

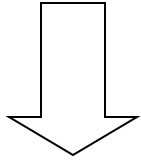
# **Livestock Gross Margin (LGM) for Dairy**

**Bruce A. Babcock  
Iowa State University**

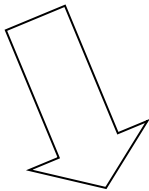
# What is LGM Dairy?

- Newly approved, federally reinsured, dairy insurance program run through the U.S. crop insurance program
- Provides protection against unexpected declines in gross margin (market value of milk minus feed costs) on target quantity of marketed milk
- Uses adjusted futures prices to determine the expected gross margin and the actual gross margin.
- Adjustments to futures prices are state-and- month-specific basis levels

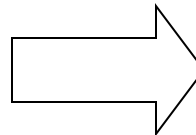
**Expected Prices  
Determined**



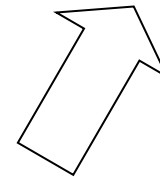
**Producer Inputs  
Target Marketings**



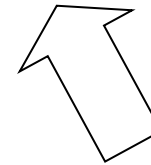
**Gross Margin  
Guarantee**



**Actual Prices  
Determined**



**Actual Gross  
Margin  
Calculated**



**Gross Margin Guarantee  
Minus  
Actual Gross Margin  
=  
Indemnity**

# How LGM Works

# Causes of Loss Covered

- LGM for Dairy covers the difference between the gross margin guarantee and the actual gross margin.
- LGM for Dairy does not insure against death loss or any other cause of production loss or damage to the producer's dairy cattle.

# Eligible States

**Any producer who milks cows in the states of:**

- Colorado
- Illinois
- Indiana
- Iowa
- Kansas
- Michigan
- Minnesota
- Missouri
- Montana
- Nebraska
- Nevada
- North Dakota
- Ohio
- Oklahoma
- South Dakota
- Texas
- Utah
- West Virginia
- Wisconsin
- Wyoming

# New Eligible States

**Any producer who milks cows in the states of:**

- Connecticut
- Delaware
- Maine
- Maryland
- Massachusetts
- New Hampshire
- New Jersey
- New York
- Pennsylvania
- Rhode Island
- Vermont
- Arizona

# What LGM is Not

- LGM does not protect milk producers against multiple year declines in milk prices or increased feed costs
- LGM does not protect milk producers against anticipated declines in milk prices or increased feed costs

# Dairy Gross Margin

- Projected Margin = Projected All Milk Price minus Projected Feed Costs
- Projected All Milk Price = CME Futures Price (Class III milk contract) plus State Milk Basis
- Projected Feed Costs = Amount of corn \* (CBOT Corn Price plus State Corn Basis) + Amount of soybean meal \* CBOT Soymeal Price



# Sales Period

- LGM for Dairy will be sold on the third to last business day of each month. The sales period begins as soon as the Risk Management Agency (RMA) validates the data submitted by the developer after the close of markets on the last day of the price discovery period.
- The sales period ends at 9:00 AM the following day.

# Insurance Period

- There are twelve insurance periods in each calendar year. Each insurance period runs for 11 months.
- For the first month of any insurance period, no milk can be insured.
- Coverage begins one full calendar month following the sales closing date,
  - For example, the insurance period for the January 29 sales closing date contains the months of February (milk not insurable), March, April, May, June, July, August, September, October, November, and December.

# Advantages of the LGM policy

- Two advantages over traditional options:
  - Convenience
    - Producers can sign up for LGM twelve (12) times per year and insure all of the milk they expect to market over a rolling 11-month insurance period.
  - Customization
    - The LGM policy can be tailored to any size farm.
    - Options cover fixed amounts of commodities and those amounts may be too large to be used in the risk management portfolio of some farms.
    - The producer does not have to decide on the mix of options to purchase, the strike price of the options, or the date of entry.

# Approved Target Marketings

- The Producer's Approved Target Marketings are the maximum amount of milk that may be stated as Target Marketings on the application.
- Approved Target Marketings are certified by the producer and are subject to inspection by the insurance company.
- A producer's Approved Target Marketings will be the lesser of the capacity of the producer's dairy operation for the 11-month insurance period as determined by the insurance provider and the underwriting capacity limit as stated in the special provisions.

# Target Marketings

- Target marketings for any month of an insurance period cannot be greater than the approved target marketings for that insurance period.
- Your target marketings are due at the time of application in the initial insurance period and your target Marketings Report is due by the sales closing date in subsequent insurance periods.

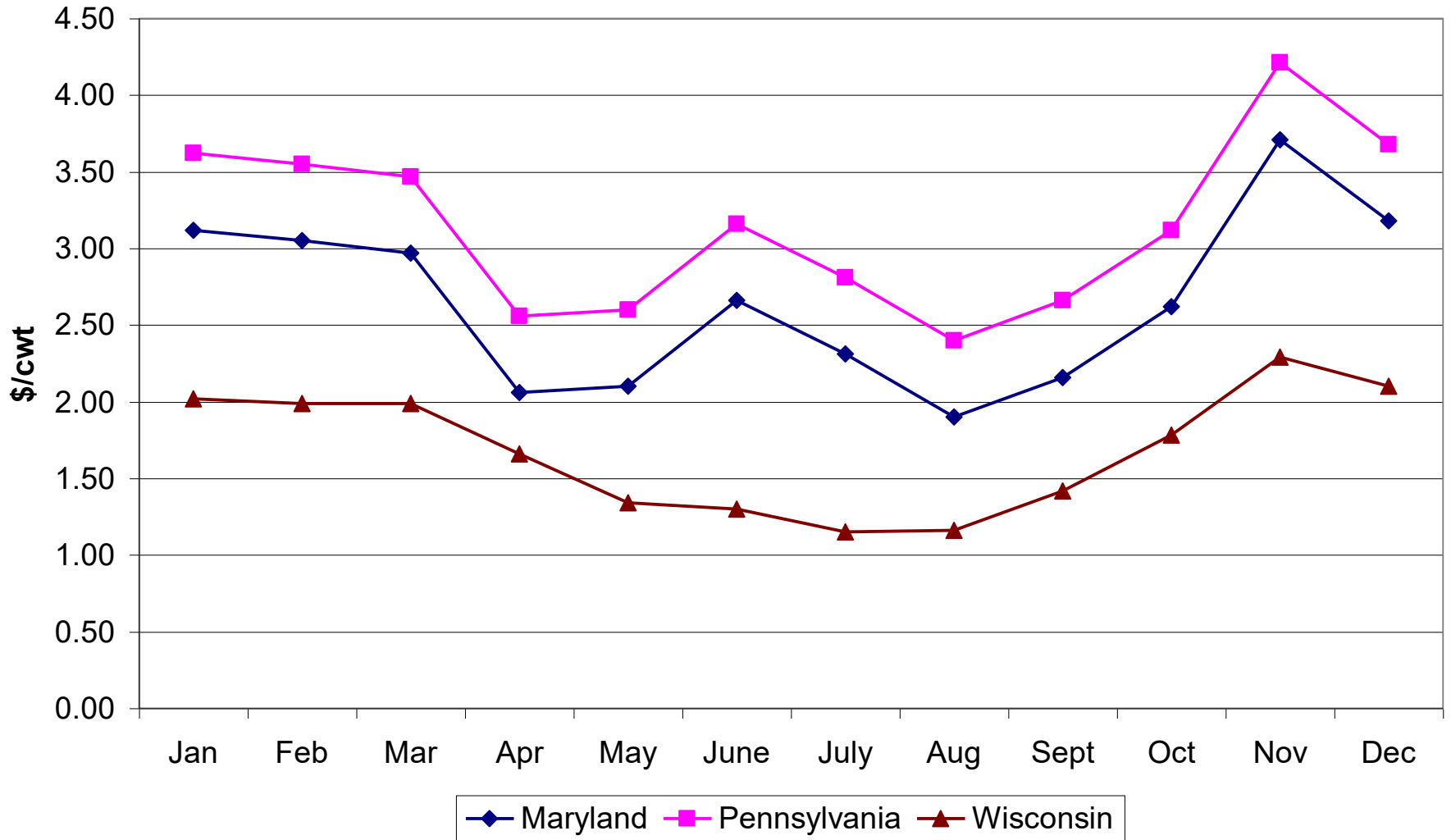
# Target Marketings

- No indemnity will be owed, but producer will still be responsible for any premiums owed, if the producer's marketing report:
  - Is not supported by written, verifiable records in accordance with the definition of marketing report; or
  - Fails to accurately report actual marketings or other material information.

# Expected Milk Price

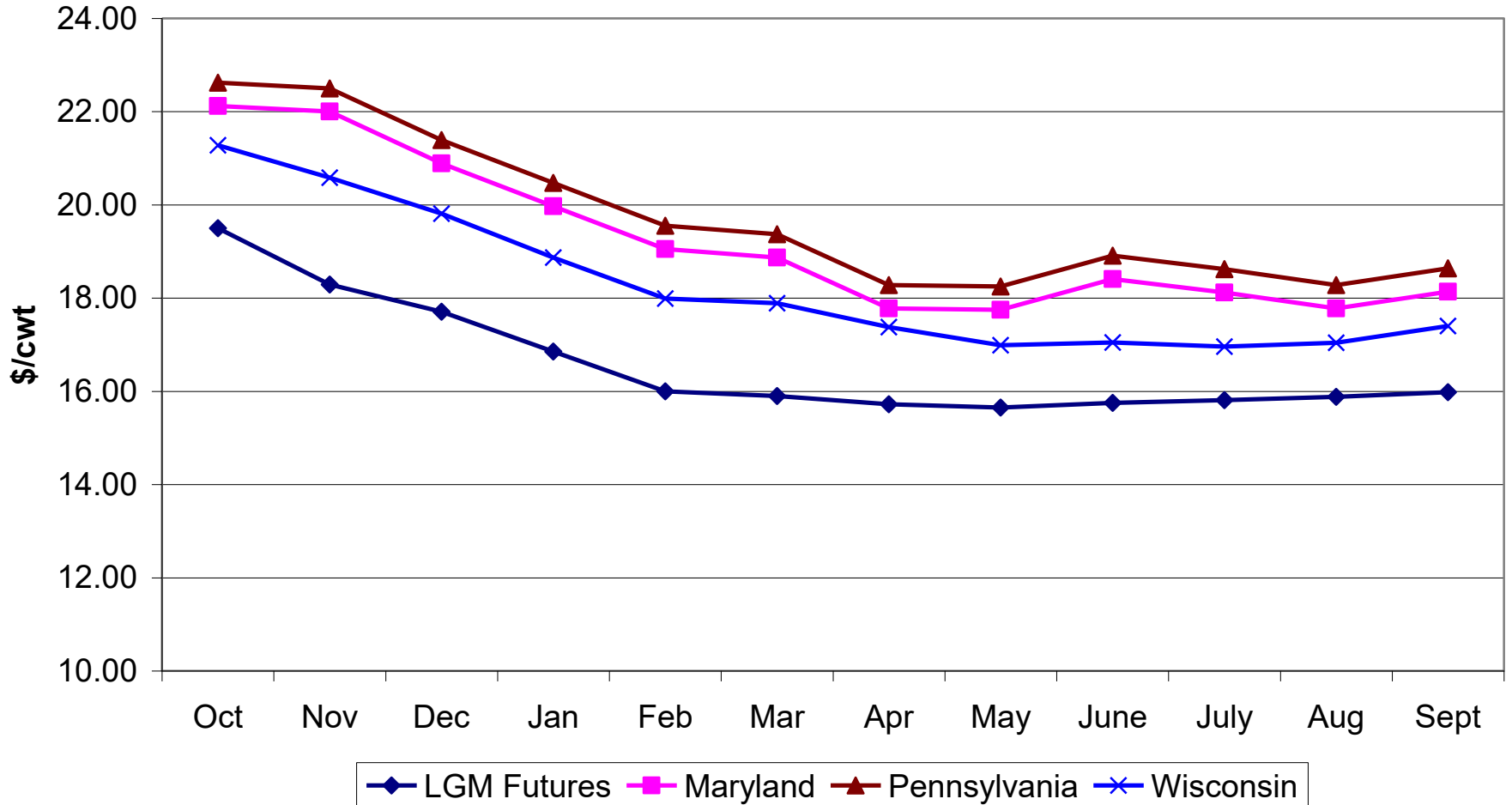
- Expected Milk Price for any month is the simple average of the CME Class III milk contract final daily settlement price during the price discovery period plus a basis that varies by state and month
  - Price discovery period includes the three days before the day with the 9:00 AM sales closing time.

# LGM Milk Basis





# LGM Projected Milk Prices (Using CME Futures Prices on Sept 14)



# Expected Corn Price

- Expected corn prices for months are determined using three-day average settlement prices on CBOT corn futures contracts and a basis adjustment that varies by month and state.
- For example, for a sales closing date of February 26, the expected corn price for July in Maryland equals the simple average of the daily settlement prices on the CBOT July corn futures contract over the period Feb 24-26 plus the Maryland corn basis for July (+ \$0.44 per bushel).

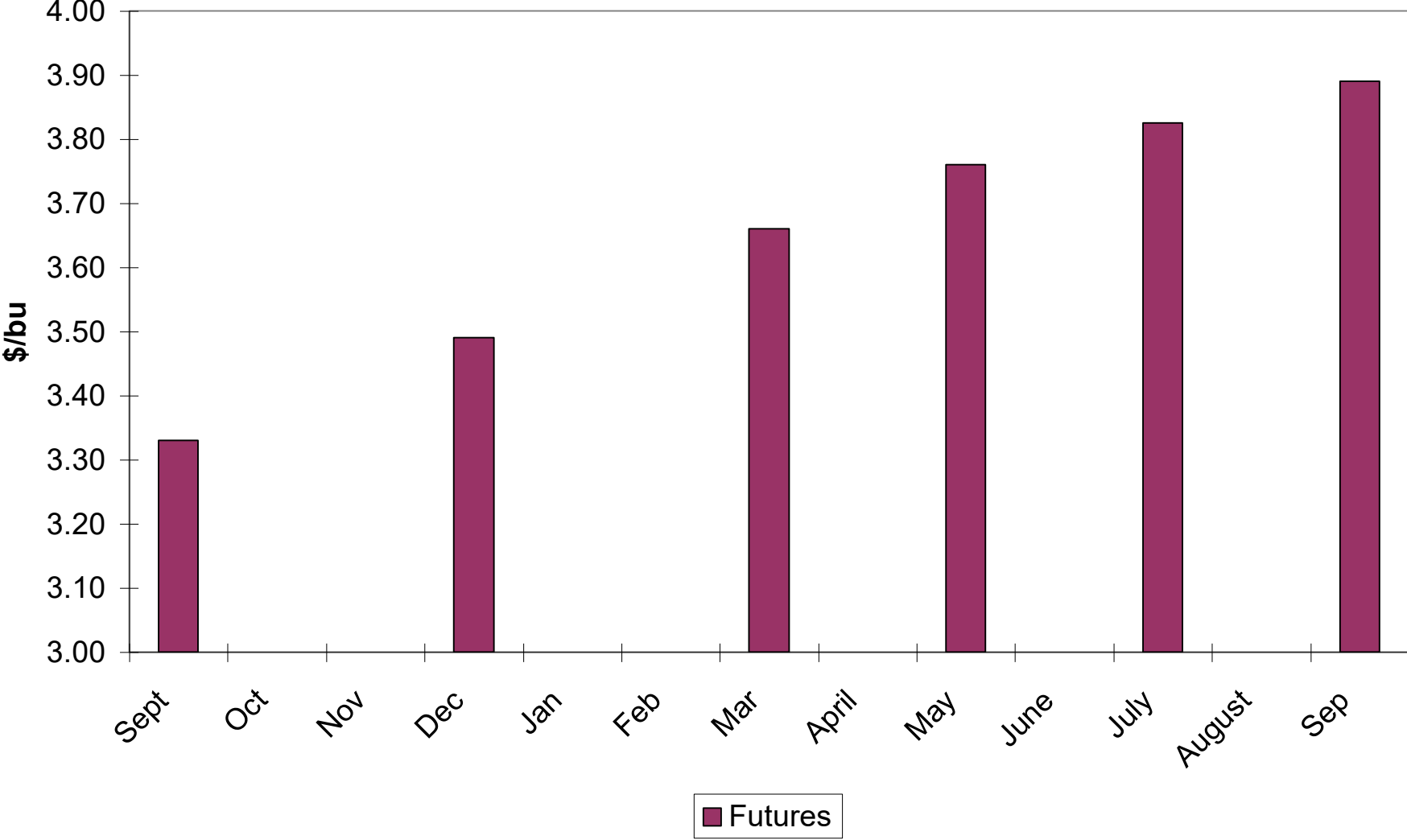
# Expected Corn Price

- For corn months with a futures contract, use the month's futures prices
- For corn months without a futures contract, the futures prices used to calculate the expected corn price are the weighted average of the futures prices used in calculating the expected corn prices for the two surrounding months that have futures contract plus the state-specific basis for the month.

