

U.S. Dairy Price Policy Options and Consequences

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August 2009

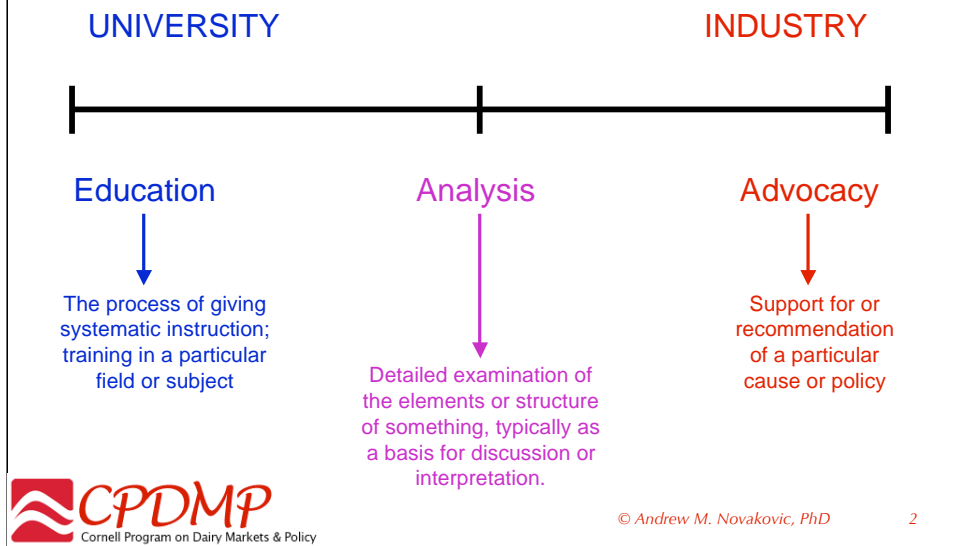


This paper is intended as a summary of Federal policies that regulate or otherwise directly impact farm milk and/or other dairy product prices. This includes existing Federal programs and some possible alternative programs. The alternatives include programs that were used previously but are no longer active as well as new proposals. This summary provides background information including any enabling legislation, historical context, and current activities. It also provides a conceptual framework for evaluating what various programs do or could do and how they work. It is not my intention to directly or implicitly endorse any existing or potential program; however, I will offer some comments on aspects or elements of these programs that I believe can be effective in dealing with some problems and those which are not so successful.

This material has been used as the basis for various extension presentations and was also provided as supplemental information for a field hearing organized by Senator Kirsten Gillibrand, Chair of the **Subcommittee on Domestic & Foreign Marketing, Inspection, & Plant & Animal Health of the Committee on Agriculture, Nutrition and Forestry**, held in Batavia, NY on 27 August.

The work behind this presentation and participation in Congressional hearings or similar events is enabled in a very significant way by the ongoing Federal grant which supports the National Institute for Livestock and Dairy Policy, which is a partnership between the Cornell Program on Dairy Markets and Policy and the Agricultural and Food

Policy Analysis vs Advocacy



There are several steps and roles in the policy-making process. From the outset, I believe it is important to emphasize that my role as an academic, particularly one at a Land Grant University, is quite different from the role of someone who is an active participant in a dairy business. While industry members and academics may both be able to offer analytical insights about the performance of an existing program or the possible outcomes or effects of a new program, it is, in my view, inappropriate for me to be an advocate for a particular policy, program or course of action. In commenting on or suggesting the possible effectiveness, or lack thereof, for a particular program, I may seem to imply favor for one approach over the other, but it is not my intention to advocate for any particular policy. Rather, it is my purpose to assist industry, legislative, and governmental decision-makers as they look for new ideas, consider proposals, and evaluate the merits of alternative solutions.

The Policy Development Process

Problem Identification

Problem Elucidation

Establishing/Describing Desired Outcomes

Possible Solutions

- A. To what extent do they solve the problem(s) and achieve the desired outcomes
- B. To what extent do they result in undesired outcomes

Selecting a solution

- A. Based on objectively measured analysis
- B. Based on subjectively determined values and objectives



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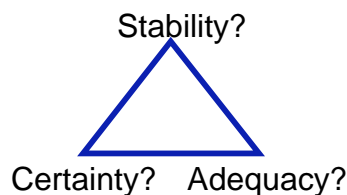
Policy development is a process. It involves steps of creation, action, and evaluation, that can be described in a variety of ways. I would especially like to draw attention to the need to first very clearly identify 1) “the problem” and 2) the desired outcomes. What is that is broken and what does it look like or do when it is fixed. In my experience, to many policy debates involve people arguing about the “best policy”, without comparing notes on whether they have the same understanding of what it is that they are trying to fix and what kinds of solutions they are hoping to achieve. While there are times when “the problem” may seem so blatantly obvious that there is no need to discuss it, even then it is probably useful to make sure we have some common understanding about the dimensions of the problem (it’s big, it’s long-lasting, etc.) and the ways in which “the problem” effects different participants in the marketplace (it’s a big problem for A and not a problem for C, etc.)

The ultimate question for a policy proposal is “will it work”. This question is meaningless if there is not a common understanding of what “working” means, I.e, what it is that one expects to accomplish.

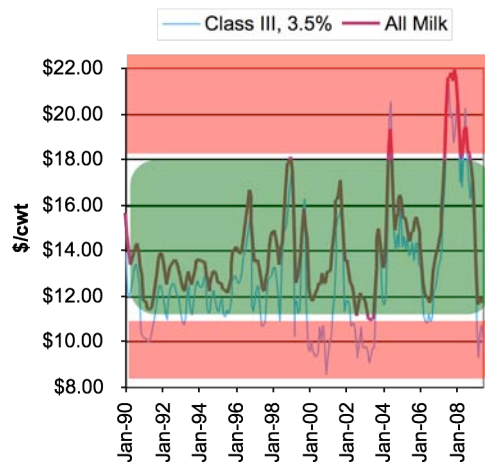
Is the Price of Milk the problem?

The Price of Milk is too volatile?

