 155.4 | 169.1 | 13129 | 2.53 | 1.26 | 3.79 | 155.4 | 169.1 | 13129 |
| | Oct | 2.37 | 1.52 | 3.89 | 156.9 | 158.7 | 13611 | 2.53 | 1.26 | 3.79 | 156.9 | 158.7 | 13611 |
| | Nov | 2.40 | 1.52 | 3.92 | 156.9 | 141.3 | 13305 | 2.46 | 1.33 | 3.79 | 156.9 | 141.3 | 13305 |
| | Dec | 2.72 | 1.20 | 3.92 | 156.9 | 122.3 | 13902 | 2.74 | 1.05 | 3.79 | 156.9 | 122.3 | 13902 |
| **2002** | Jan | 2.72 | 1.20 | 3.92 | 158.2 | 123.0 | 14245 | 2.73 | 1.06 | 3.79 | 158.2 | 123.0 | 14245 |
| | Feb | 2.59 | 1.30 | 3.89 | 158.2 | 128.4 | 13190 | 2.62 | 1.14 | 3.76 | 158.2 | 128.4 | 13190 |
| | Mar | 2.75 | 1.17 | 3.92 | 158.2 | 143.2 | 14821 | 2.76 | 1.03 | 3.79 | 158.2 | 143.2 | 14821 |
| | Apr | 2.73 | 1.16 | 3.89 | 159.8 | 158.1 | 14564 | 2.80 | 1.02 | 3.82 | 159.8 | 158.1 | 14564 |
| | May | 2.52 | 1.14 | 3.66 | 159.8 | 156.0 | 15105 | 2.45 | 1.01 | 3.46 | 159.8 | 156.0 | 15105 |
| | Jun | 2.53 | 1.13 | 3.66 | 159.8 | 157.9 | 14285 | 2.45 | 1.01 | 3.46 | 159.8 | 157.9 | 14285 |
| | Jul | 2.53 | 1.09 | 3.62 | 161.1 | 159.4 | 14230 | 2.44 | 0.98 | 3.42 | 161.1 | 159.4 | 14230 |
| | Aug | 2.28 | 1.08 | 3.36 | 161.1 | 158.4 | 14154 | 2.22 | 0.97 | 3.19 | 161.1 | 158.4 | 14154 |
| | Sep | 2.58 | 1.08 | 3.66 | 161.1 | 157.1 | 13490 | 2.49 | 0.97 | 3.46 | 161.1 | 157.1 | 13490 |
| | Oct | 2.61 | 1.05 | 3.66 | 162.3 | 152.8 | 13935 | 2.51 | 0.95 | 3.46 | 162.3 | 152.8 | 13935 |

| | | St. Louis Whole Milk | | | | | | St. Louis 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Yr | Mn | Spread | FP | RP | LC | FC | Mn Prod | Spread | FP | RP | LC | FC | Mn Prod |
| 1994 | Jan | 0.87 | 1.42 | 2.29 | 121.2 | 96.6 | 12698 | 0.85 | 1.37 | 2.22 | 121.2 | 96.6 | 12698 |
| | Feb | 0.86 | 1.40 | 2.26 | 121.2 | 98.7 | 11645 | 0.81 | 1.35 | 2.16 | 121.2 | 98.7 | 11645 |
| | Mar | 0.86 | 1.40 | 2.26 | 121.2 | 98.6 | 13243 | 0.81 | 1.35 | 2.16 | 121.2 | 98.6 | 13243 |
| | Apr | 0.86 | 1.40 | 2.26 | 122.3 | 101.6 | 13104 | 0.84 | 1.35 | 2.19 | 122.3 | 101.6 | 13104 |
| | May | 1.00 | 1.39 | 2.39 | 122.3 | 103.9 | 13711 | 0.98 | 1.33 | 2.31 | 122.3 | 103.9 | 13711 |