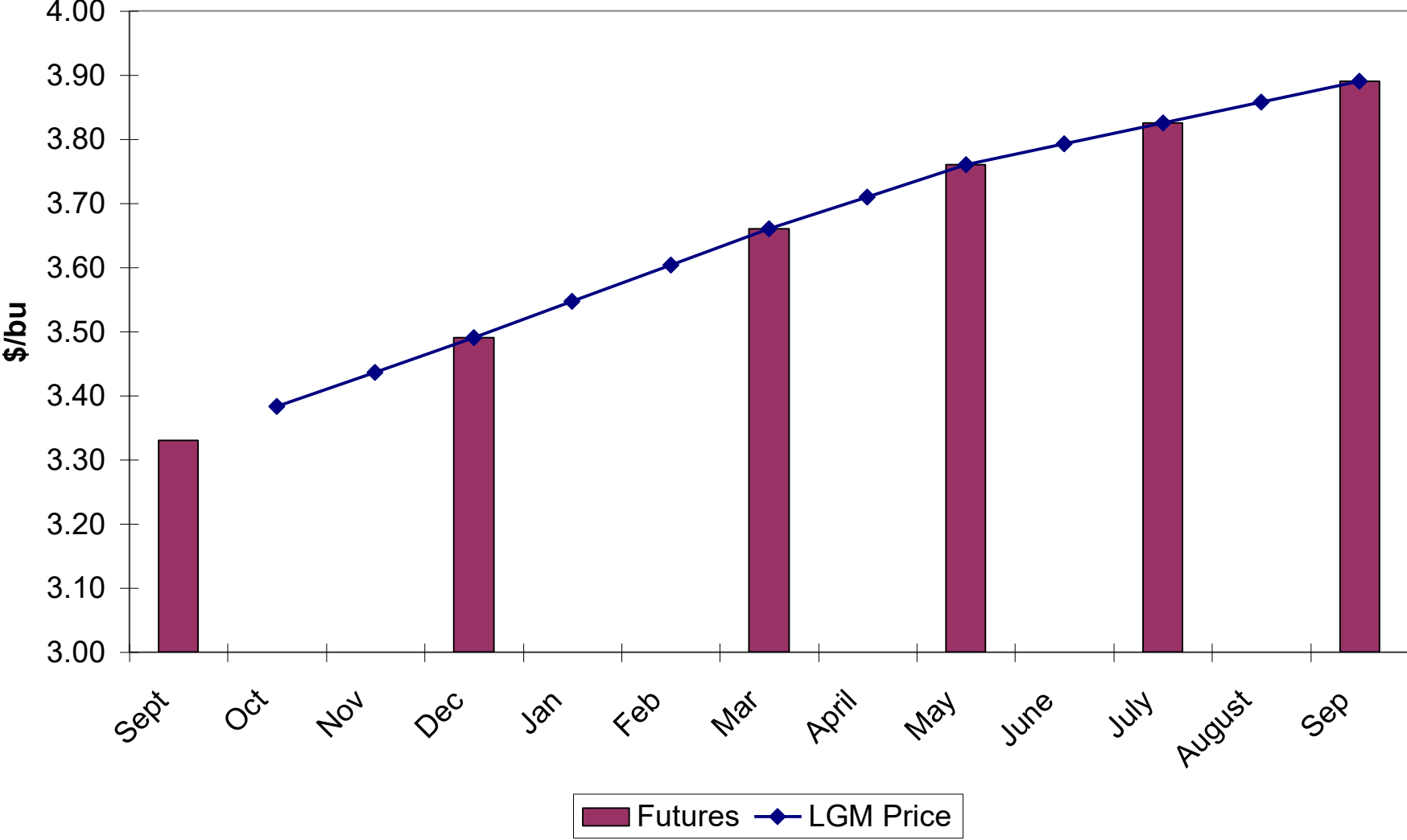
# Expected Corn Price

- The weights are based on the time difference between the corn month and the contract months.
  - For example, for the March 31st sales closing date, the expected corn price for April in Kansas equals one-half times the simple average of the daily settlement prices on the CBOT March corn futures contract over the last three trading days prior to sales closing plus one-half times the simple average of the daily settlement prices on the CBOT May corn futures contract for the last three trading days in March plus the April Kansas corn basis.
- See the LGM for Dairy commodity exchange endorsement for additional detail on exchange prices. Prices will be released by RMA after the markets close on the last day of the price discovery period.

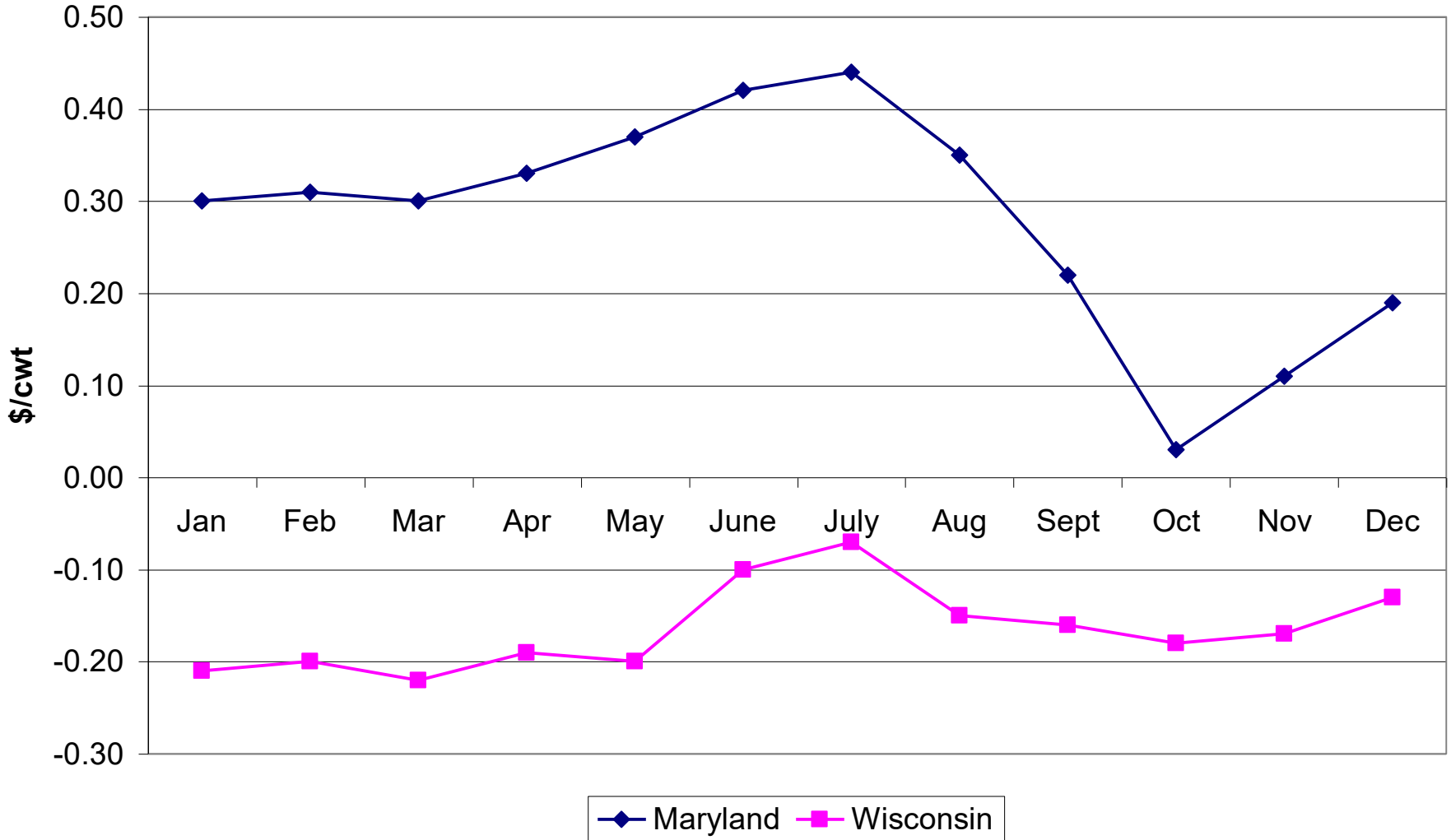
# Converting Corn Futures Prices to LGM Corn Prices



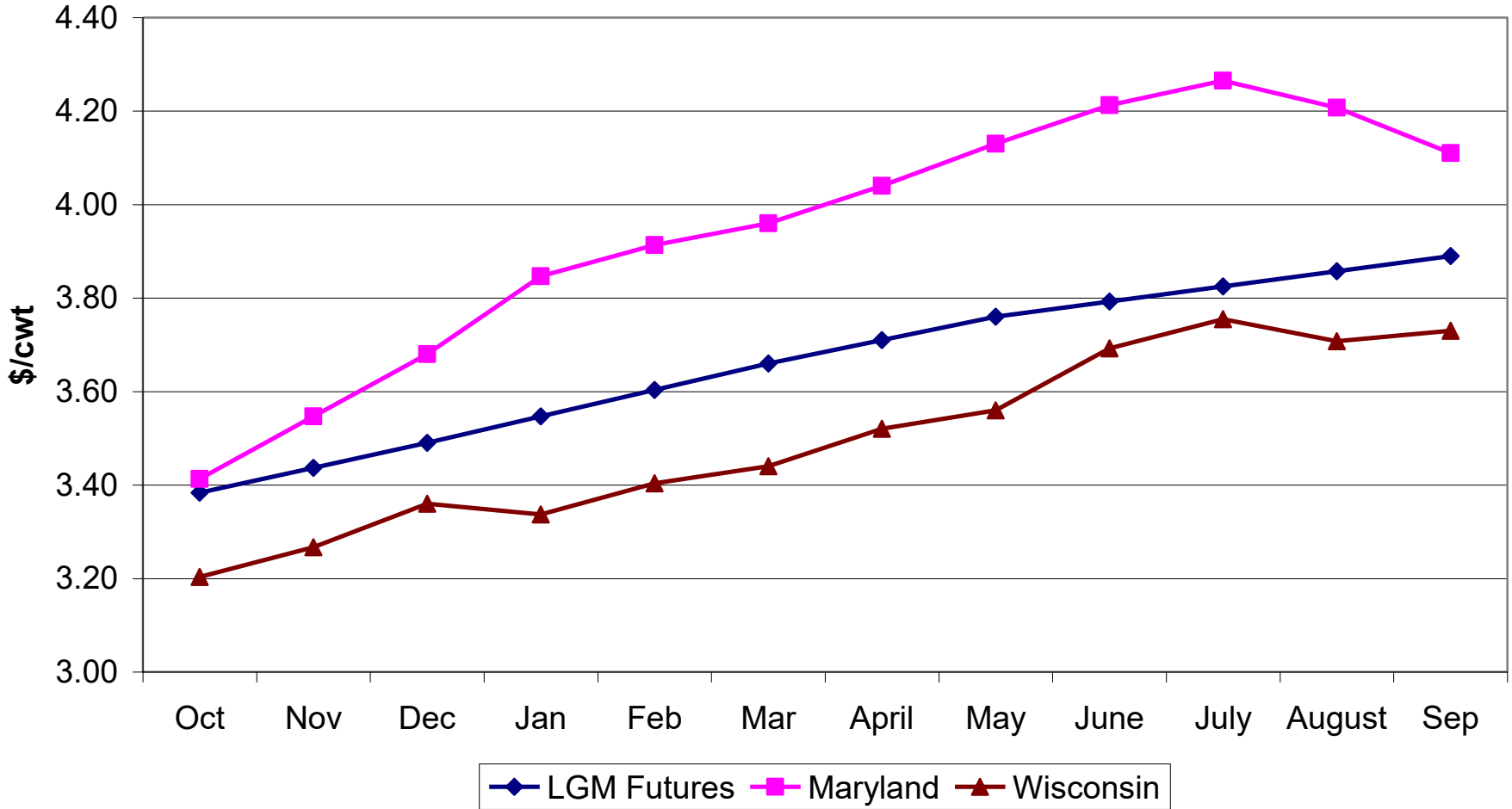
# Converting Corn Futures Prices to LGM Corn Prices



# LGM Corn Price Basis



# LGM Projected Corn Prices (Using CBOT Futures Prices on Sept 14)





# Expected Soybean Meal Price

- No basis adjustments for soybean meal prices

# Expected Cost of Feed

- Must convert tons of feedstock used for energy into tons of corn equivalent and tons of tons of feedstock used for protein into tons of soybean meal equivalent