The Price of Milk is too low?



Benchmark Measures of the Value of Producer Milk, 2006-2008



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At one level, we can probably all agree that, today - in 2009, the problem is the price of milk. And, we can probably all agree that the farm price of milk for most if not all producers is too low to allow them to cover their direct or cash costs, much less their total costs. Nevertheless, it is important to ask ourselves several questions about this problem.

Is this a problem confined only to dairy farmers, or is there a price problem for dairy food processors or consumers or some other agent in the marketing chain? Is the problem for these downstream agents the same problem that farmers perceive? Is it the case that the problem for the dairy farmer is the boon for someone else?

What it is about the price of milk that we want to change? Is it that it is too low? Is it that it is too low relative to costs? Is it that it is too unpredictable? Is it that it is too volatile; it changes too quickly and/or by too much for producers (or buyers) to make appropriate, compensating management decisions?

I describe three innate characteristics of prices that I think are related but in fact very different.

Many current or historic discussions of "the price problem" use the term Stability (or instability) to describe the problem. Perhaps this is

Is the Price:Cost Margin the problem?

Is it about Margins?

- Comparing prices of inputs with prices of output(s)
- Which inputs?

Is it about Net Revenue?

- How do I measure costs of production?

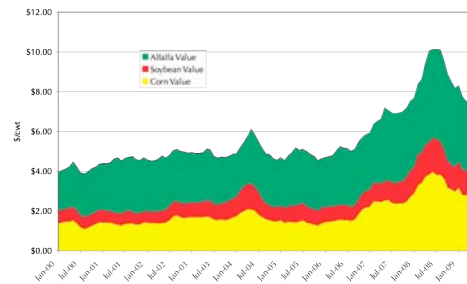
Is it about level or volatility?



Indices of Prices Paid by Livestock Producers and the All Milk Price
1990-92 = 100



Average Value of Feeds Used in Milk Production



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Perhaps a better way to describe the current problem is that net returns to dairy farming are horribly low. It is often the case that farmers or analysts will take about prices and returns or profits as if they were the same thing or at least always moved in the same direction. As the recent explosion in corn, fuel and fertilizer prices made abundantly clear, it is quite possible to have negative returns with high prices and acceptable returns with seemingly low prices. What makes the current dairy farm situation so bad is that milk prices are historically low at the same time that prices of many inputs are very high. This double whammy may well prove to be the worst period for returns to dairy farming the lifetimes of anyone now actively engaged in dairy farming.

The price of milk can be measured in several ways - the Class III price, the All Milk Price, the Statistical Uniform Price for a Federal Order, the Mailbox Price, etc. Perhaps even more price, returns to dairy farming can be measured in many ways.

The charts above show feed prices and USDA's Prices Paid Index for all Livestock operations. Both are measures of the prices of inputs. One quick indicator of net returns is to take a simple ratio of price(s) received vs price(s) paid or to similarly calculate a margin based on the price per hundredweight of milk vs the cost per hundredweight of milk. The margin gets closer to net return, but this calculation typically falls short of a proper net return in that it only looks at a few key inputs (typically feed costs).

Once I Identify the Problem....

What data or knowledge can I bring to bear to better understand it?

- ↳ Causes of price volatility
- ↳ Extent of low net revenues across farms
- ↳ Are certain events or factors correlated, e.g.
 - ✓ Is feed price a good proxy for feed costs
 - ✓ Are feed costs a good proxy for total costs

What could I do about it anyway?

Desired Outcomes?

cf. what is the problem...

Price doesn't go below $\$X/\text{cwt}$?

Milk:Feed doesn't go below Y

Net Revenue doesn't go below Z

Price doesn't deviate from P_1 by more than Δ

I can predict Price within $\pm 50\text{¢}$ one year in advance

I can lock in a price one year in advance

How we achieve a solution vs What outcome we seek?

Degrees of Control in Markets and Governments (behaviors vs results)

Free — Restrained — Regulated — Planned
(behavior) (outcomes)

To the extent we have a choice, a fundamental question, explicitly or implicitly, is how much control can we tolerate - how much freedom are we willing to give up in order to achieve the desired results.

Pure Representative
Anarchy Democracy Democracy Socialism Totalitarianism Authoritarianism

Desired Objectives, Objectionable Methods, and Unintended Consequences

In evaluating alternative policy solutions, it is well to keep in mind:

- ↳ To what degree is the solution likely to solve the problem, to achieve the desired solution?
- ↳ Is the medicine worse than the illness?
- ↳ Are there side effects that we can anticipate?
- ↳ What is the distribution of benefits and side effects?

Prospects for Change?

If not now, when? How bad does it have to get before “we” do something?

Is Congress, or perhaps more to the point, are the leaders of the agriculture committees, prepared to re-open dairy policy?

Is there something we can do in the short run (eg., cash payments) and something else we can prepare to do in the long run (eg., policy reform for the 2012 Farm bill)?

**Existing Tools -
Federal Milk Marketing Orders,
Marketing Agreements,
Dairy Price Supports,
Milk Income Loss Contracts**



Key Elements of U.S. Dairy Laws or Programs

1. Cooperative Marketing
2. Federal Milk Marketing Orders
3. Dairy Price Supports
4. Import Quotas and/or Tariffs
5. Demand Stimulation
 - a) domestic
 - b) export
6. Cash Subsidies - Milk Income Loss Contract
7. Production Reduction Incentives



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I have been asked to talk about the future of US dairy policy. Before that, it is good to make sure that we have a common understanding about what are the components of US Dairy Policy.

Dairy industry members and observers tend to think of US policy in terms of price supports and federal orders. To be sure, these are the most obvious manifestations of US dairy policy and have the most direct intervention in dairy markets, but they do not represent all of what is done or what has been done. The list above probably could be expanded, but it gives a more complete representation of the breadth of US dairy policy.

Some of these policies relate to the infrastructure of dairy markets, providing for a structure in which it is believed desirable outcomes are more likely.

Some are forms of direct regulation or intervention designed to encourage positive outcomes or discourage negative outcomes.