| | Jun | 0.97 | 1.42 | 2.39 | 122.3 | 107.5 | 13072 | 0.95 | 1.36 | 2.31 | 122.3 | 107.5 | 13072 |
| | Jul | 1.09 | 1.27 | 2.36 | 123.3 | 110.6 | 13021 | 1.08 | 1.21 | 2.29 | 123.3 | 110.6 | 13021 |
| | Aug | 0.95 | 1.29 | 2.24 | 123.3 | 116.6 | 12828 | 0.94 | 1.22 | 2.16 | 123.3 | 116.6 | 12828 |
| | Sep | 0.93 | 1.31 | 2.24 | 123.3 | 113.5 | 12336 | 0.97 | 1.24 | 2.21 | 123.3 | 113.5 | 12336 |
| | Oct | 0.95 | 1.33 | 2.28 | 124.0 | 108.4 | 12747 | 0.90 | 1.27 | 2.17 | 124.0 | 108.4 | 12747 |
| | Nov | 0.97 | 1.36 | 2.33 | 124.0 | 107.9 | 12319 | 0.98 | 1.29 | 2.27 | 124.0 | 107.9 | 12319 |
| | Dec | 0.93 | 1.38 | 2.31 | 124.0 | 105.2 | 12878 | 0.94 | 1.32 | 2.26 | 124.0 | 105.2 | 12878 |
| 1995 | Jan | 1.06 | 1.27 | 2.33 | 124.9 | 106.1 | 13170 | 1.07 | 1.21 | 2.28 | 124.9 | 106.1 | 13170 |
| | Feb | 1.14 | 1.22 | 2.36 | 124.9 | 105.9 | 12126 | 1.15 | 1.16 | 2.31 | 124.9 | 105.9 | 12126 |
| | Mar | 1.11 | 1.22 | 2.33 | 124.9 | 106.7 | 13622 | 1.12 | 1.16 | 2.28 | 124.9 | 106.7 | 13622 |
| | Apr | 1.13 | 1.26 | 2.39 | 125.8 | 113.1 | 13330 | 1.12 | 1.19 | 2.31 | 125.8 | 113.1 | 13330 |
| | May | 1.15 | 1.27 | 2.42 | 125.8 | 119.7 | 13868 | 1.18 | 1.20 | 2.38 | 125.8 | 119.7 | 13868 |
| | Jun | 1.18 | 1.20 | 2.38 | 125.8 | 120.2 | 13267 | 1.19 | 1.13 | 2.32 | 125.8 | 120.2 | 13267 |
| | Jul | 1.20 | 1.20 | 2.40 | 126.5 | 114.3 | 13141 | 1.20 | 1.12 | 2.32 | 126.5 | 114.3 | 13141 |
| | Aug | 1.18 | 1.22 | 2.40 | 126.5 | 111.6 | 12751 | 1.18 | 1.14 | 2.32 | 126.5 | 111.6 | 12751 |
| | Sep | 1.16 | 1.22 | 2.38 | 126.5 | 111.2 | 12316 | 1.17 | 1.13 | 2.30 | 126.5 | 111.2 | 12316 |
| | Oct | 1.16 | 1.24 | 2.40 | 127.3 | 107.8 | 12674 | 1.08 | 1.14 | 2.22 | 127.3 | 107.8 | 12674 |
| | Nov | 1.15 | 1.29 | 2.44 | 127.3 | 105.8 | 12232 | 1.19 | 1.17 | 2.36 | 127.3 | 105.8 | 12232 |
| | Dec | 1.14 | 1.34 | 2.48 | 127.3 | 108.5 | 12795 | 1.12 | 1.28 | 2.40 | 127.3 | 108.5 | 12795 |
| 1996 | Jan | 1.17 | 1.36 | 2.53 | 128.3 | 111.0 | 13068 | 1.15 | 1.29 | 2.44 | 128.3 | 111.0 | 13068 |
| | Feb | 1.21 | 1.37 | 2.58 | 128.3 | 110.8 | 12411 | 1.18 | 1.31 | 2.49 | 128.3 | 110.8 | 12411 |