## Suggested Conversion Rates for Dairy Feeds

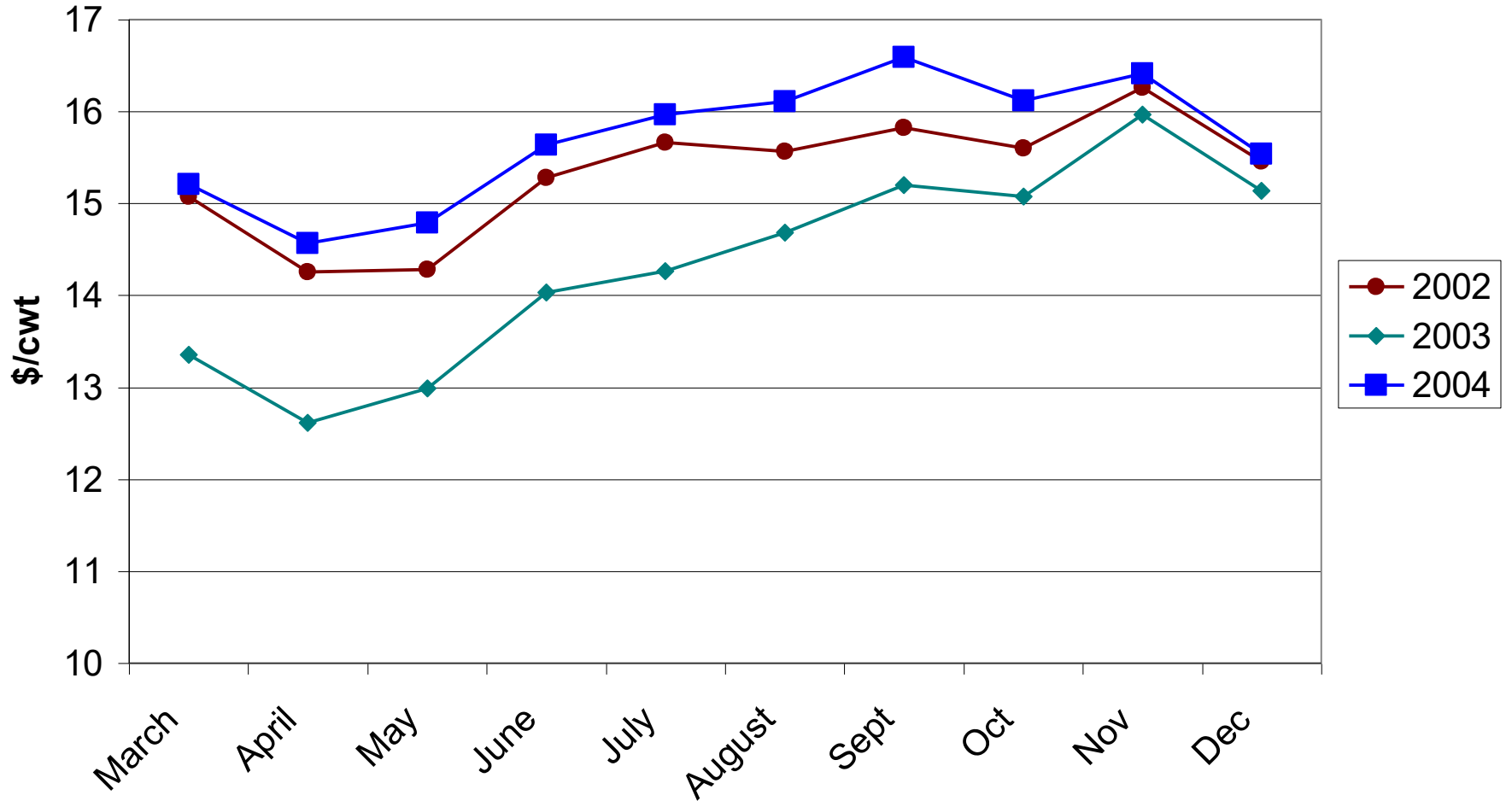
Based on Protein and Energy Content, Per Ton

Example: 1 Ton of Barley is equivalent to 0.111 Tons of Soybean Meal and 0.866 Ton

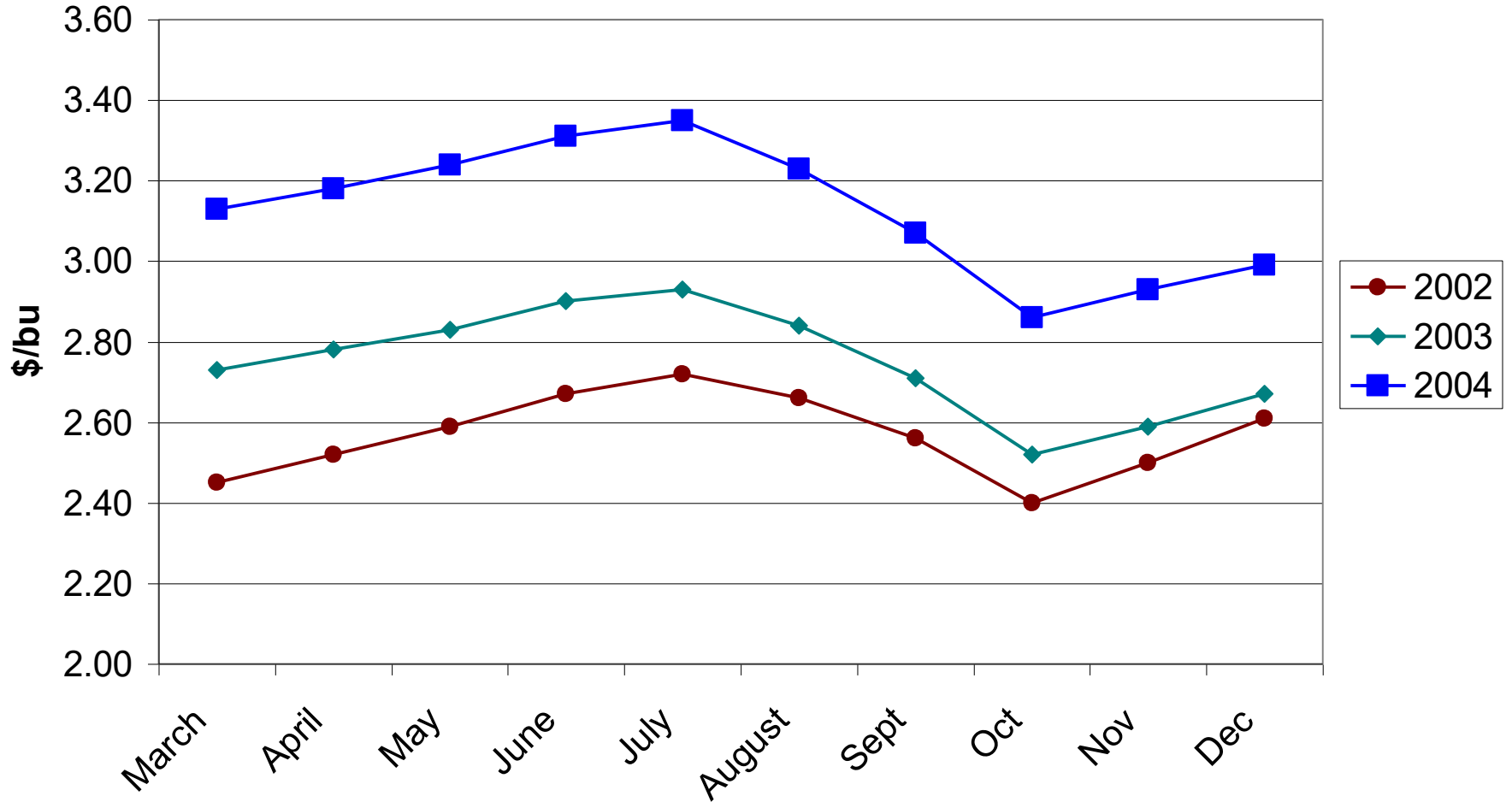
	Soybean Meal Ratio	Corn Ratio
Barley	0.111	0.866
Blood meal	2.025	-1.235
Brewer's grain, dry	0.433	0.357
Brewer's grain, wet (21% DM)	0.099	0.081
Brewer's grain, wet (40% DM)	0.188	0.155
Corn, shelled	0.000	1.000
Corn and cob meal (ear corn)	-0.007	0.985
Corn gluten meal, dry	1.408	-0.420
Corn gluten feed, dry	0.304	0.597
Whole cottonseed	0.323	0.850
Cottonseed meal (41% CP)	0.905	0.036
Cottonseed meal (36% CP)	0.867	0.015
Distiller's grain with solubles, dried (92% DM)	0.394	0.686
Distiller's grain with solubles, wet (60% DM)	0.257	0.447

# An Historical Example

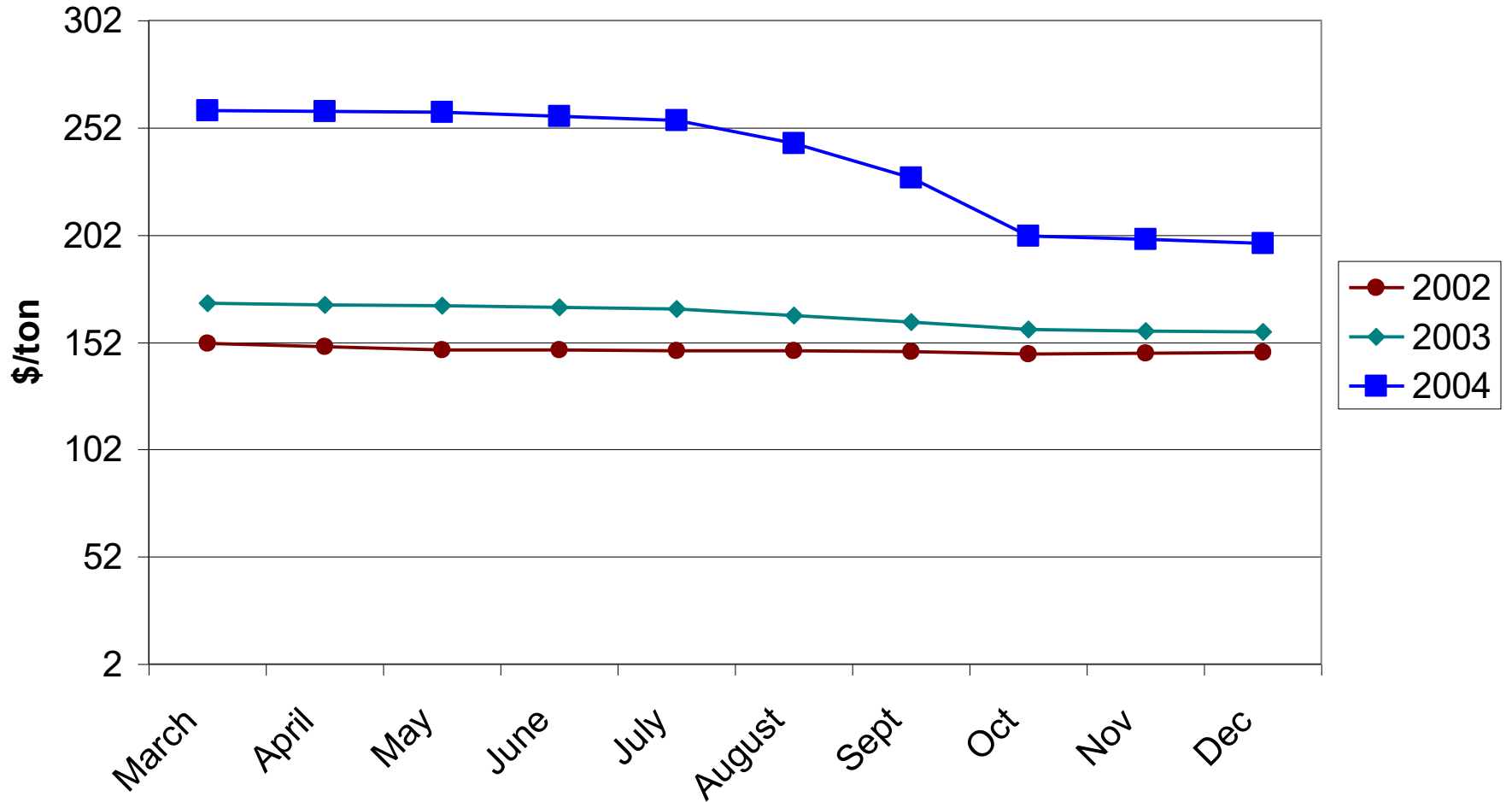
## Projected LGM All-Milk Prices for January Sales Date



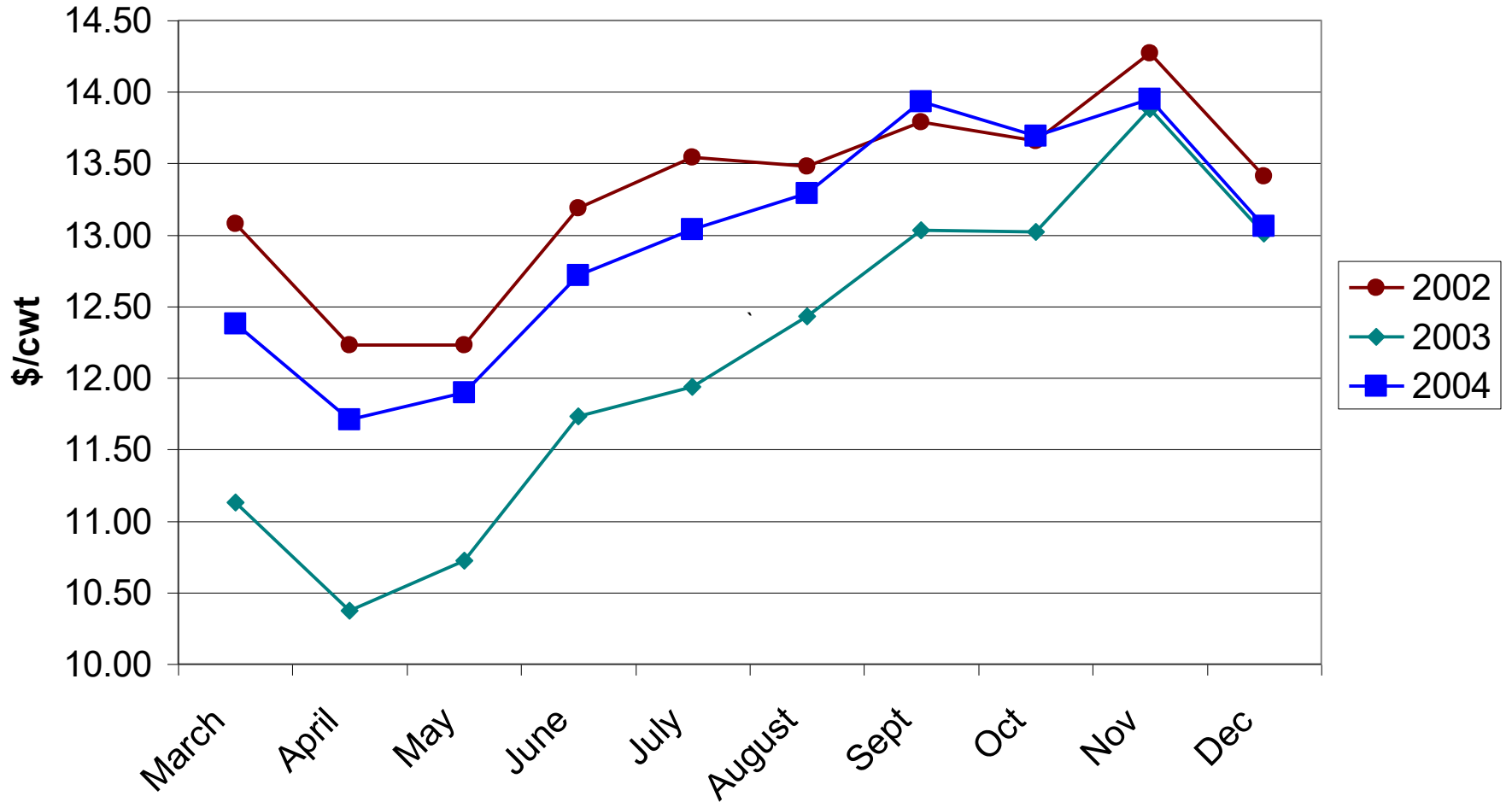
# Projected LGM Corn Prices for January Sales Date