Some are designed as long term measures to deal with ongoing issues or problems. Some are or were designed as a short term response to a particular problem.

MAJOR FEDERAL DAIRY MARKET PROGRAMS

I. Agricultural Cooperatives

Objectives:

improve bargaining power or competitive position of farmers relative to processors

Methods:

legally permit collective action by producers, which otherwise might be treated as collusion or anticompetitive; cooperatives are allowed the implied market power this provides but they may not abuse it.

Law: [Capper-Volstead Act of 1921](#)

Current Status: Cooperatives are alive and well -- consolidating but still competitive. Very large scale producers are independent minded. CV challenged as unnecessary and egregious benefit to privileged few in a recent report to Congress, but no consequences to date.



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The Capper-Volstead Act, which allows farmers to band together and market their products collectively without running afoul of other US antitrust law, preceded direct government intervention in dairy markets by almost 20 years. Cooperative marketing actually began in the early 1800s, well before there were any antitrust laws to worry about. Many farmers believed that the low price problems they perceived were the result of an imbalance of market power and abuse by buyers. Cooperative marketing was seen as a way to rebalance market power. Prior to the development of government programs, legislation was focused on strengthening the ability of farmers to work cooperatively for their own benefit. The Great Depression persuaded government that cooperation alone was inadequate.

Cooperatives were the vehicles for developing and trying new approaches to milk pricing. Some of these concepts were later adapted for implementation under federal law. Then and now, cooperatives have typically led policy development and change; however, they have seldom been able to control or dictate it.

MAJOR FEDERAL DAIRY MARKET PROGRAMS

II. Milk Marketing Orders

Objectives: create market conditions that will encourage:

1. orderly marketing activity; markets that function smoothly, predictably, and at a reasonable cost
2. orderly pricing (predictable but not necessarily stable or adequate)
3. adequate and wholesome supplies of fluid milk
4. equitable returns to farmers, equitable prices for processors

Methods:

regulate and supervise the terms of trade between farmers and processors, i.e., set minimum farm level prices and trading rules that determine who qualifies for what price, so as to create market (price) incentives that result in desired market behavior or performance

Law: Agricultural Adjustment Act of 1933, Agricultural Adjustment Act of 1935, Agricultural Marketing Agreement Act of 1937, various modifications introduced by subsequent “farm bills”

Current Status: operating daily but feeling across both sides of the market that changes are needed in provisions, operating procedures and regulatory framework. There is significant disagreement on degree of change.



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Federal Milk Marketing Orders are often described as incomprehensibly complicated. Actually, their essential elements involve categorizing quantities of milk sold by farmers according to the type of product into which it was made (classification), setting prices for milk based on these classes (pricing), and sharing the gross proceeds that result from the various quantities and prices more or less equally across all farmers (pooling). This concept was developed by cooperatives in the late 1800s, implemented as a permissive law in federal and various state laws beginning in the 1930s and slowly became adopted across the US. In the 1950s, less than 1/4 of the milk was priced by a Marketing Order. Today, virtually all the milk in the US is.

Although minimum prices are announced, Marketing Orders don't enhance prices so much as they regulate and coordinate them. They create a well-defined pricing system under which prices become more predictable and incentives or opportunities for “destructive competition” are reduced. This may refer to seller-buyer relationships, but it also relates to sellers competing amongst themselves so vigorously for a buyer that they end up driving prices down to their mutual detriment.

Federal Milk Marketing Orders

Can imagine almost any adaptation to Orders, but this is a fairly unwieldy tool for price stabilization and probably completely unworkable for price guarantees or serious price enhancement.

Price stabilization

- ↳ Class III and IV prices (with Classes I and II following)
 - ✓ Moving average or snubber on product prices
 - ✓ Competitive pay price?
 - ✓ Some other price mover, eg. Cost of production based or indexed to price(s) of input(s)
- ↳ Class I only (presumably at a high level)
 - ✓ Moving average or snubber
- ↳ Blend Price or SUP
 - ✓ Moving average or snubber
 - ✓ Like the old takeout/payback plan, leave the total dollars untouched but redistribute them to level out payments (similar to Farm Savings Accounts)

Price Enhancement

- ↳ S. 889 (Specter/Casey), tie prices to cost of production



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Federal Milk Marketing Agreements

Already authorized by AMAA, although may be desirable to focus or add to existing language.

Provides for USDA oversight of an agreement (contract) negotiated by buyers and sellers in a marketing area.

Could serve as a transition to private, forward contracts.

MAJOR FEDERAL DAIRY MARKET PROGRAMS

III. Dairy Price Support Program

Objectives:

- farm price stability
- farm income enhancement
(market security)

Methods:

purchase storable products (cheese, butter, and skim milk powder) at prices that will yield farm price goal (i.e., the support price). 2008 Farm Bill introduced trigger mechanism to adjust support down in times of high surplus.

Law: Agricultural Act of 1949, various changes introduced by subsequent farm bills, effectively neutered since 1989

Current Status: sporadically effective; but at low price level. Likely to continue as low level “safety net” but Secretary has the authority to increase product purchase prices above the minimums required in the Act.



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Efforts to support farm milk prices by purchasing manufactured dairy products actually began with programs to purchase surplus butter by dairy cooperatives in the 1920s, in the wake of the collapse of butter markets following World War I. Federal efforts to support farm prices were used throughout World War II and tied to the concept of parity prices established in landmark agricultural legislation of the 1930s. Following WWII, dairy markets suffered as US production was restored with the influx of returning farm boys but US export sales fell as European agriculture recovered. Thus, the Agricultural Act of 1949 made intervention in dairy markets permanent. The Secretary of Agriculture was instructed to support farm milk prices at no less than 75 percent and no more than 90 percent of their parity equivalent. He was empowered to achieve this by buying butter, skim milk powder and cheddar cheese at wholesale prices designed to result in the desired farm milk price.

