

Dairy Programs in the 2013 Farm Bill: How would they work for *your* farm?

**Dr. Marin Bozic
University of Minnesota**

**National Dairy Producers
Conference
April 8, 2013 - Indianapolis, IN**

The scope of today's talk

- “Is the Dairy Security Act a good program?”
- “If this program becomes the law, is it good for me to participate?”

These are different questions. Today we focus on the second question.



Outline

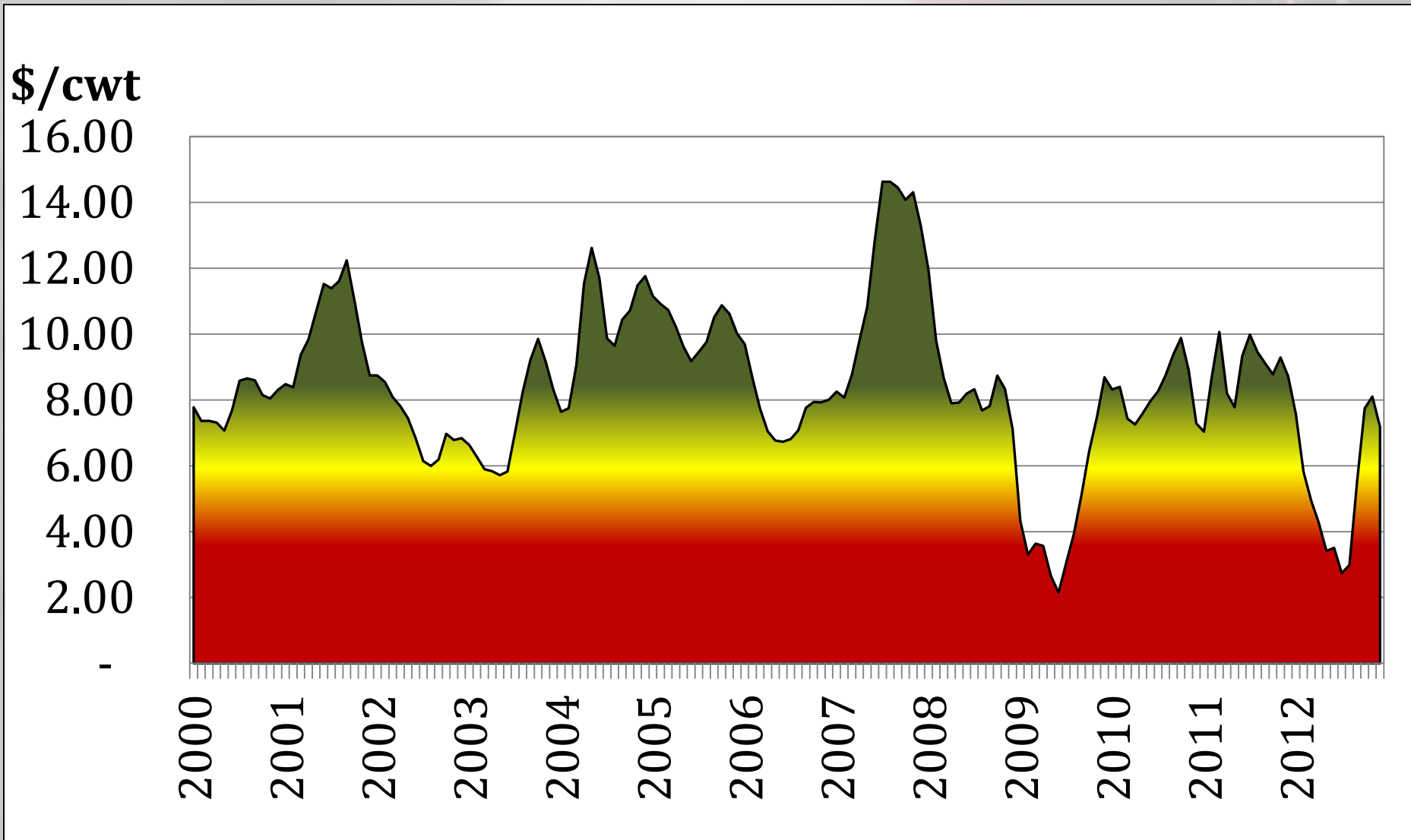
- Understanding the impacts of participating in new dairy programs for *your* farm.
- What I heard doing DSA case studies
- Planned extension activities once farm bill is passed.