# Projected LGM Soymeal Prices for January Sales Date

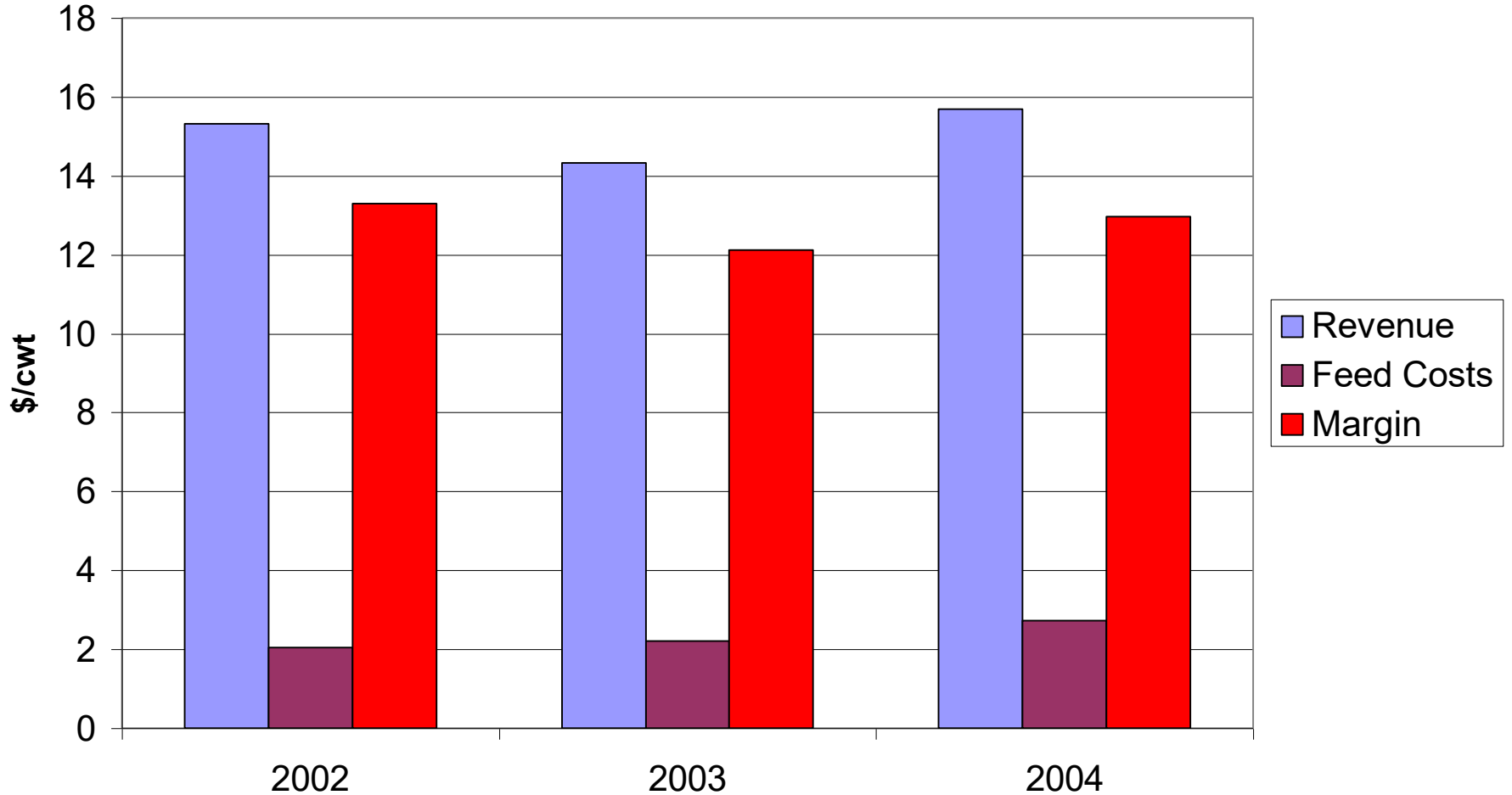


# Projected LGM Margin for January Sales Date

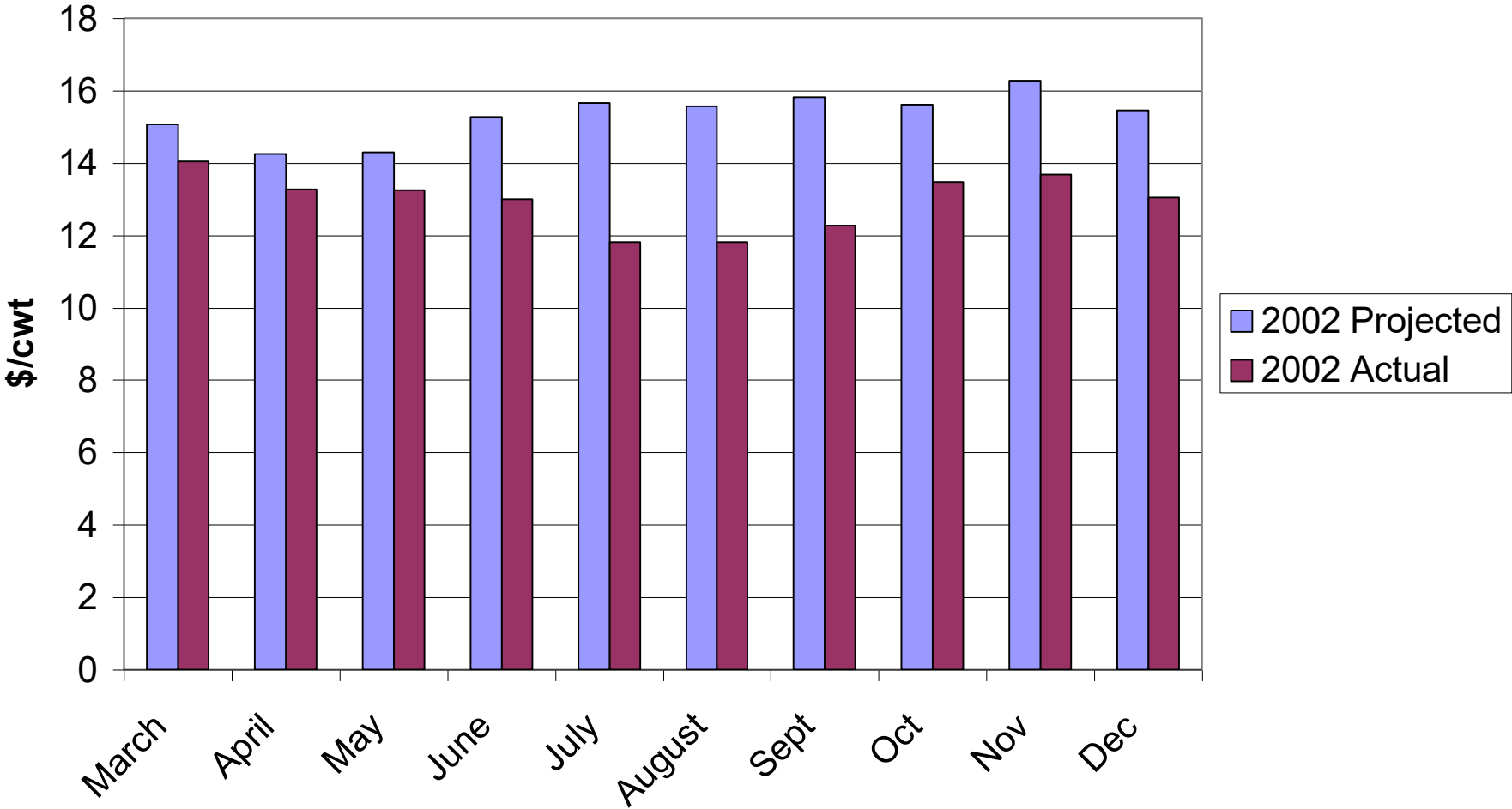




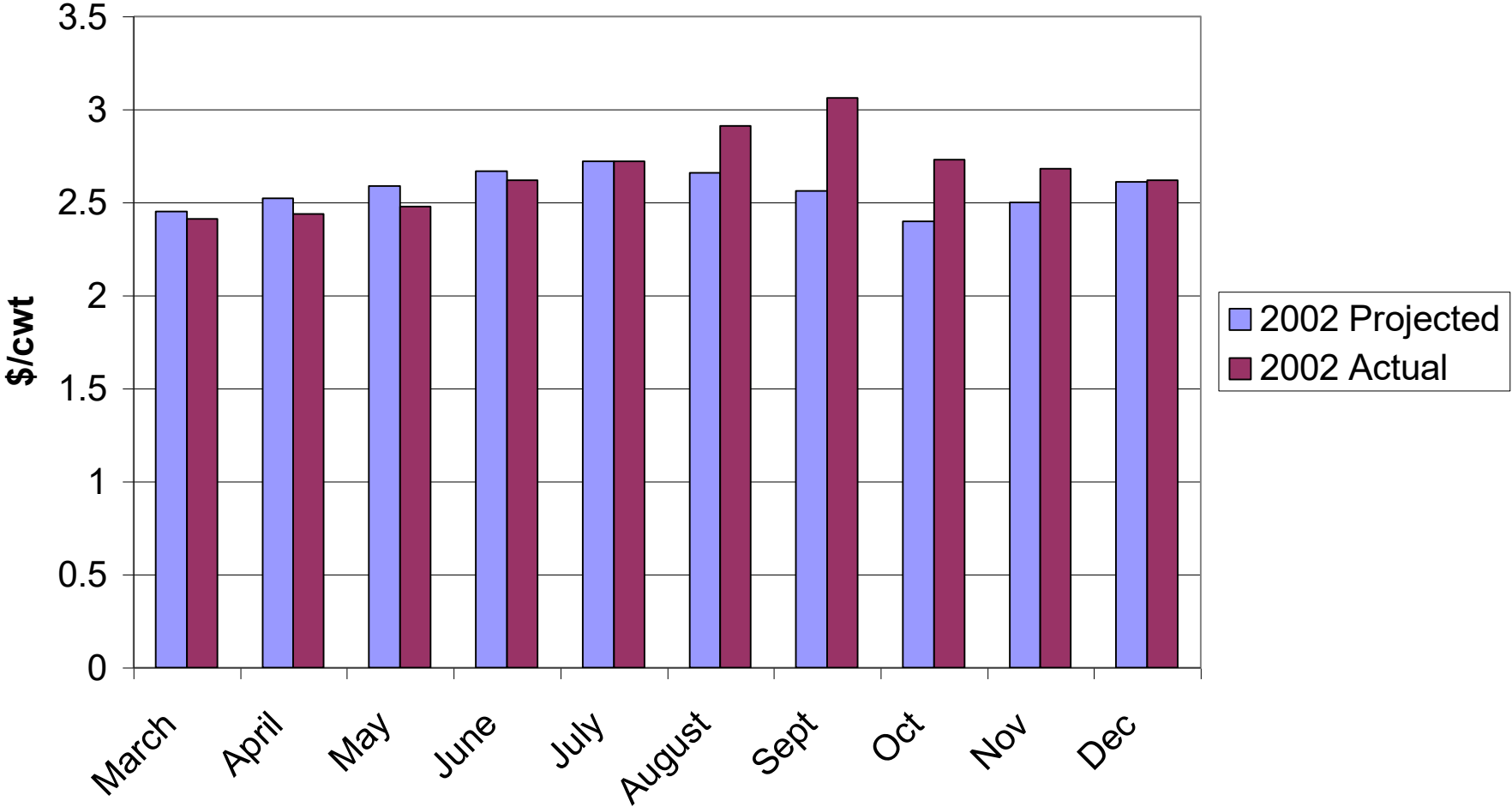
# Average Projected Revenue, Feed Costs, and Margin



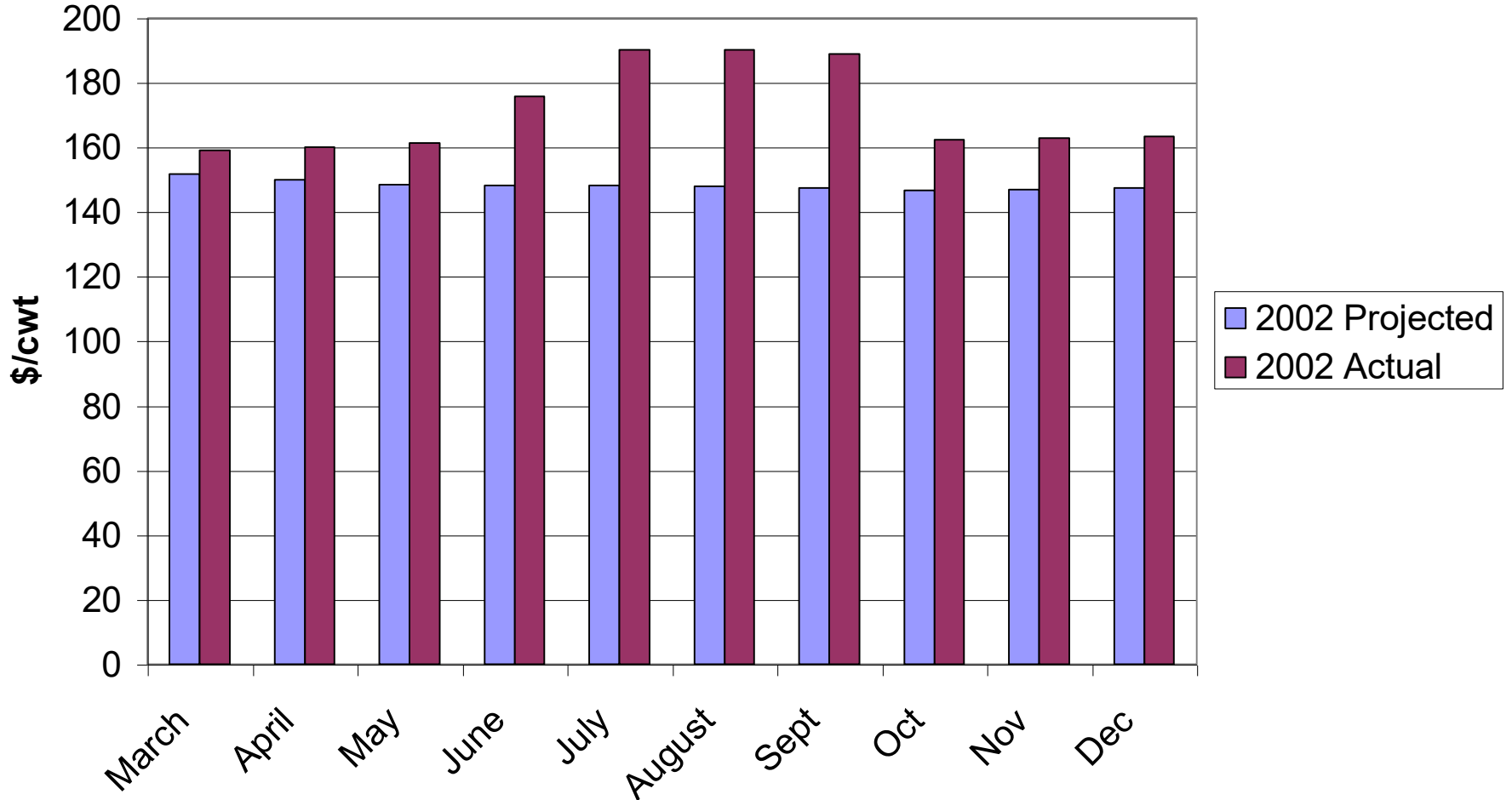
# Comparison of Projected and Actual Milk Prices in 2002