The support program has always been justified as providing farm price stability, but inherent in this has always been some notion of achieving higher farm prices than would otherwise likely occur, even if just providing a shallower bottom to the market. The system of guaranteed, unlimited purchases also has had the effect of guaranteeing, to a considerable degree, an outlet for all milk produced (market security).

Dairy Price Support Program

Historically, we know this can be used for

- ↳ Price stabilization by establishing a fairly low price floor
- ↳ Price enhancement by establishing a high price floor

The ability to remove surpluses is essential to managing prices that exceed market clearing levels

- ↳ Ability to distribute government stocks is practically essential
- ↳ However, this ability is seriously undermined in an open economy
 - ✓ WTO limits ability to distribute overseas
 - ✓ Can we distribute internally in a way acceptable to industry?

MAJOR FEDERAL DAIRY MARKET PROGRAMS

VI. Milk Income Loss Contract - a Counter-Cyclical Payments (Federal)

Objectives:

augment dairy farmer income, especially for smaller scale farms, when milk prices are low

Methods:

establish milk price trigger, when benchmark market price falls below trigger, taxpayer funds used to make up part of the difference, up to a maximum amount based on production. Overall design patterned after CCP for crops. Price trigger patterned after Class I premiums that existed under NE Dairy Compact.

Law: Food, Conservation and Energy Act of 2008 (originated with 1995 Farm Bill)

Current Status: was slated to expire on month before end of 2002 Farm Bill, now looking like it has achieved permanence as part of overall CCP approach

Lessons and Implications: "We prefer fair market prices, but we'll cash the check"
Hard to restrict payments based on farm size. Can be VERY expensive. Cost falls on taxpayers rather than consumers. Despite payment limitations, creates incentive to produce (or disincentive to retire) that results in more milk production and even lower market prices.



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MILC – the Counter Cyclical Payment

Could use different triggering mechanisms, eg.,

- ↳ US all milk price or FMMO average blend price
- ↳ price:cost ratio
- ↳ margin
- ↳ net revenue

Could pay out differently, eg.,

- ↳ Payment limits or payment eligibility
- ↳ Progressive payments
 - ✓ A% of difference when actual is within x% of trigger
 - ✓ B% when actual is within x-y%
 - ✓ C% when actual is less than y%

CWT Buyouts or New Plans to Manage the Supply of Milk

Charles F. Nicholson, PhD
Cornell University
June 2009



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What Can We Say About CWT?

“Historically, CWT has not addressed volatility directly

↳ Helps producers in periods of low prices”

“Ability to address volatility with the current program depends entirely on the timing of events relative to future market changes

↳ A hard task to correctly look ahead

↳ A hard set of rules to follow may limit effectiveness of the program”

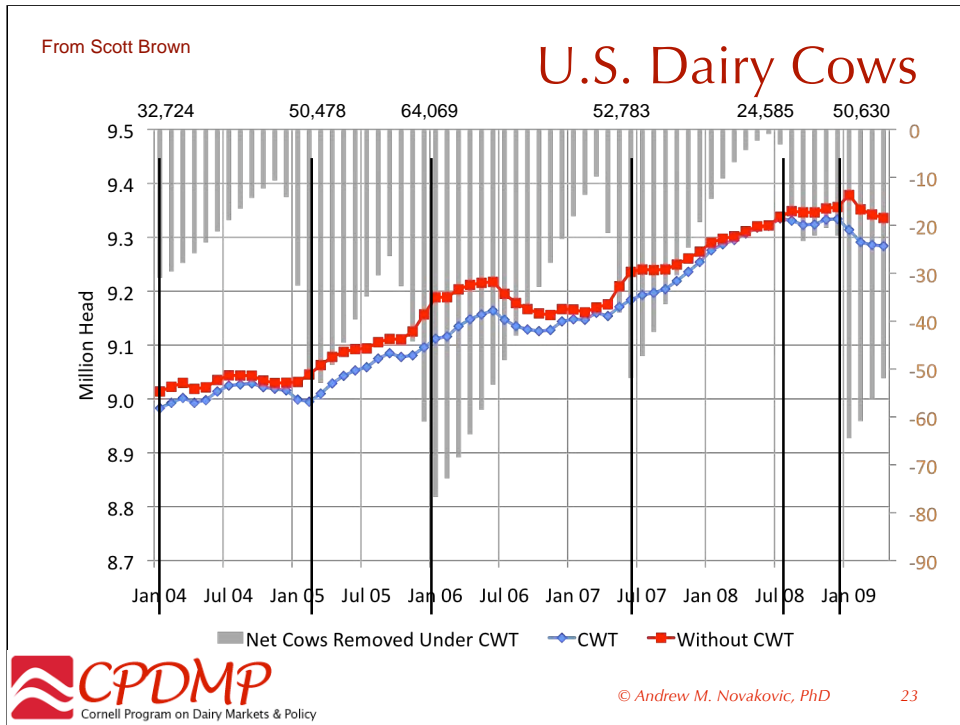
Scott Brown, PhD

Food and Agricultural Policy Research Institute (Missouri)



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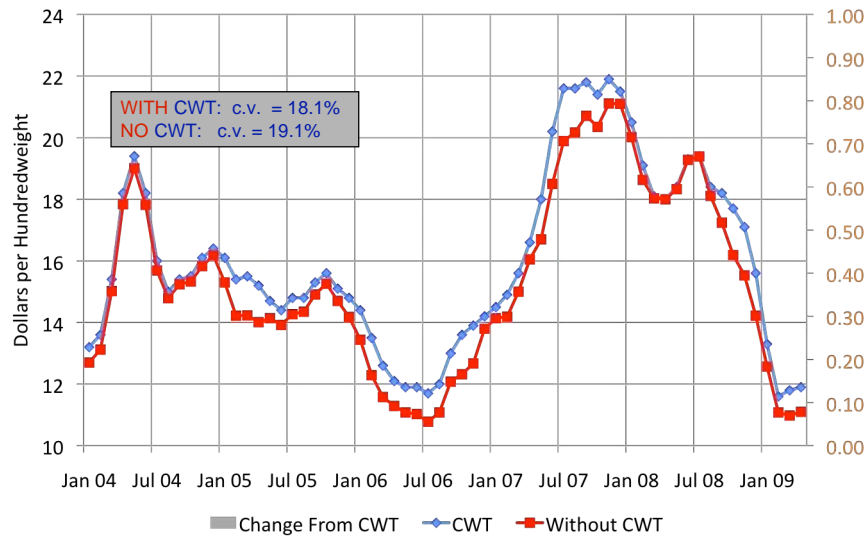
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Milk yield growth has been slowing as a result of high feed costs and declining use of rBST. The February 2008 data is not adjusted to account for leap year.

