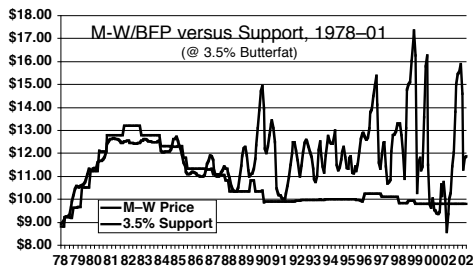


Dairy Markets

*Cash,
Futures,
Options &
Forward Contracts*

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Why the Interest?

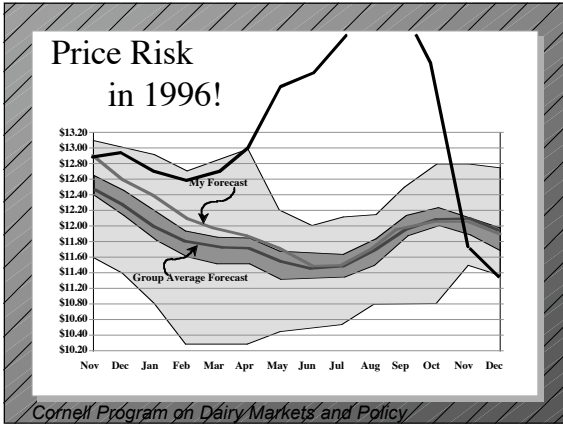


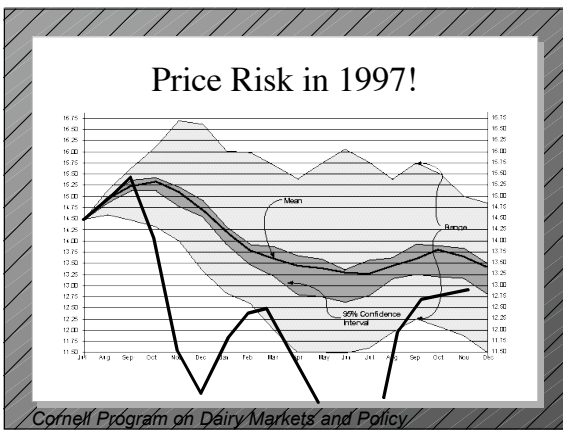
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Risk Management is the Key!

- Contracts are available for cheese, butter, nonfat dry milk, class III & IV.
- Farmers wish to control price risk and so do processors.
- Need to understand the difference between price risk and basis risk.

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Basis Risk

- Basis is the difference between the cash and the futures price
- How is your farm milk price determined?
 - Multiple Component Pricing
 - The FMMO Blend or Uniform Price & the Producer Price Differential
 - Your Farm Price

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What is Milk Worth?

- _____
- _____
- _____
- _____
- _____
- _____

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Multiple Component Pricing

- Begins with surveys of cheese, butter, nonfat dry milk, and whey
- Class prices and/or component values are calculated
- Announced on, or before, the 5th of each month

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Blend or Uniform Price

- Weighted average by use of:
 - Class I mover plus a differential
 - Class II mover + \$0.70
 - Class III, announced components
 - Class IV, announced components
- PPD is the uniform price minus the class III price

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Farm Price

- Begin with component values times pounds of components sold
- Add (Subtract) PPD times pounds of milk sold
- Adjust for premiums
 - Components, quality, volume, market, etc.
- Other additions and deductions
 - Coop payments or retains, hauling, etc.

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To Hedge, Or Not To Hedge— That Is The Question!

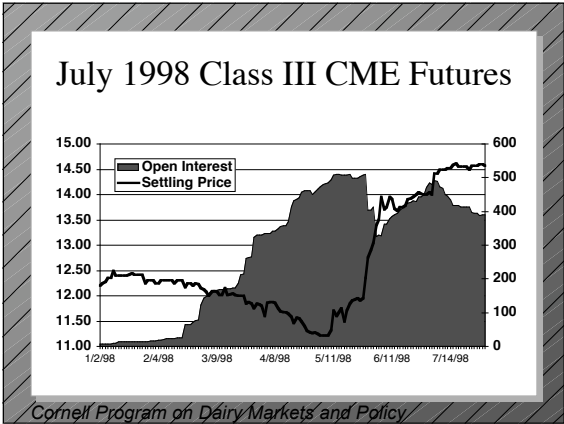
- How vulnerable are you to price volatility?
 - Cash flow
 - Balance sheet
- **Never** lock in a milk price that is less than your variable costs of milk production!