| | Mar | 1.23 | 1.35 | 2.58 | 128.3 | 117.0 | 13509 | 1.20 | 1.29 | 2.49 | 128.3 | 117.0 | 13509 |
| | Apr | 1.23 | 1.35 | 2.58 | 129.2 | 124.7 | 13211 | 1.20 | 1.29 | 2.49 | 129.2 | 124.7 | 13211 |
| | May | 1.22 | 1.36 | 2.58 | 129.2 | 126.9 | 13561 | 1.22 | 1.27 | 2.49 | 129.2 | 126.9 | 13561 |
| | Jun | 1.31 | 1.38 | 2.69 | 129.2 | 124.7 | 12815 | 1.31 | 1.23 | 2.54 | 129.2 | 124.7 | 12815 |
| | Jul | 1.29 | 1.43 | 2.72 | 130.1 | 122.1 | 12773 | 1.38 | 1.26 | 2.64 | 130.1 | 122.1 | 12773 |
| | Aug | 1.27 | 1.45 | 2.72 | 130.1 | 120.4 | 12594 | 1.36 | 1.28 | 2.64 | 130.1 | 120.4 | 12594 |
| | Sep | 1.27 | 1.51 | 2.78 | 130.1 | 121.9 | 12197 | 1.34 | 1.34 | 2.68 | 130.1 | 121.9 | 12197 |
| | Oct | 1.30 | 1.58 | 2.88 | 131.0 | 122.8 | 12684 | 1.34 | 1.44 | 2.78 | 131.0 | 122.8 | 12684 |
| | Nov | 1.31 | 1.63 | 2.94 | 131.0 | 128.0 | 12288 | 1.30 | 1.56 | 2.86 | 131.0 | 128.0 | 12288 |
| | Dec | 1.40 | 1.54 | 2.94 | 131.0 | 127.3 | 12895 | 1.39 | 1.47 | 2.86 | 131.0 | 127.3 | 12895 |
| 1997 | Jan | 1.55 | 1.36 | 2.91 | 131.9 | 126.5 | 13106 | 1.58 | 1.28 | 2.86 | 131.9 | 126.5 | 13106 |
| | Feb | 1.37 | 1.34 | 2.71 | 131.9 | 124.3 | 12104 | 1.43 | 1.23 | 2.66 | 131.9 | 124.3 | 12104 |
| | Mar | 1.36 | 1.36 | 2.72 | 131.9 | 120.0 | 13649 | 1.44 | 1.24 | 2.68 | 131.9 | 120.0 | 13649 |
| | Apr | 1.28 | 1.41 | 2.69 | 132.9 | 119.1 | 13379 | 1.35 | 1.31 | 2.66 | 132.9 | 119.1 | 13379 |
| | May | 1.28 | 1.41 | 2.69 | 132.9 | 121.7 | 13870 | 1.35 | 1.31 | 2.66 | 132.9 | 121.7 | 13870 |
| | Jun | 1.31 | 1.31 | 2.62 | 132.9 | 122.5 | 13325 | 1.43 | 1.19 | 2.62 | 132.9 | 122.5 | 13325 |
| | Jul | 1.37 | 1.25 | 2.62 | 133.9 | 119.9 | 13265 | 1.49 | 1.13 | 2.62 | 133.9 | 119.9 | 13265 |
| | Aug | 1.47 | 1.25 | 2.72 | 133.9 | 125.8 | 13000 | 1.48 | 1.14 | 2.62 | 133.9 | 125.8 | 13000 |
| | Sep | 1.44 | 1.25 | 2.69 | 133.9 | 123.2 | 12362 | 1.52 | 1.14 | 2.66 | 133.9 | 123.2 | 12362 |
| | Oct | 1.37 | 1.35 | 2.72 | 135.2 | 118.0 | 12768 | 1.50 | 1.19 | 2.69 | 135.2 | 118.0 | 12768 |
| | Nov | 1.42 | 1.41 | 2.83 | 135.2 | 115.9 | 12325 | 1.57 | 1.23 | 2.80 | 135.2 | 115.9 | 12325 |