From Scott Brown

U.S. All Milk Price



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Milk yield growth has been slowing as a result of high feed costs and declining use of rBST. The February 2008 data is not adjusted to account for leap year.

CPDMP Analysis of Dairy Farmers Working Together (DFWT) Program

DFWT Program Elements

- ↳ National program, similar to CWT but mandatory
- ↳ Collect assessment from all farmers
- ↳ Use funds for herd buyouts and export subsidies (kind of like old DTP plus DEIP)

Could also use government funds

- ↳ Replaces MILC and DEIP
- ↳ Assumed savings of \$250 million per year

Analysis of DFWT Program: Results

DFWT program reduced price variation

- After two-year “adjustment period”
- With assessments \$0.10 to \$0.15 per cwt
- \$0.12 to \$0.20 / cwt reduction in average deviation

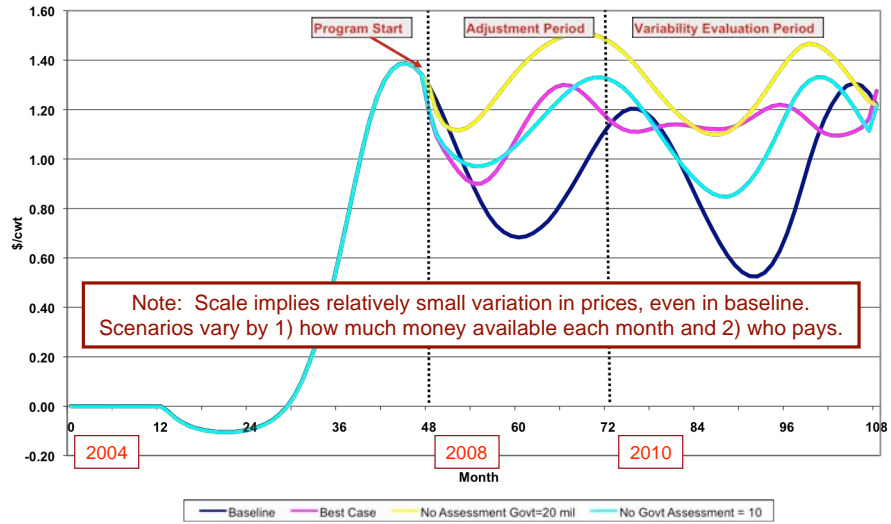
DFWT program increased average all-milk price

- \$0.16 to \$0.34 per cwt
- A bit less than Dr. Brown’s estimate for CWT (different analysis, different model)

Increased net imports of NDM, cheese, whey

DFWT program would need to operate continuously to reduce price variation

Producer Price Difference From Baseline with DFWT Program, Various Assumptions



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CA MPC Growth Management Plan

Set an allowable annual % growth in milk

If milk is more than the amount a year ago plus allowable growth, the farm pays a “market access fee” per cwt on all milk produced

Pool the money collected as market access fees

Pay refunds to farms that did not exceed the allowable growth



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The Growth Management Program would be mandatory but producers can choose to produce any amount of milk for the market. An allowable growth rate would be announced perhaps quarterly, possibly yearly, or maybe just set and not changed very often—we examine each of those scenarios. An individual farm (facility identified by pool number or bulk tank unit) would compare their quarterly milk production against their production in the same period the prior year. If that production exceeded the allowable annual growth rate, that facility would be assessed a “market access fee” per cwt on all milk produced at that facility. The allowable growth rate would be selected to minimize milk price volatility. Under most circumstances, the growth rate would be positive and accommodate the growth in demand for dairy products. Under an extreme circumstances, it could be negative to recover from a price shock.

Key Decisions for GMP

What is the size of the Market Access Fee?

What % production increases are allowed?

- Should these, could these change over time?
- Who gets to decide?

CPDMP Analysis of GMP

Three basic questions:

Can it make milk prices more stable relative to regular variation due to cycles?

Can it make milk prices more stable relative to unexpected shocks?

↳ Feed Costs, Demand

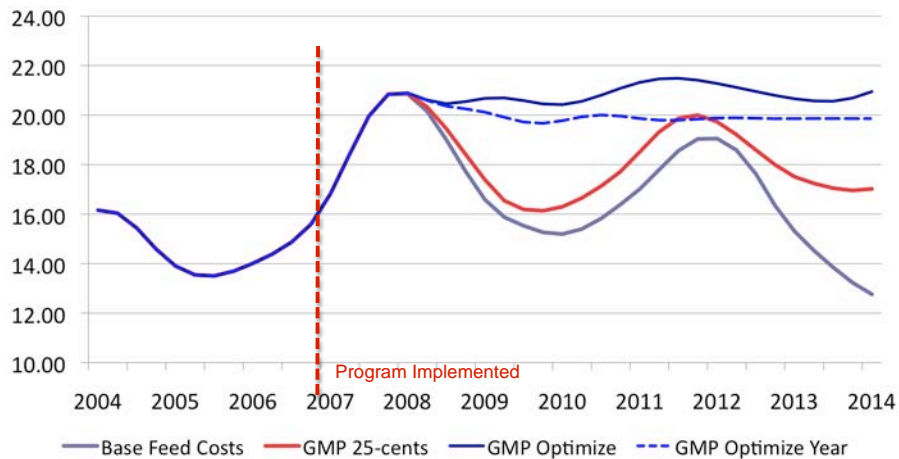
What are the levels of Market Access Fees and % growth that achieve more stable prices?