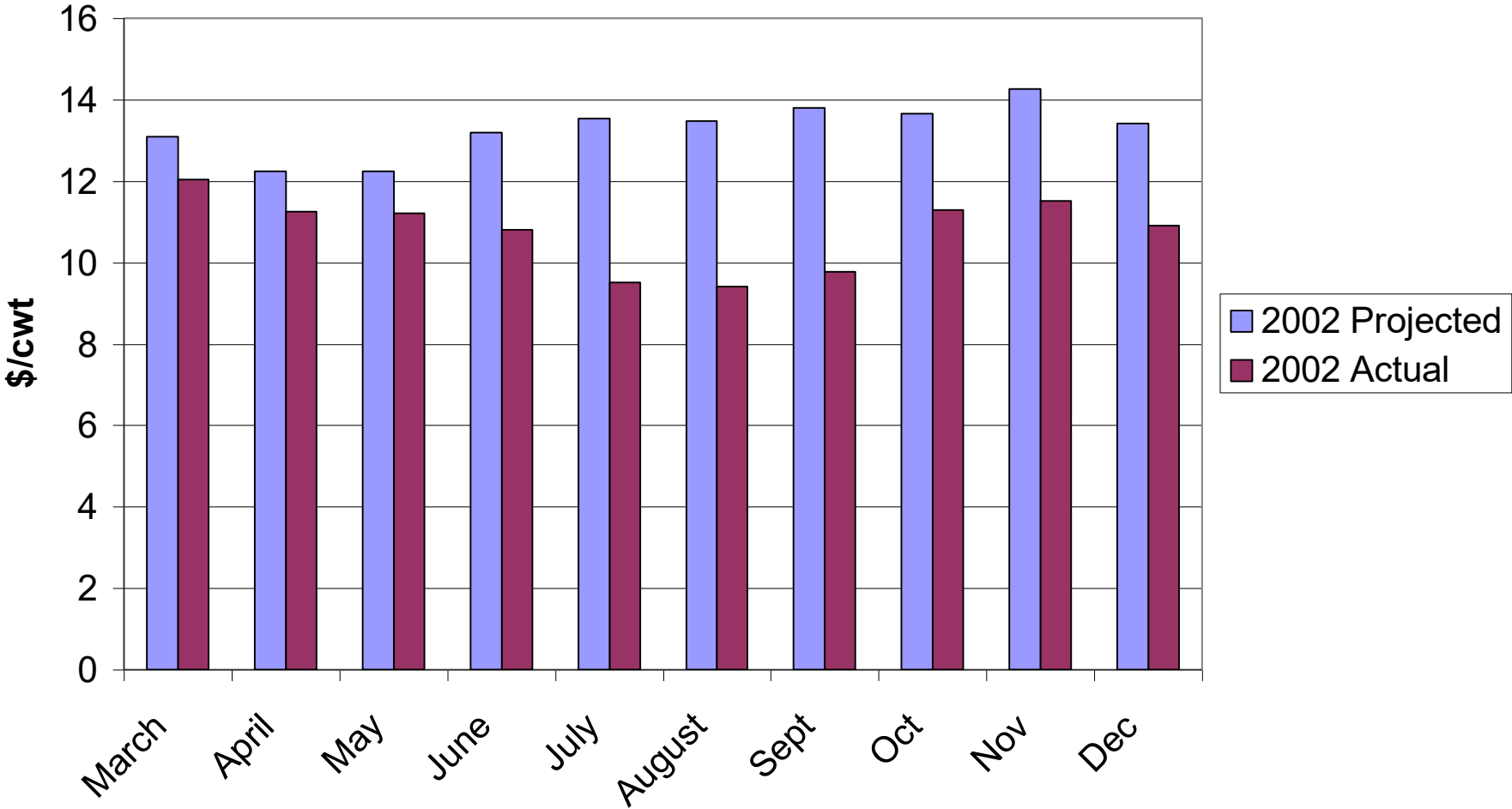
# Comparison of Projected and Actual Corn Prices in 2002



# Comparison of Projected and Actual Soymeal Prices in 2002



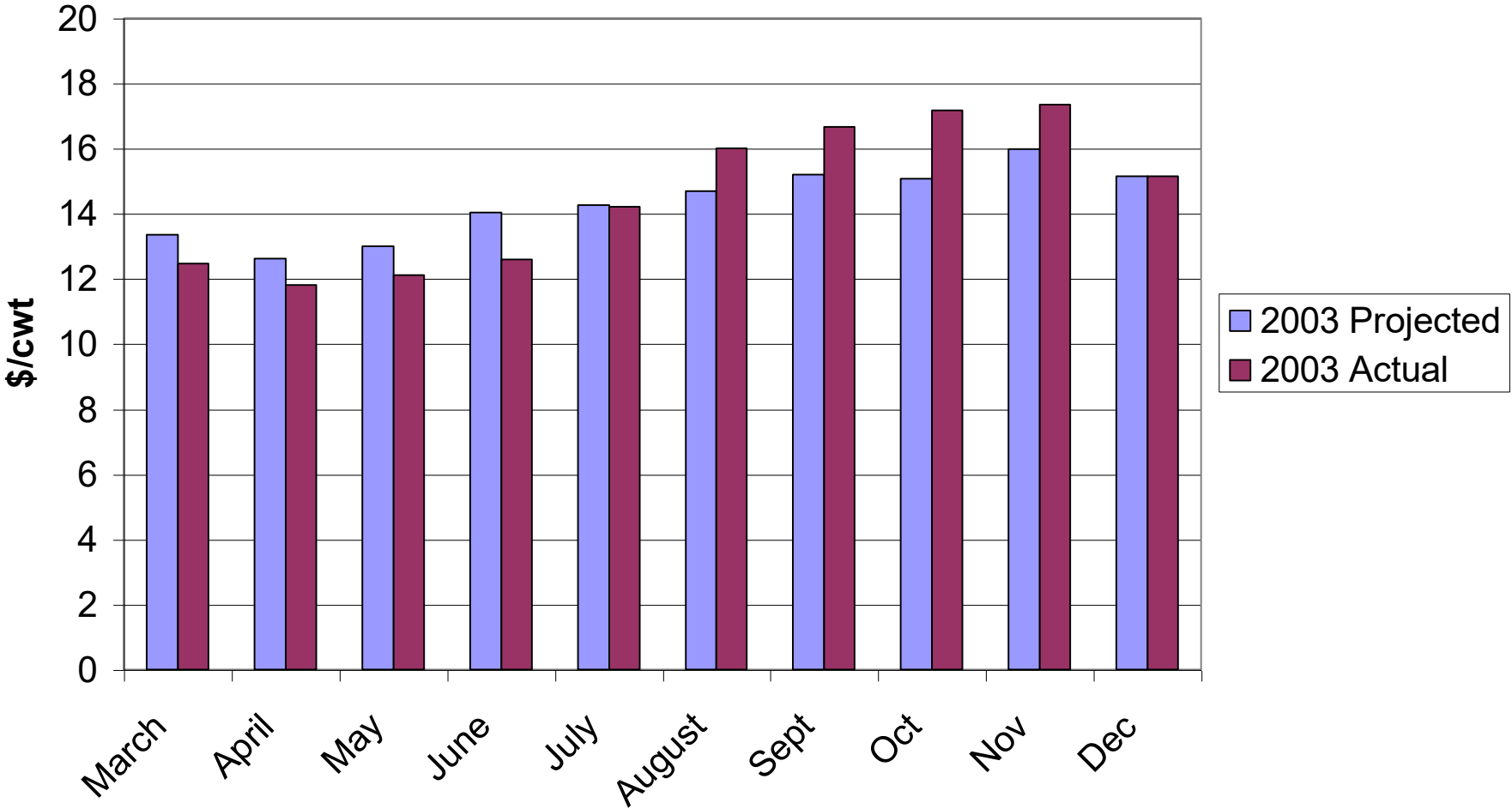
# Comparison of Projected and Actual Margin in 2002



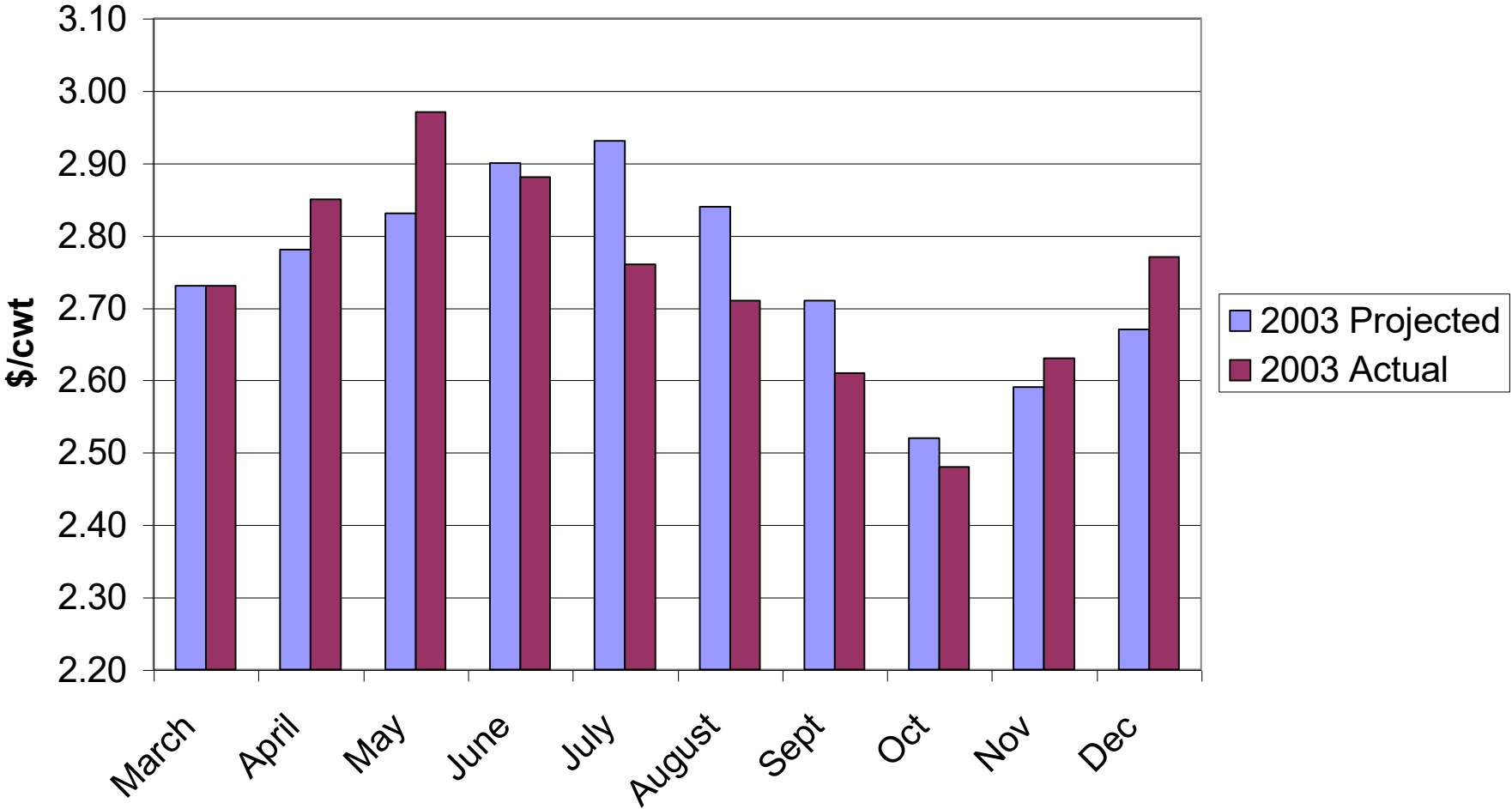
# Indemnity in 2002

- LGM would have paid out \$2.52 per insured hundredweight of milk if milk had been insured each month of the sales period