| | Dec | 1.42 | 1.42 | 2.84 | 135.2 | 111.1 | 12938 | 1.52 | 1.29 | 2.81 | 135.2 | 111.1 | 12938 |
| 1998 | Jan | 1.46 | 1.42 | 2.88 | 136.2 | 105.8 | 13287 | 1.50 | 1.30 | 2.80 | 136.2 | 105.8 | 13287 |
| | Feb | 1.43 | 1.45 | 2.88 | 136.2 | 104.8 | 12188 | 1.54 | 1.30 | 2.84 | 136.2 | 104.8 | 12188 |
| | Mar | 1.47 | 1.45 | 2.92 | 136.2 | 104.1 | 13689 | 1.59 | 1.30 | 2.89 | 136.2 | 104.1 | 13689 |
| | Apr | 1.47 | 1.45 | 2.92 | 137.3 | 106.0 | 13515 | 1.59 | 1.30 | 2.89 | 137.3 | 106.0 | 13515 |
| | May | 1.53 | 1.39 | 2.92 | 137.3 | 110.1 | 14014 | 1.68 | 1.21 | 2.89 | 137.3 | 110.1 | 14014 |
| | Jun | 1.62 | 1.30 | 2.92 | 137.3 | 109.8 | 13292 | 1.82 | 1.07 | 2.89 | 137.3 | 109.8 | 13292 |
| | Jul | 1.59 | 1.20 | 2.79 | 138.7 | 109.4 | 13167 | 1.63 | 0.96 | 2.59 | 138.7 | 109.4 | 13167 |
| | Aug | 1.42 | 1.37 | 2.79 | 138.7 | 104.9 | 12941 | 1.49 | 1.10 | 2.59 | 138.7 | 104.9 | 12941 |
| | Sep | 1.27 | 1.49 | 2.76 | 138.7 | 103.4 | 12411 | 1.62 | 1.14 | 2.76 | 138.7 | 103.4 | 12411 |
| | Oct | 1.27 | 1.52 | 2.79 | 139.7 | 104.1 | 12961 | 1.53 | 1.23 | 2.76 | 139.7 | 104.1 | 12961 |
| | Nov | 1.27 | 1.55 | 2.82 | 139.7 | 100.1 | 12611 | 1.43 | 1.36 | 2.79 | 139.7 | 100.1 | 12611 |
| | Dec | 1.28 | 1.64 | 2.92 | 139.7 | 93.4 | 13365 | 1.32 | 1.50 | 2.82 | 139.7 | 93.4 | 13365 |
| 1999 | Jan | 1.45 | 1.71 | 3.16 | 140.2 | 94.2 | 13628 | 1.50 | 1.56 | 3.06 | 140.2 | 94.2 | 13628 |
| | Feb | 1.37 | 1.75 | 3.12 | 140.2 | 91.9 | 12607 | 1.46 | 1.60 | 3.06 | 140.2 | 91.9 | 12607 |
| | Mar | 1.46 | 1.66 | 3.12 | 140.2 | 100.2 | 14270 | 1.54 | 1.52 | 3.06 | 140.2 | 100.2 | 14270 |
| | Apr | 1.90 | 1.22 | 3.12 | 141.7 | 112.5 | 13938 | 1.94 | 1.12 | 3.06 | 141.7 | 112.5 | 13938 |

| | | St. Louis Whole Milk | | | | | | St. Louis 2% Milk | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Yr** | **Mn** | **Spread** | **FP** | **RP** | **LC** | **FC** | **Mn Prod** | **Spread** | **FP** | **RP** | **LC** | **FC** | **Mn Prod** |
| | May | 1.63 | 1.33 | 2.96 | 141.7 | 112.7 | 14458 | 1.68 | 1.21 | 2.89 | 141.7 | 112.7 | 14458 |