↳ How often might need to change them?

↳ How stable

GMP and Feed Cost Increase

All-Milk Price, \$/cwt, With Increased Feed Cost



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This set of scenarios differs from the previous graph in that the feed price shock of 2006-2007 was included. You can see the impact with a 2008 price peak that is much higher than baseline scenarios without the feed price shock. Again, the GMP significantly reduces the price volatility in all cases but the ability to alter the market access fee and allowable growth provides the most stability and rapid recovery from this magnitude of shock.

GMP and Feed Cost Increase

	Baseline with Feed Cost Increase, No GMP	Baseline with Feed Cost Increase Minimize Variation with Annual Changes	Difference from Baseline with No GMP
Market Access Fee, \$/cwt	--	0.74*	--
Allowable Growth, %/year	--	2.7%*	--
Refund, Qualifying Milk, \$/cwt	--	0.61	--
Average all milk price, \$/cwt	17.02	19.84	2.82
Coefficient of variation, %	12.9%	3.6%	-9.3%

* Indicates varies over time

Reduction in variation, increase in all-milk price

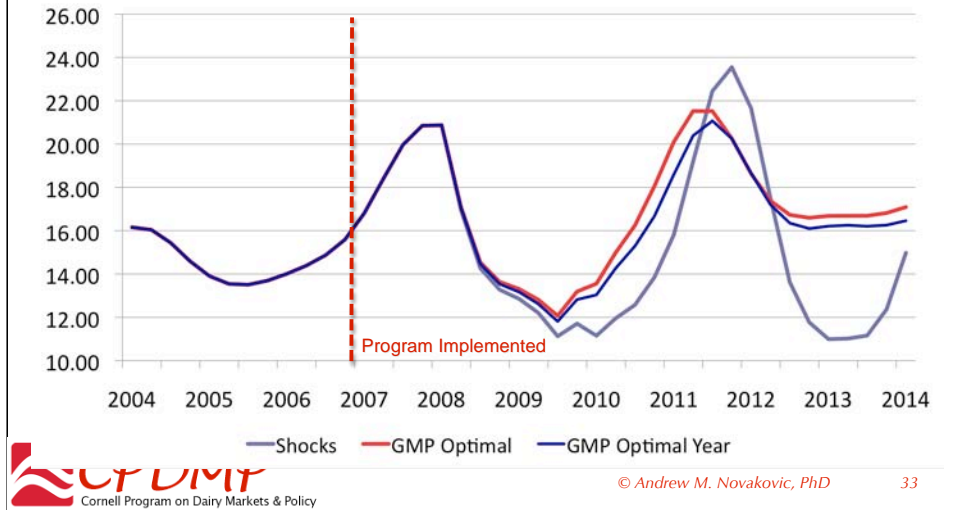


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GMP with Feed & Demand Shocks

All-Milk Price, \$/cwt, Scenarios with Shocks



Lastly, we combine the underlying price cycles and the feed shock with the demand shock of 2008-2009 (global recession). You can see that the impact of the demand shock causes the price drop to be nearly \$4.00 lower than before—it is a severe shock. It is also the case that while the GMP elevates the trough somewhat, it cannot provide complete protection from such an unanticipated event. Although it may be somewhat difficult to detect from the graph, a shock of this magnitude partially “resets” the underlying cycles which begin again at a slightly different time period. The GMP does substantially aid in the recovery after the shock (years 2013-2014) by again smoothing the price variation from underlying volatility.

GMP with Feed & Demand Shocks

	Demand and Feed Costs Shocks, No GMP	Demand and Feed Costs Shocks, Minimize Variation with Annual Changes	Difference from Baseline with No GMP
Market Access Fee, \$/cwt	--	0.32*	--
Allowable Growth, %/year	--	1.5%*	--
Refund, Qualifying Milk, \$/cwt	--	0.46	--
Average all milk price, \$/cwt	15.34	16.44	1.10
Coefficient of variation, %	26.0%	16.5%	-9.5%

* Indicates varies over time



Still fairly large variation

Reduction in variation, smaller increase in all-milk price

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GMP Summary

Basic findings:

GMP could decrease variability

- ↳ Less effective for a demand shock

GMP would increase farm prices

- ↳ 8 to 21%, depending on scenario
- ↳ Larger % increases under Holstein Association proposal (larger MAF)

Issues:

Impacts on trade

Impacts of price enhancement

- ↳ Asset values
- ↳ Sales and growth

Implementation

- ↳ Cheating!
- ↳ Transfer of "base"
- ↳ Setting growth and MAF

Regional distribution

Interactions with CWT

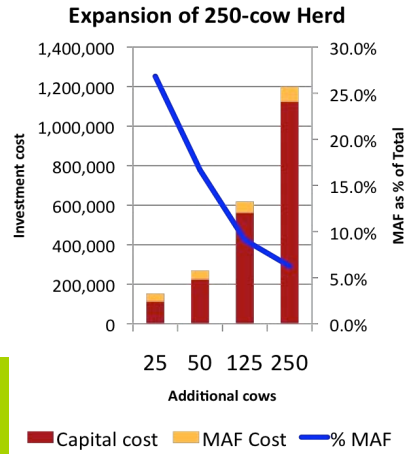
Incentives for expansion?

Incentives for Expansion?

Payment of MAF is on ALL milk, rather than "extra" milk

MAF as a proportion of expansion cost decreases for larger expansions

Will this encourage expansions to be larger?
Should MAF be based on changes in production?



Concluding Comments

A GMP could reduce price variability

Additional analyses of growth management programs should be undertaken to address the unresolved issues

↳ Broader perspective on impacts and implementation challenges is needed

For more information:

Nicholson and Stephenson. An Analytical Review of a Growth Management Plan for Dairy Producers. Cornell Program on Dairy Markets and Policy. May 2009

www.cpdmp.cornell.edu/CPDMP/Pages/Publications/Pubs/GMP_Report.pdf



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Personal Firm Strategies for Risk Management

Mark Stephenson, PhD
Cornell University
June 2009



Basic price risk management tools:

Hedging: To establish a fixed base milk price.