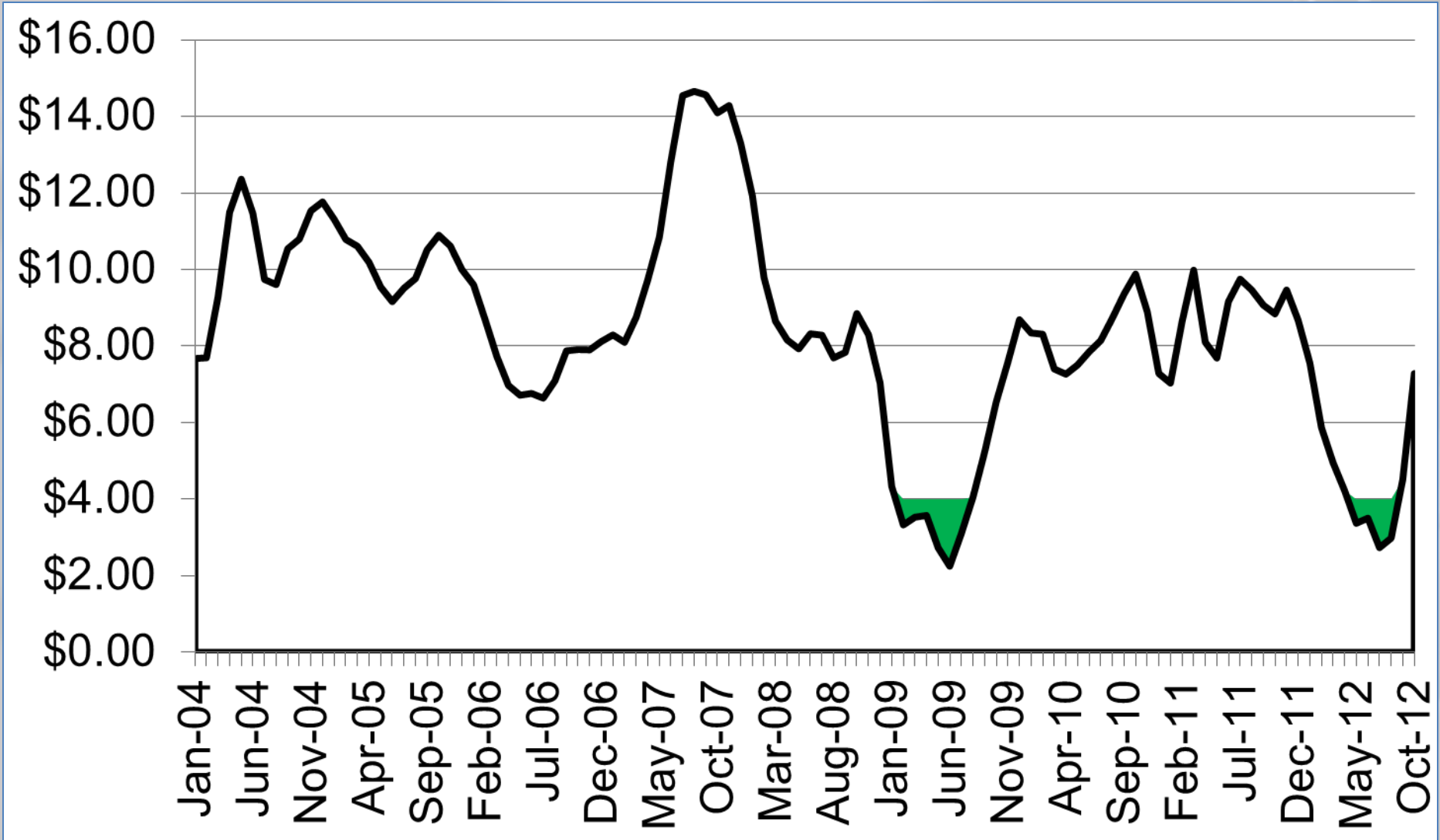
Four angles to DSA participation decision