# Comparison of Projected and Actual Milk Prices in 2003

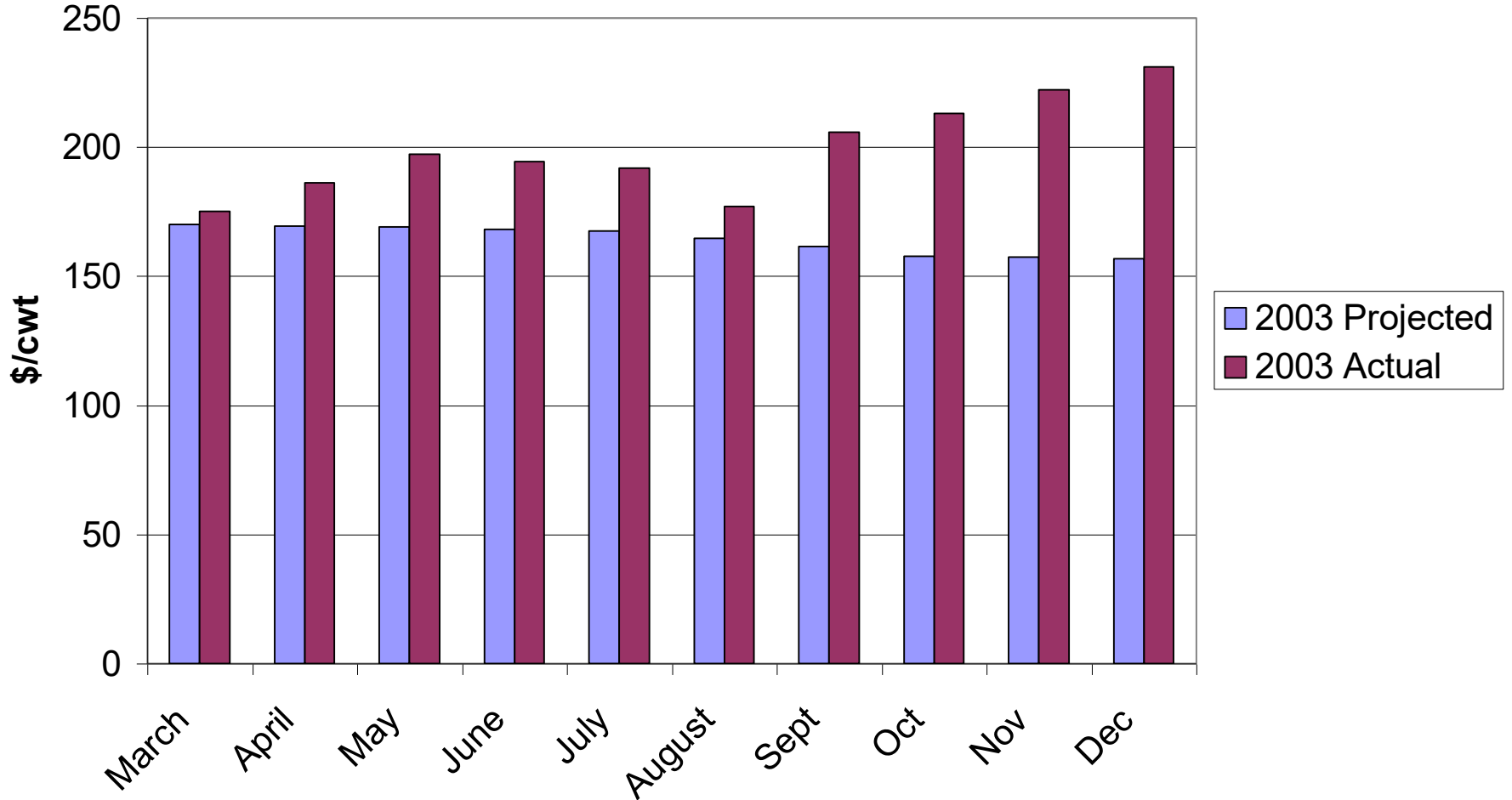


# Comparison of Projected and Actual Corn Prices in 2003

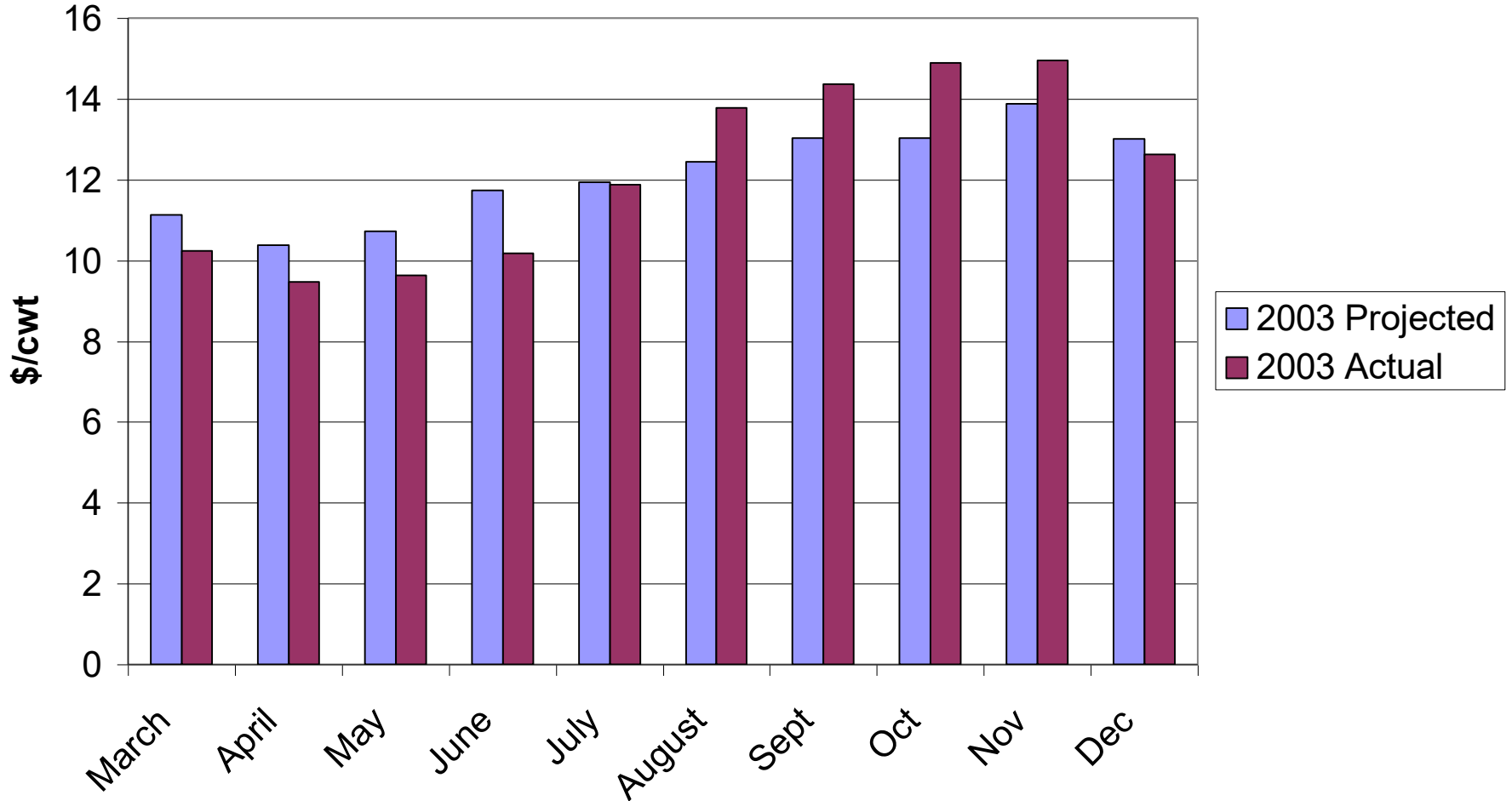




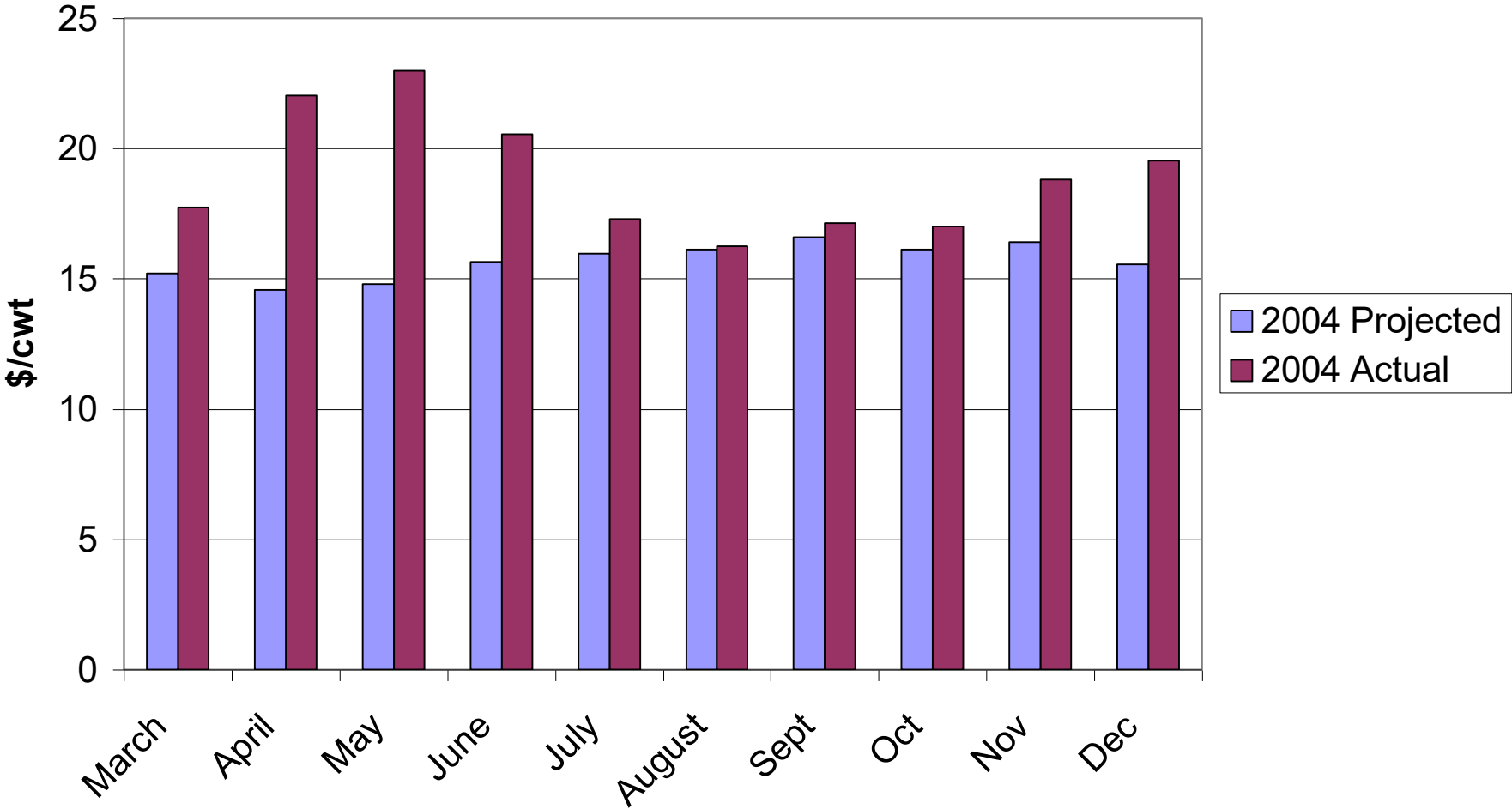
# Comparison of Projected and Actual Soymeal Prices in 2003



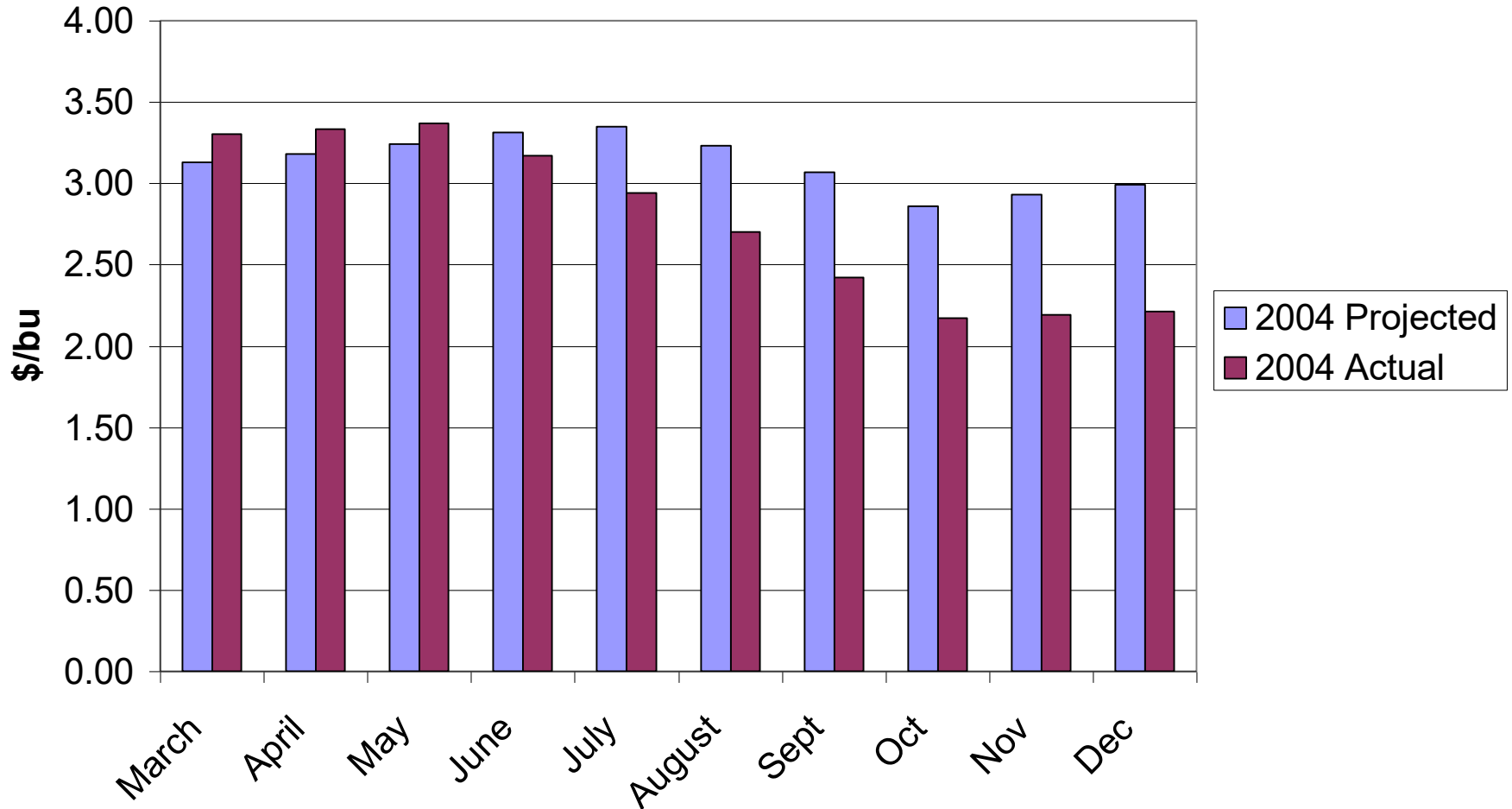
# Comparison of Projected and Actual Margins in 2003



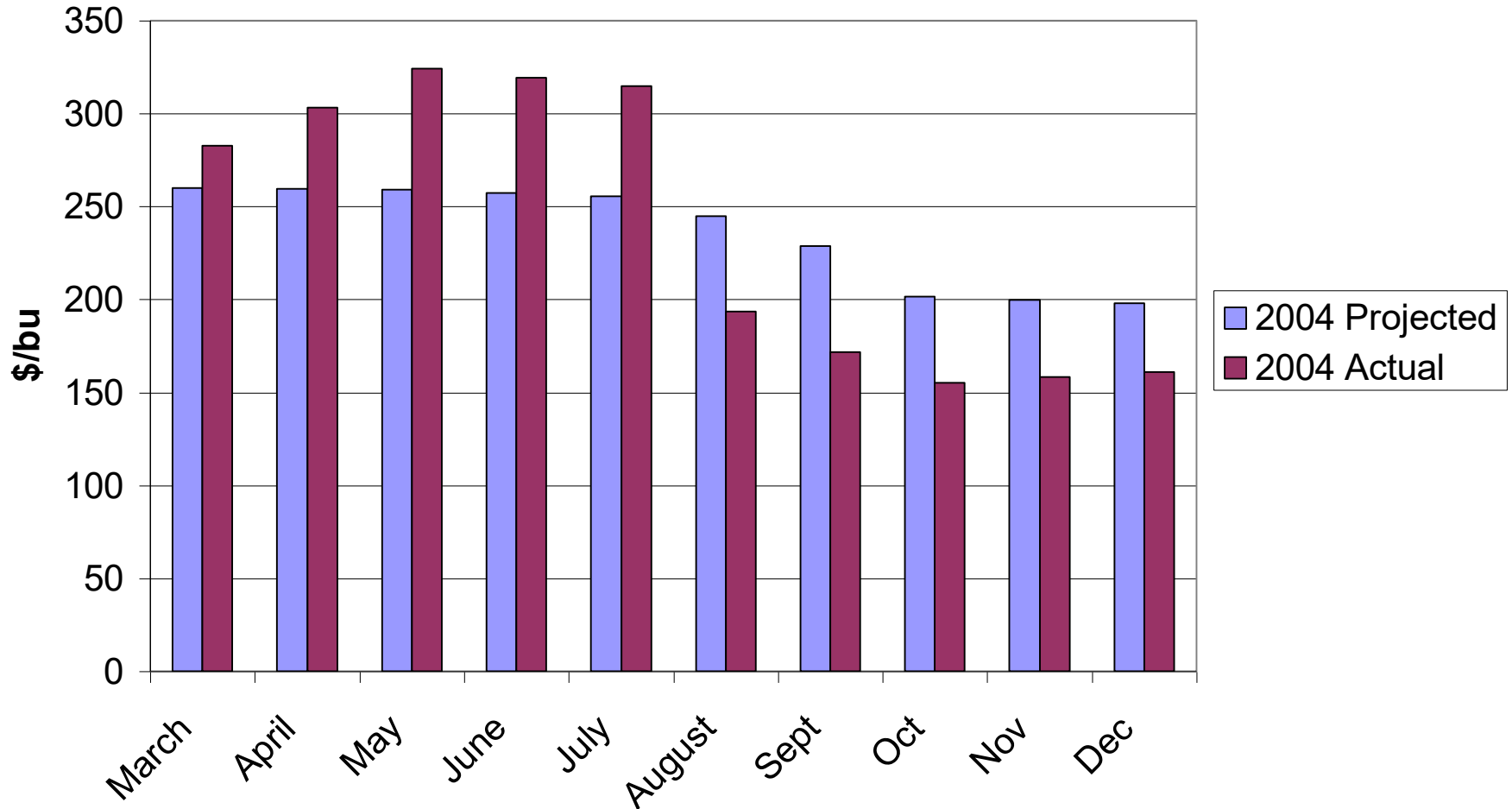
# Comparison of Projected and Actual Milk Prices in 2004