Put Options: To create opportunity to establish a floor base milk price.

Cash Forward Contract: To establish a fixed base milk price, or floor base milk price for one or more months.

Forward Contract - an alternative: establish both the price and the quantity

Advantages of hedging as a risk management tool:

- Achieves a “specific” price or profit objective
- Can get out if market changes, or use an advanced strategy
- Not tied to a milk buyer

Disadvantages:

- Margin account and margin calls
- Forgo opportunity for rising milk prices.

Advantages of buying a Put option as a risk management tool:

Protects against a price decline and leaves open the opportunity for higher prices.

No margin money or margin calls.

Disadvantages:

If prices fall, net mailbox price usually lower than if hedged because of an out-of-the-money PUT plus premium paid.

Cash Forward Contracting:

Milk plants have recently offered producers two types of cash forward contracts:

1. **Fixed base contract:** This is a Class III base contract. The producer receives all other premiums and discounts as before. This is similar to if a producer hedged.
2. **Floor base contract:** This establishes a floor on the Class III price. The producer receives all of the premiums and discounts as before. This is similar to if the producer bought a PUT option.

Advantages of cash forward contracting as a risk management tool:

Flexible in terms of quantities of milk protected

Can protect a specific milk price or profit objectives; or a floor mailbox price.

Simple to use—no broker account or margin money

Disadvantages:

Locked into a milk buyer

With fixed price contract, can't get out if market changes

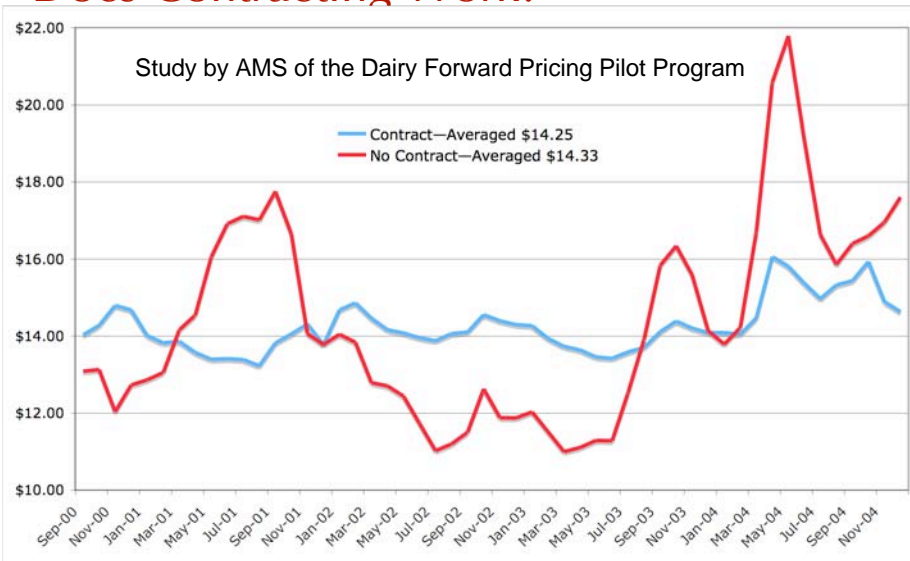
Forgo opportunity for higher prices with fixed price contract.



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Does Contracting Work?



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Most Significant Need

Dairy Farmers should have a Marketing Plan!

- Firms should have a roadmap for action, what I will do if/when
- Think through a course of action when you have time to think rationally and thoughtfully

A Marketing Plan is part of and consistent with an overall business plan

An Overview of the Livestock Gross Margin Insurance Program for Dairy



Brian W. Gould, PhD
Associate Professor
Department of Agricultural and Applied Economics
University of Wisconsin-Madison

June 2009

Understanding Dairy Markets

Your Source for Market Information and Price Risk Management Principles

LGM-Dairy: An Overview

- Unlike traditional dairy price risk management system LGM-Dairy establishes a floor on *Gross Margins*
 - $GM \equiv \text{Imputed Milk Revenue} - \text{Imputed Feed Costs}$
 - ✓ Manages risk from both milk price and feed costs
- Class III, corn, and SBM futures settlement prices determine expected prices at insurance sign-up and actual prices when contract matures
 - Prices received/paid by producer not used
 - No actual futures/options market activity
- 11-mo. insurance period (*up to 10 covered mo.*)

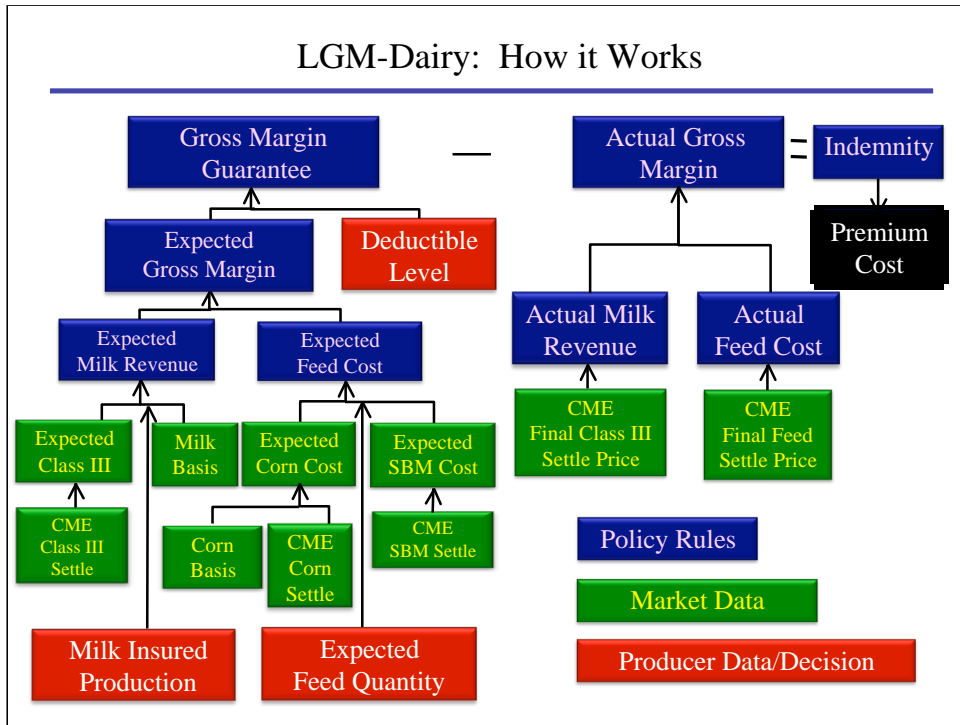
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LGM-Dairy: An Overview