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Basis Risk

- Basis is the difference between the cash and the futures price
- Basis may differ because of
 - Order class utilizations
 - Market premiums
 - Milk quality
 - Regulatory, political or judicial decisions

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Futures Example...

- On January 5, 1998
 - Look at July BFP contract selling for \$12.25 & May BFP at \$11.85
 - Determine Blend price of \$12.99 and farm price of \$14.21
 - Sell 200,000 lbs milk @ \$12.25 = \$24,500
 - Sell 200,000 lbs milk @ \$11.85 = \$23,700
 - 2 “Round trip” brokerage fees = \$150

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Futures Example Continued...

- On June 5, 1998, USDA announces May BFP at \$10.88
 - Must “buy back” 200,000 lbs @ \$10.88 = \$21,760
- On August 5, 1998, USDA announces July BFP at \$14.77
 - Must “buy back” 200,000 lbs @ \$14.77 = \$29,540
- Loss from hedging= -\$3,100 or -77.5¢/cwt

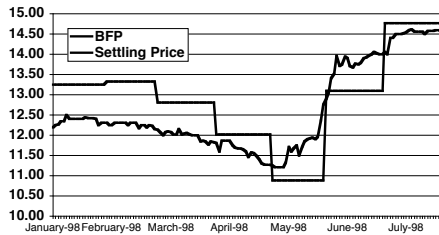
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Futures Example Continued...

- We expect the July blend price to be about \$13.58 less 78¢ hedging loss = \$12.80 less 3¢ brokerage fee = \$12.77
- The price risk was \$13.58-\$12.99 = 59¢
- The basis risk was \$12.99-\$12.80 = 19¢
- The “transactions cost” in brokerage fees was 3¢

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Futures and BFP Converge



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Another Futures Example...

- On June 1, 1998 you observe that the July contract is moving up and you decide to close out your position
 - Must “buy back” 200,000 lbs @ \$11.00 = \$22,000
 - Must “buy back” 200,000 lbs @ \$12.91 = \$25,820
 - Gain from hedging = \$380 or 3.8¢ per cwt
 - Less brokerage fee of 3¢ means that you are about even

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Guaranteed Profit?

- Not at all! Hedging is a means of managing price risk. If the basis risk is less than the price risk, then a farmer may want to buy & sell futures contracts.
- NOTE: Buying or selling contracts equivalent to more milk than is being produced is *speculating*, not *hedging*.

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Options Contracts

- A Futures Contract Option is the right, but not obligation, to buy or sell at a specified price.
- The price of this option is called its premium.
- “Put” options provide upside potential for milk prices.
- Basis risk still applies.

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July Options Example

- On January 5, 1998
 - Determine that Blend price is \$12.99
 - “at the money” puts
 - May BFP futures = \$11.75 for ATM put of 21¢
 - July BFP futures = \$12.25 for ATM put of 35¢
 - buy one each for \$1,120

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July Options Example Continued

- On June 1 see May BFP at \$11.00 so exercise put for gain of 75¢/cwt on one contract or \$1,500
- On August 1 see July BFP at \$14.60 so let put expire
- Net gain from options = \$380
- Less brokerage fee means that you are about even

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Forward Contracting

- Dairy cooperatives can forward contract milk by using futures or options contracts
- Manufacturing processors can also offer forward contracts

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Forward Contracting Example

- On January 5, 1998
 - pick up phone and find out that you can forward contract an Order 2 July Blend at \$12.68
 - in July, you will receive a \$12.68 Blend price on up to half of production and you must deliver!

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How to Get Started

- Call **312-930-1000** and the CME will send you materials
- Good link to web sites is <http://www.ams.usda.gov/dairy/mncs/dysites.htm>
- Form marketing club.
- Contact dairy broker.

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The Future of Futures?

- Some of these markets are very “thin” and sometimes behave poorly.
- The Class III contract is working well.
- You **must** know your cost of production!
- Basis risk could be very large.
- If you can handle the price volatility, do so—you will make more money in the long-run.

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