1. Catastrophic Risk Insurance
2. Revenue Enhancement
3. Stabilization Program Impacts on Your Farm
4. Policy Risk

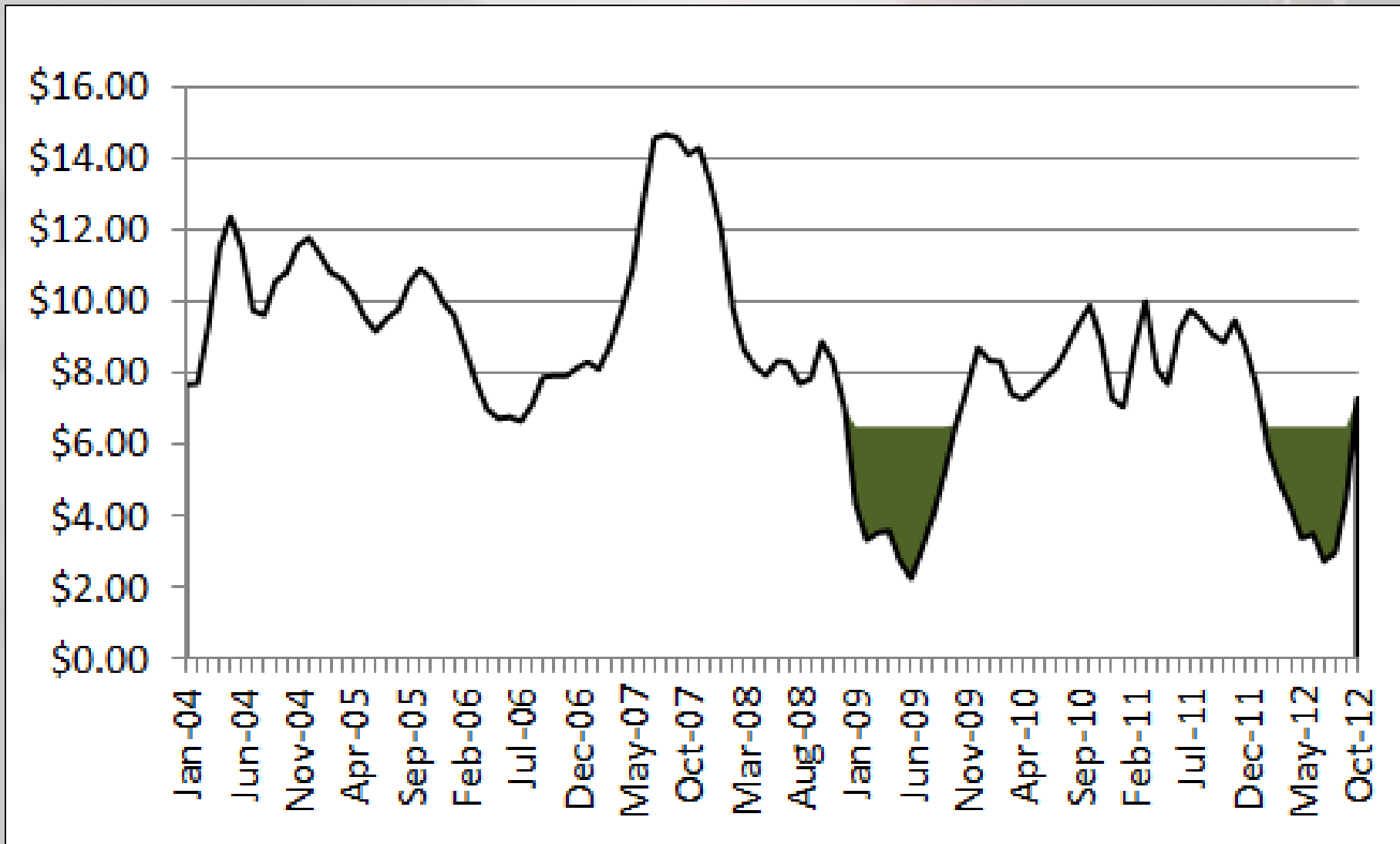
1. Catastrophic Risk Insurance



What \$4.00 margin insurance covers...