| | Jun | 1.66 | 1.30 | 2.96 | 141.7 | 112.4 | 13633 | 1.76 | 1.13 | 2.89 | 141.7 | 112.4 | 13633 |
| | Jul | 1.70 | 1.26 | 2.96 | 143.0 | 116.7 | 13444 | 1.77 | 1.12 | 2.89 | 143.0 | 116.7 | 13444 |
| | Aug | 1.69 | 1.27 | 2.96 | 143.0 | 122.0 | 13357 | 1.76 | 1.13 | 2.89 | 143.0 | 122.0 | 13357 |
| | Sep | 1.56 | 1.46 | 3.02 | 143.0 | 127.7 | 12970 | 1.69 | 1.33 | 3.02 | 143.0 | 127.7 | 12970 |
| | Oct | 1.55 | 1.66 | 3.21 | 144.6 | 124.0 | 13412 | 1.60 | 1.54 | 3.14 | 144.6 | 124.0 | 13412 |
| | Nov | 1.56 | 1.70 | 3.26 | 144.6 | 126.9 | 13140 | 1.62 | 1.58 | 3.20 | 144.6 | 126.9 | 13140 |
| | Dec | 1.97 | 1.29 | 3.26 | 144.6 | 128.7 | 13854 | 2.00 | 1.20 | 3.20 | 144.6 | 128.7 | 13854 |
| **2000** | Jan | 1.72 | 1.24 | 2.96 | 146.4 | 132.3 | 14263 | 1.75 | 1.14 | 2.89 | 146.4 | 132.3 | 14263 |
| | Feb | 1.77 | 1.22 | 2.99 | 146.4 | 143.7 | 13606 | 1.79 | 1.13 | 2.92 | 146.4 | 143.7 | 13606 |
| | Mar | 1.76 | 1.23 | 2.99 | 146.4 | 152.3 | 14761 | 1.78 | 1.14 | 2.92 | 146.4 | 152.3 | 14761 |
| | Apr | 1.75 | 1.24 | 2.99 | 147.9 | 143.3 | 14390 | 1.82 | 1.14 | 2.96 | 147.9 | 143.3 | 14390 |
| | May | 1.74 | 1.28 | 3.02 | 147.9 | 152.2 | 14791 | 1.79 | 1.17 | 2.96 | 147.9 | 152.2 | 14791 |
| | Jun | 1.69 | 1.30 | 2.99 | 147.9 | 180.7 | 14008 | 1.78 | 1.18 | 2.96 | 147.9 | 180.7 | 14008 |
| | Jul | 1.66 | 1.36 | 3.02 | 149.3 | 154.3 | 14117 | 1.74 | 1.22 | 2.96 | 149.3 | 154.3 | 14117 |
| | Aug | 1.70 | 1.32 | 3.02 | 149.3 | 142.1 | 13798 | 1.77 | 1.19 | 2.96 | 149.3 | 142.1 | 13798 |
| | Sep | 1.71 | 1.31 | 3.02 | 149.3 | 156.6 | 13246 | 1.77 | 1.19 | 2.96 | 149.3 | 156.6 | 13246 |
| | Oct | 1.74 | 1.32 | 3.06 | 150.6 | 153.6 | 13708 | 1.80 | 1.19 | 2.99 | 150.6 | 153.6 | 13708 |
| | Nov | 1.78 | 1.31 | 3.09 | 150.6 | 153.1 | 13212 | 1.83 | 1.19 | 3.02 | 150.6 | 153.1 | 13212 |
| | Dec | 1.75 | 1.34 | 3.09 | 150.6 | 143.3 | 13758 | 1.82 | 1.20 | 3.02 | 150.6 | 143.3 | 13758 |
| **2001** | Jan | 1.60 | 1.49 | 3.09 | 152.3 | 148.6 | 13998 | 1.72 | 1.30 | 3.02 | 152.3 | 148.6 | 13998 |
| | Feb | 1.70 | 1.32 | 3.02 | 152.3 | 146.7 | 12894 | 1.76 | 1.20 | 2.96 | 152.3 | 146.7 | 12894 |