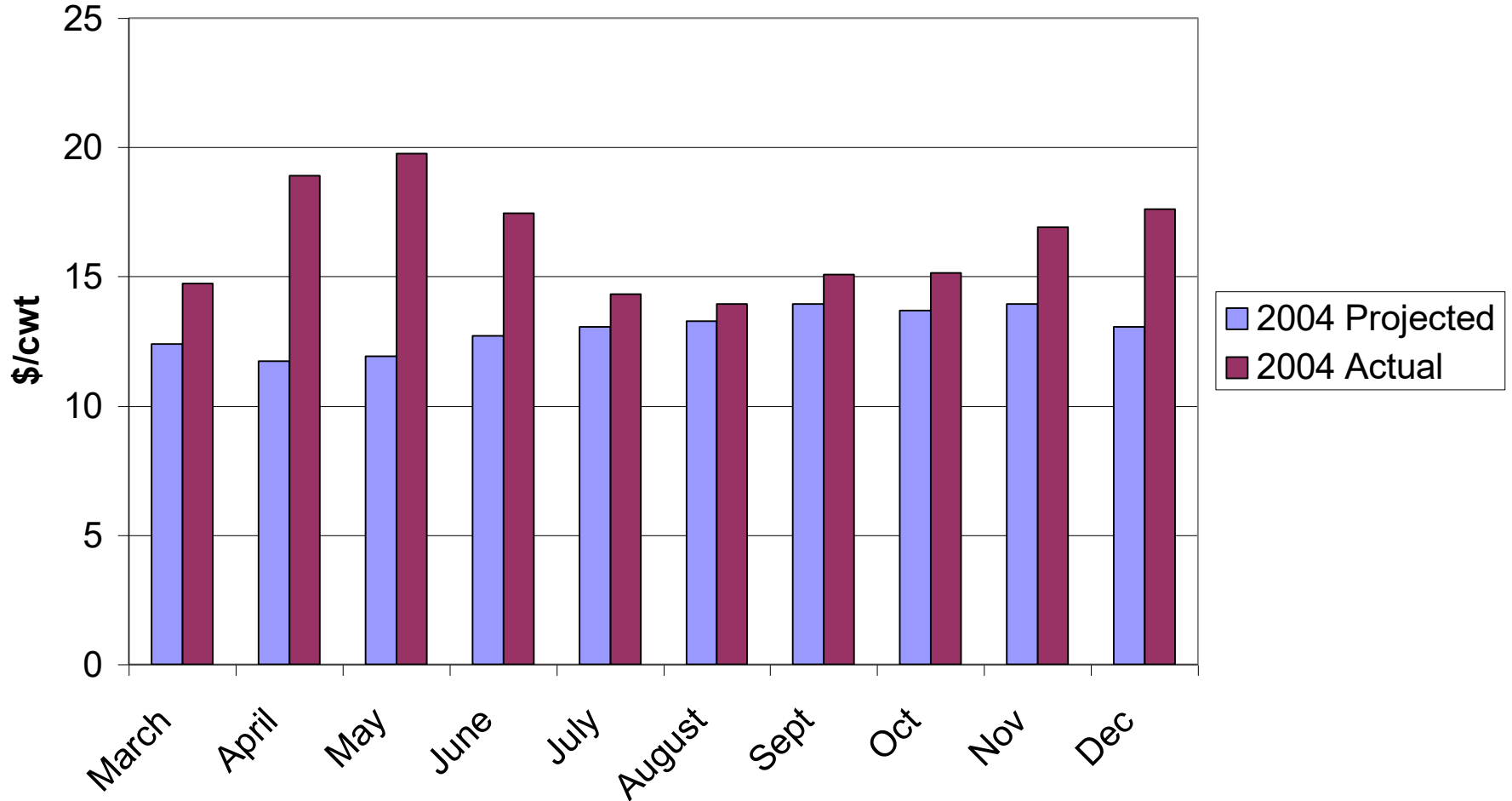
# Comparison of Projected and Actual Corn Prices in 2004



# Comparison of Projected and Actual Soymeal Prices in 2004



# Comparison of Projected and Actual Margins in 2004



# How Much Does LGM for Dairy Cost?

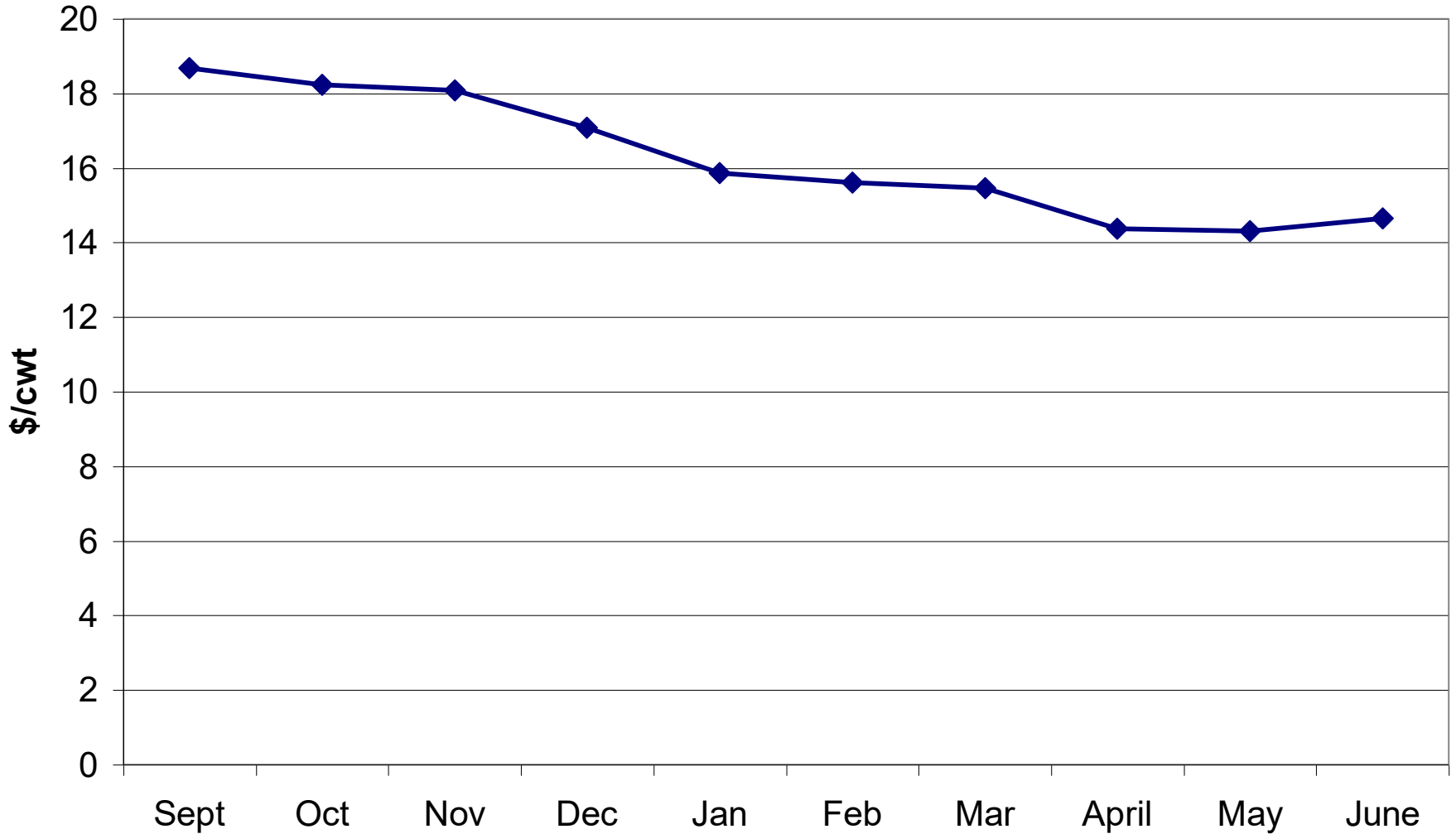
- Premiums are set so that the farmer gets out what he puts in over the long haul
  - In times of high price volatility, premiums will be high
  - Farmers who insure 10 months together will pay less than farmers who insure month to month
  - Farmers who insure 100% of their margin will pay more than those who take a deductible

# Example Farm

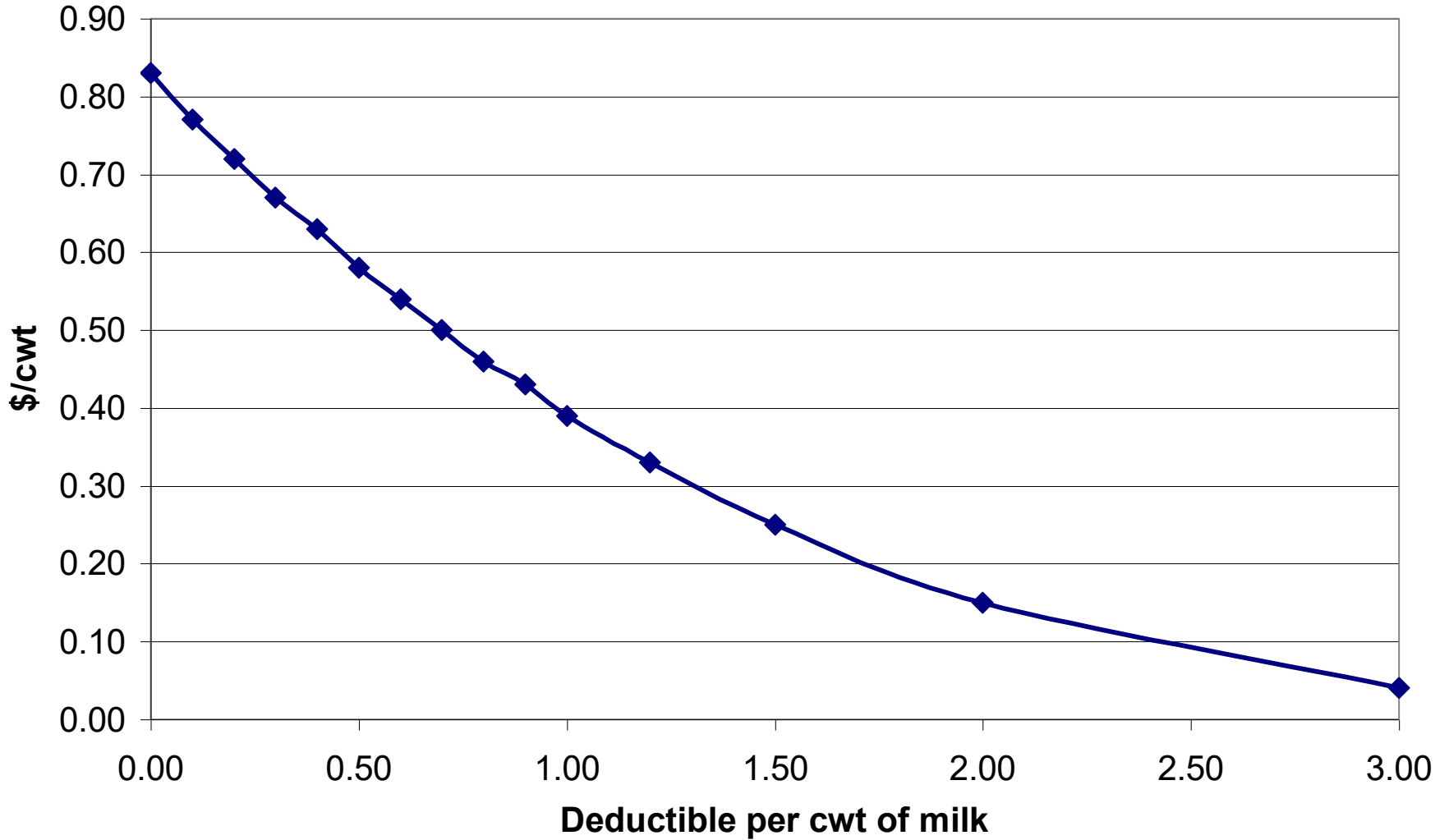
- 100 milking cow dairy in Massachusetts
- 18,000 pounds of milk per cow per year
- Even production each month (1500 cwt)
- Buys LGM in July 2007 for insurance period August to June, 2008
- 26 tons of corn equivalent fed per month
- 7.7 tons of soybean meal fed per month