- *LGM-Dairy* similar to use of a bundled option risk management system
 - Sets milk revenue *floor* and feed cost *ceiling*
 - ✓ Put option limits milk price downside risk
 - ✓ Call option limits feed cost upside risk
- Unlike use of Class III, Corn or SBM options:
 - No contract size lumpiness
 - ✓ *LGM-Dairy* is customizable as to amount of milk covered
 - ✓ Upper limit of 240,000 cwt over 10 months: Approximate production from farm with 900 cows and 22,500 lbs/cow
 - ✓ Any portion of a month's production can be covered
 - Can use LGM-Dairy to insure *any month(s)*

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LGM-Dairy: How it Works



LGM-Dairy: Insurance Premium

- Unlike Crop Insurance *No Producer Premium Subsidy*
 - USDA uses a complex process, developed by Iowa State agricultural economist to determine an “actuarially fair” premium that is based on an expected payout at the time of sign-up

- UW analysis indicates that LGM-Dairy is much cheaper than use of traditional options to floor dairy net revenue under most circumstances/deductibles

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LGM-Dairy: Coverage Calendar

- Example: Purchase insurance in June '09

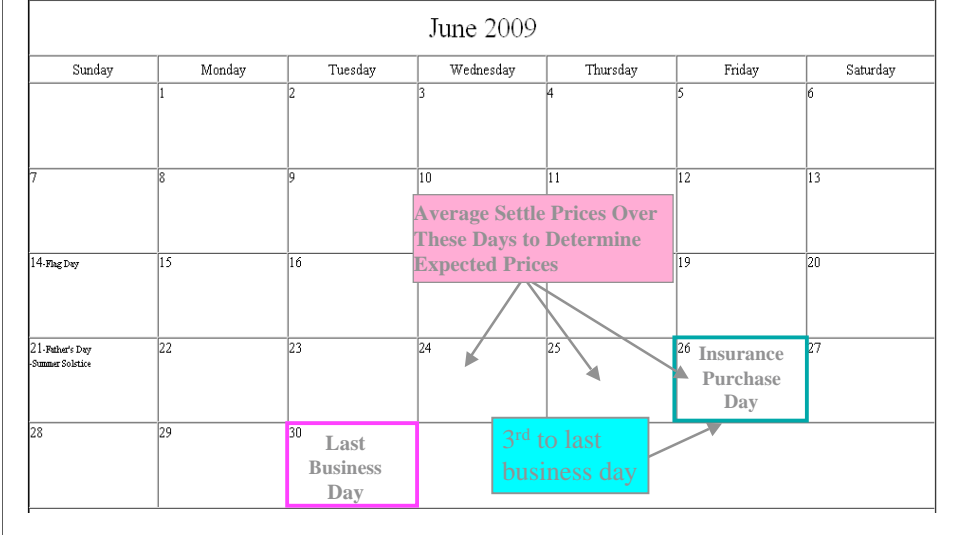
Possible Production Months Covered

June '09	Jul '09	Aug '09	Sep '09	Oct '09	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10
		1	2	3	4	5	6	7	8	9	10
Purchase at End of Month	No Coverage	Insurance Contract Period									
Covered Months		Aug 50%	Sep 25%	Oct 75%				Feb 50%	Mar 90%	Apr 100%	

Can overlap covered months with additional insurance contracts so long as production does not exceed 100%

LGM-Dairy: June 2009 EPM Period

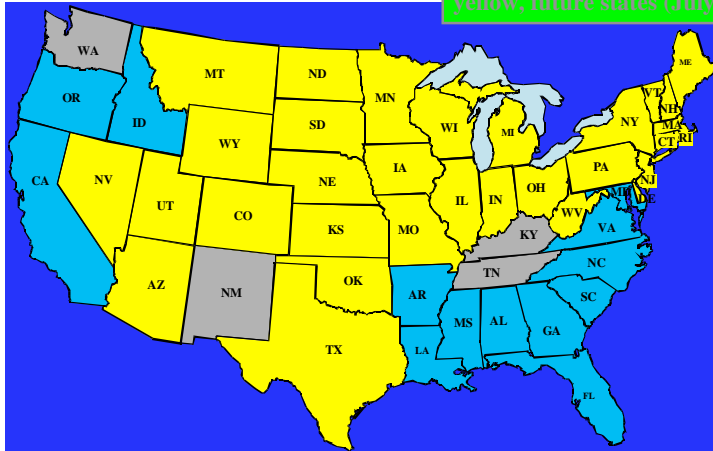
- Insurance contract purchased on June 26th



LGM-Dairy: An Overview

- Who is eligible to purchase LGM-Dairy?

LGM-Dairy eligible states shown in yellow, future states (July 2009) in gray



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LGM-Dairy: Summary

- LGM-Dairy is a flexible insurance program
 - Need not insure all months or all monthly production
 - May make sense to overlap contracts for same month
- Covers Margin, not milk price
 - Analogous to simultaneous use of Class III puts and corn/SMB call options
 - Premiums compared to option costs are reasonable
 - Premiums are very sensitive to deductible
- LGM-Dairy drawbacks
 - Short sign-up window at the end of each month
 - Total contract premium is due at sign-up

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Contact Information

- University of Wisconsin Dairy Marketing Website:
<http://future.aae.wisc.edu>
- Livestock Gross Margin Insurance:
http://future.aae.wisc.edu/lgm_dairy.html
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