| | Mar | 1.64 | 1.38 | 3.02 | 152.3 | 140.4 | 14375 | 1.73 | 1.23 | 2.96 | 152.3 | 140.4 | 14375 |
| | Apr | 1.62 | 1.44 | 3.06 | 153.8 | 161.1 | 14078 | 1.73 | 1.27 | 3.00 | 153.8 | 161.1 | 14078 |
| | May | 1.62 | 1.50 | 3.12 | 153.8 | 181.8 | 14646 | 1.75 | 1.31 | 3.06 | 153.8 | 181.8 | 14646 |
| | Jun | 1.59 | 1.57 | 3.16 | 153.8 | 161.9 | 13957 | 1.74 | 1.35 | 3.09 | 153.8 | 161.9 | 13957 |
| | Jul | 1.60 | 1.59 | 3.19 | 155.4 | 134.0 | 13877 | 1.76 | 1.36 | 3.12 | 155.4 | 134.0 | 13877 |
| | Aug | 1.60 | 1.60 | 3.20 | 155.4 | 150.2 | 13564 | 1.76 | 1.37 | 3.13 | 155.4 | 150.2 | 13564 |
| | Sep | 1.59 | 1.61 | 3.20 | 155.4 | 166.1 | 13129 | 1.78 | 1.38 | 3.16 | 155.4 | 166.1 | 13129 |
| | Oct | 1.59 | 1.64 | 3.23 | 156.9 | 128.1 | 13611 | 1.78 | 1.38 | 3.16 | 156.9 | 128.1 | 13611 |
| | Nov | 1.62 | 1.64 | 3.26 | 156.9 | 116.0 | 13305 | 1.78 | 1.45 | 3.23 | 156.9 | 116.0 | 13305 |
| | Dec | 1.88 | 1.32 | 3.20 | 156.9 | 111.9 | 13902 | 1.98 | 1.18 | 3.16 | 156.9 | 111.9 | 13902 |
| **2002** | Jan | 1.90 | 1.28 | 3.18 | 158.2 | 112.9 | 14245 | 2.00 | 1.14 | 3.14 | 158.2 | 112.9 | 14245 |
| | Feb | 1.90 | 1.28 | 3.18 | 158.2 | 112.6 | 13190 | 1.98 | 1.13 | 3.11 | 158.2 | 112.6 | 13190 |
| | Mar | 1.74 | 1.25 | 2.99 | 158.2 | 128.9 | 14821 | 1.91 | 1.11 | 3.02 | 158.2 | 128.9 | 14821 |
| | Apr | 1.74 | 1.24 | 2.98 | 159.8 | 141.2 | 14564 | 1.81 | 1.10 | 2.91 | 159.8 | 141.2 | 14564 |
| | May | 1.79 | 1.22 | 3.01 | 159.8 | 141.0 | 15105 | 1.85 | 1.09 | 2.94 | 159.8 | 141.0 | 15105 |
| | Jun | 1.80 | 1.21 | 3.01 | 159.8 | 140.2 | 14285 | 1.85 | 1.09 | 2.94 | 159.8 | 140.2 | 14285 |
| | Jul | 1.84 | 1.17 | 3.01 | 161.1 | 143.2 | 14230 | 1.88 | 1.06 | 2.94 | 161.1 | 143.2 | 14230 |
| | Aug | 1.85 | 1.16 | 3.01 | 161.1 | 140.9 | 14154 | 1.89 | 1.05 | 2.94 | 161.1 | 140.9 | 14154 |
| | Sep | 1.82 | 1.16 | 2.98 | 161.1 | 141.8 | 13490 | 1.86 | 1.05 | 2.91 | 161.1 | 141.8 | 13490 |
| | Oct | 1.81 | 1.13 | 2.94 | 162.3 | 150.6 | 13935 | 1.85 | 1.03 | 2.88 | 162.3 | 150.6 | 13935 |

# VITA

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