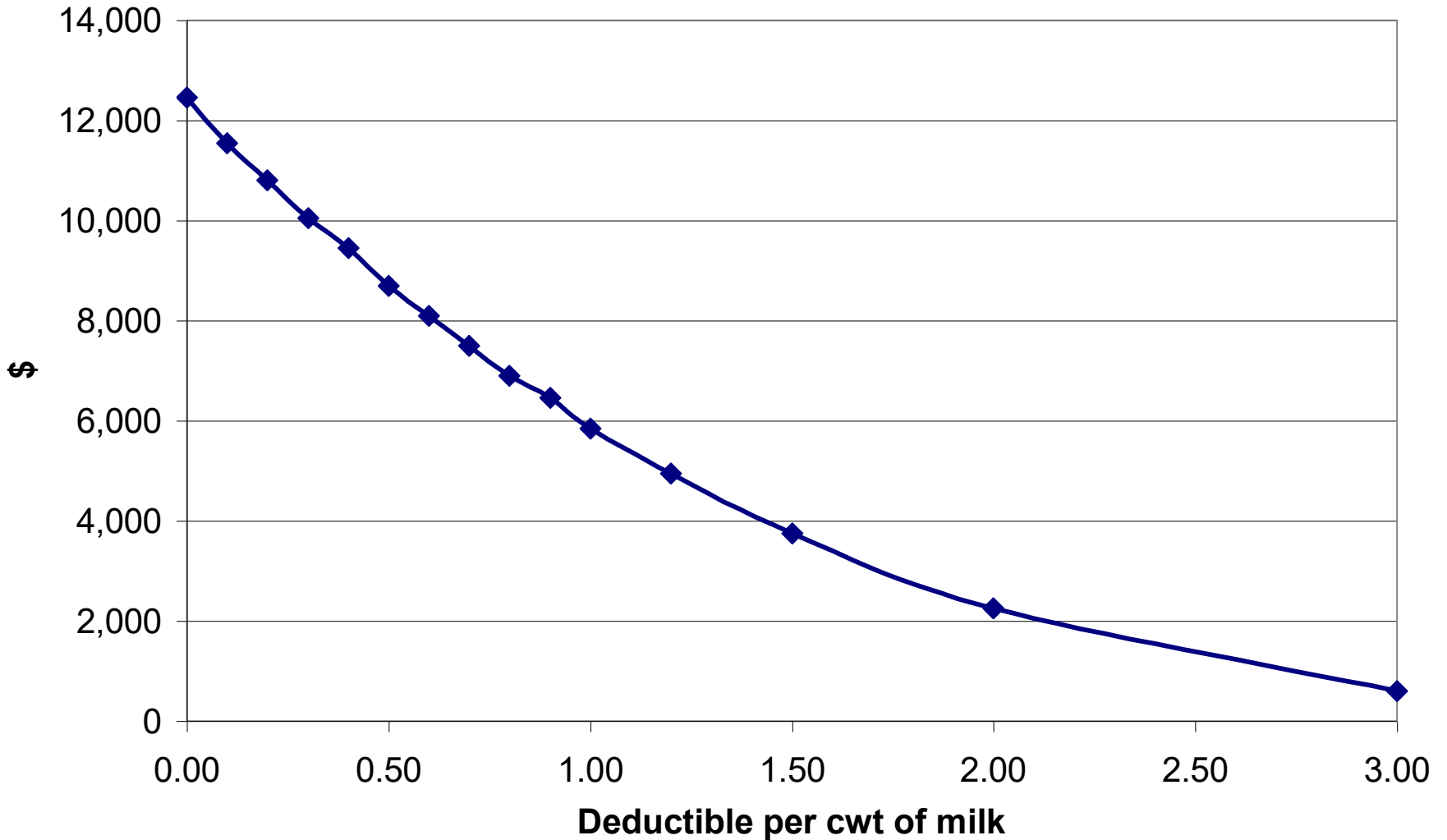
# Projected Margin for July 2007 Sales Date



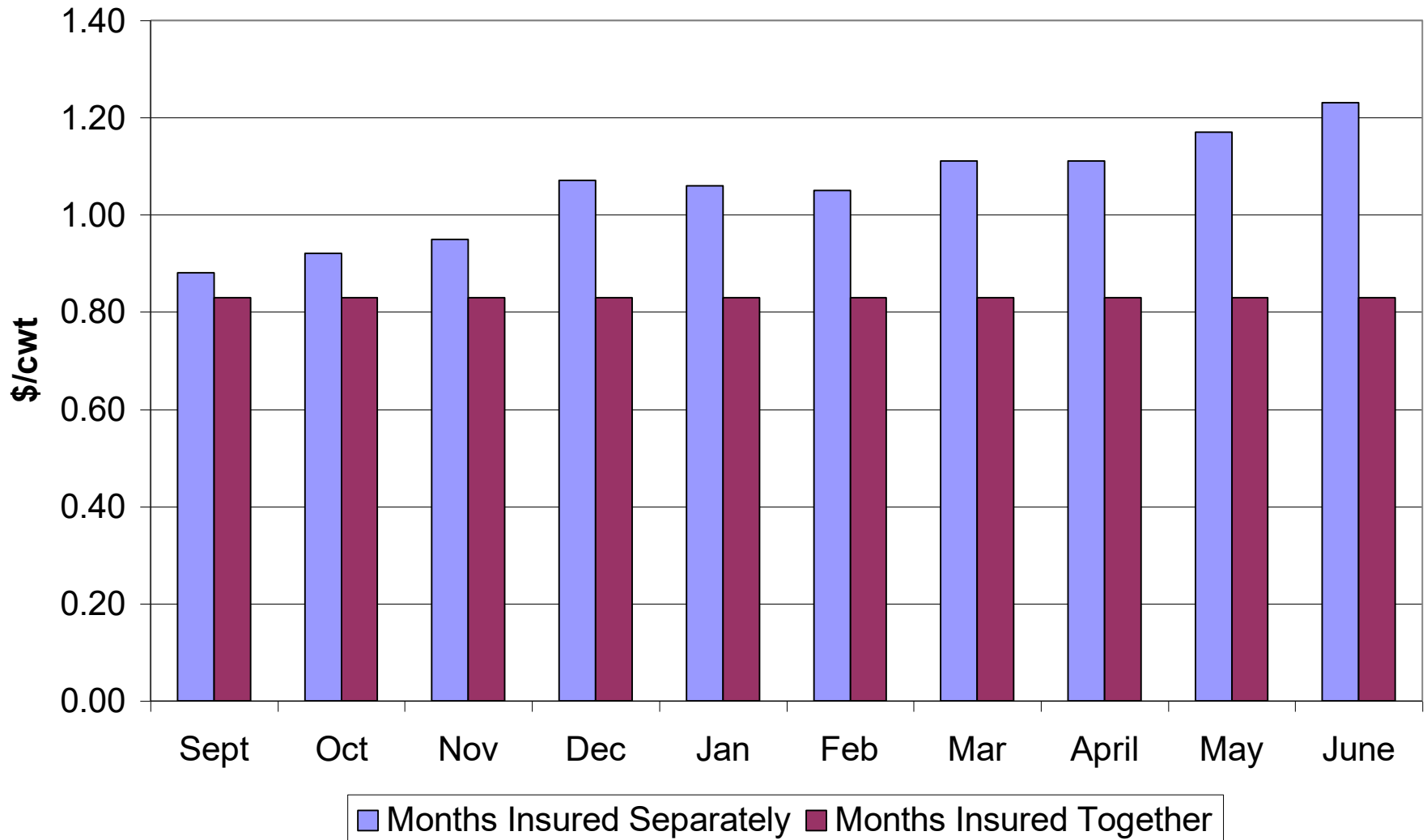
# Premium When All Milk Insured Together



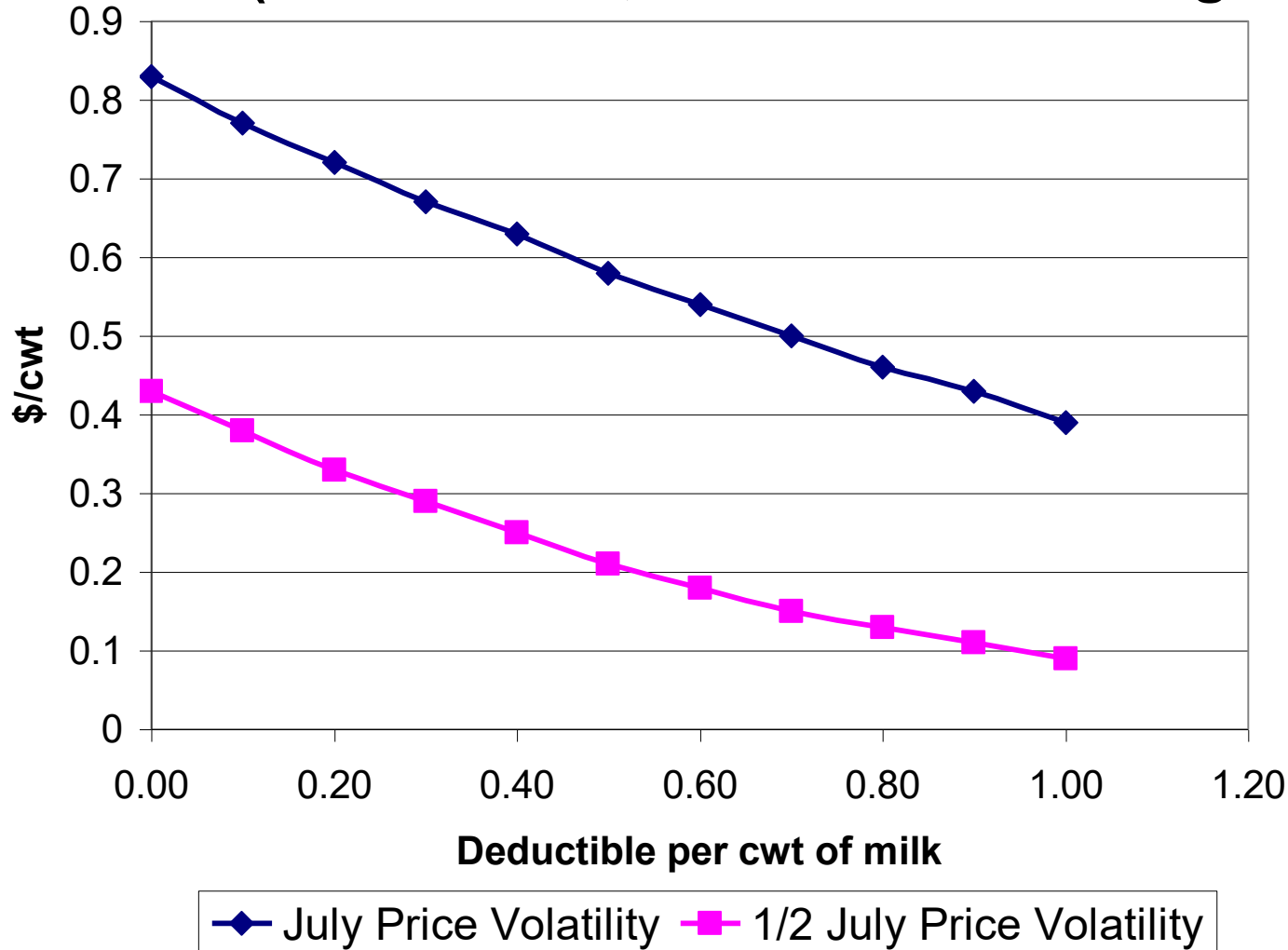
# Premium When All Milk Insured Together



# Effect on Premium of Insuring Month by Month



## Impact on Premium of Price Volatility (0 Deductible, Months Insured Together)



# Insurance Program Details

# Does LGM make early indemnity payments?

- Yes
  - If an indemnity is due under LGM for Dairy coverage, the company will send the producer a notice of probable loss after the last month of the producer's marketing plan.
  - The last month of the producer's marketing plan is the last month in which the producer indicated target marketings on the application.

# Underwriting Capacity

- LGM for Dairy has limited underwriting capacity that will be distributed through the Federal Crop Insurance Corporation's underwriting capacity manager. The underwriting capacity will be distributed on a first come, first served basis.
- LGM for Dairy will not be offered for sale after capacity is full or at any time the underwriting capacity manager is not functional.



# Insurance Period

- Coverage ends at the earliest of:
  - (1) The last month of the insurance period in which you have target marketings;
  - (2) As otherwise specified in the policy.
  - (3) If the end date is on a Saturday, Sunday, or federal holiday, or, if for any reason the relevant report is not available to us for that day or any other day of the ending period, then the actual ending value will be based on the most recent reports made prior to that date.

# Limitations

- A producer can insure any amount of milk for which he or she has adequate dairy cattle to produce.

# Indemnities

- In the case of a payable loss on insured milk, we will send you a notice of probable loss approximately ten days after all actual gross margins applicable for the insurance period are released by RMA.
- Producer must submit a marketing report within 15 days of receipt of the notice of probable loss.
- In the event of loss covered by this policy, we will settle your claim by subtracting the actual total gross margin from the gross margin guarantee.
- If the result is greater than zero, an indemnity will be paid.

# Indemnities

- In the event that the total of actual marketings are less than 75 percent of the total of targeted marketings for the insurance period, indemnities will be reduced by the percentage by which the total of actual marketings for the insurance period fell below the total of targeted marketings for the period.

# Marketings Report

- In the event of a loss the producer must submit a Marketings Report and sales receipts showing evidence of actual marketings.
- The marketing report must be accompanied by copies of packer sales receipts that provide records of the actual marketings shown on the marketing report.
- The producer must submit the Marketings Report within 15 days of receipt of Notice of Probable Loss.

# Life of Policy

- This is a continuous policy with twelve overlapping insurance periods per year.
- Policy will automatically terminate at the end of the pilot program.
- Target marketings must be submitted for each insurance period.
- If a Target Marketings Report is not submitted by the sales closing date for the applicable insurance period, target marketings for that insurance period will be zero.

# Life of Policy

- The agent does not have authority to bind coverage under this policy. Coverage can be purchased from the time starting after the validation of prices and ending on the following day at 9:00 AM Central Time or as otherwise specified in the Special Provisions.
- Coverage is not available for purchase if expected gross margins are not available on the RMA website or may not be available in instances of a news report, announcement, or other event that occurs during or after trading hours that result in market conditions significantly different than those used to rate the LGM for Dairy Cattle program.
- In these cases, coverage will no longer be offered for sale on the RMA Website. LGM for Dairy Cattle sales will resume, after a halting or suspension in sales, at the discretion of the Manager of RMA

# Application

- The sales closing dates for the policy are the third to last business day of the month for each of the twelve calendar months.
- The Application must be completed and filed not later than the sales closing date of the initial insurance period for which coverage is requested.
- Coverage for the cattle described in the Application will not be provided unless the insurance company receives and accepts a completed Application and a Target Marketings Report, the producer pays the premium paid in full, and the company sends the producer a written Summary of Insurance.



# Application

- After acceptance of the application, producer may not cancel this policy for the initial insurance period.
- Thereafter, the policy will continue in force for each succeeding insurance period unless canceled or terminated.
- Either you or we may cancel this policy after the initial insurance period by providing written notice to the other on or before the cancellation date.

# When does Coverage begin?

- Coverage begins one month after the sales closing date. Coverage begins on producer's milk one full calendar month following the sales closing date, unless otherwise specified in the Special Provisions, provided premium for the coverage has been paid in full.
  - For example for the January 28 sales closing date, coverage begins on March 1.

# Important Dates

- The contract change date is April 30. Any changes to the LGM for Dairy Cattle Policy will be made prior to this contract change Date.
- The cancellation date is June 30 for all insurance periods.
- The end of insurance for the policy is 11 months after the sales closing date.
  - For example, for the January 31 sales closing date, coverage ends on December 31.

# Deductibles

- This is the portion of the expected gross margin that the insured elects not to insure.
- The producer may select deductibles from \$0 to \$2.00 per cwt of milk in \$0.10 per cwt increments.

# Premium

- The premium for the initial insurance period is due with the application for LGM for Dairy Cattle Insurance coverage.
- The application will not be accepted if the premium is not paid in full at the time of application.
- In subsequent insurance periods, if the premium is not paid in full by the applicable sales closing date, your target marketings will be reduced to zero for each month of the insurance period and you will have no coverage for cattle under this policy.

# Premium

- Premium dependent on a number of variables
  - Amount of coverage selected
  - Producer's marketing plan
  - Level of futures prices
  - Amount of price volatility

# Assignment of Indemnity

- Producer may assign to another party the right to an indemnity for the insurance period.
- If producer has suffered a loss from an insurable cause and fails to file a marketing report within 15 days after you receive a notice of probable loss, the assignee may submit the marketing report not later than 15 days after the 15-day period has expired.