What \$6.50 margin insurance covers...



Consider a \$150 cow farm dairy...

2013 Expected production: 3,235,296 lbs

Happy IOFC margin: \$8.00/cwt

Happy IOFC revenue: \$258,824

Basic Margin Coverage: 2,562,610 lbs

Supplemental Coverage: 2,882,937 lbs

Bad memories:

2009 IOFC margin: \$4.52

2012 IOFC margin: \$5.31

Expected impacts of DSA on a 150 cow farm in 2013 (based on information on Apr 02)

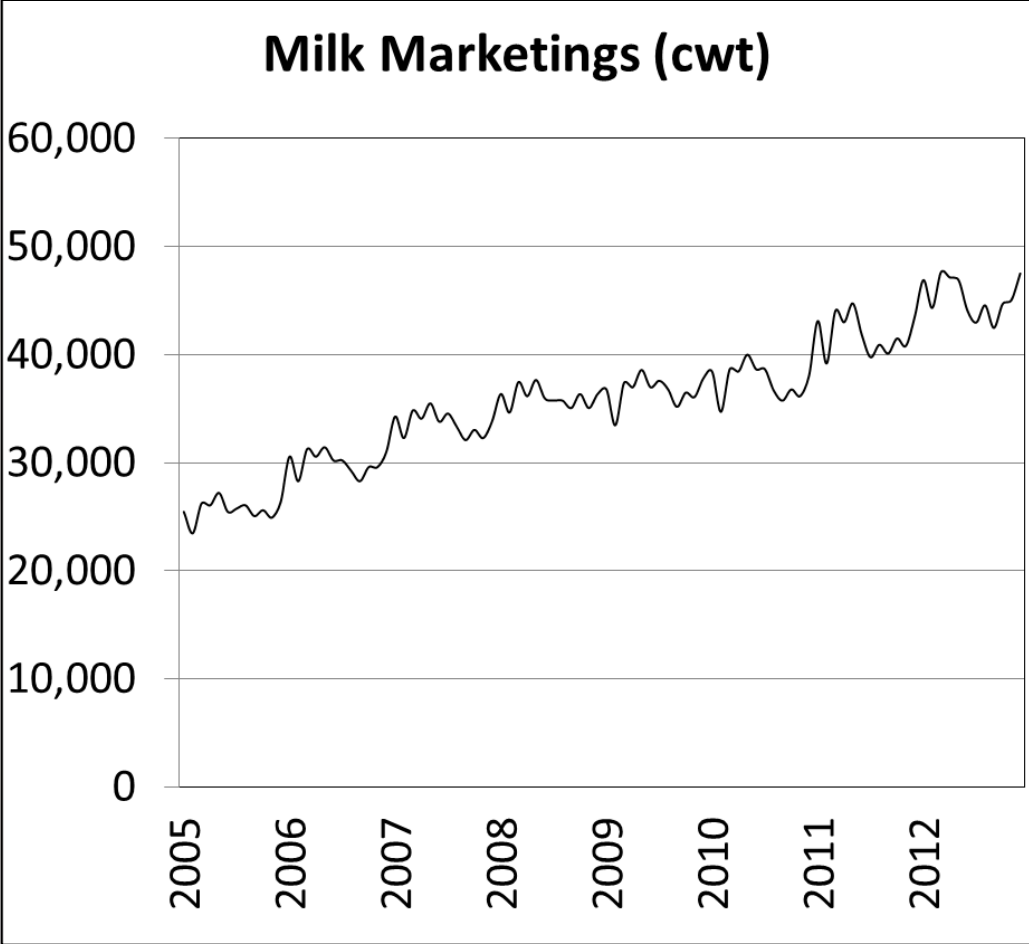
Coverage Level	Fees & Premium	Expected Indemnity	DMSP Penalty*	DMSP Price Boost*	Net Return (Excluding DMSP Boost)
\$4.00	250	78	2,807	1,622	(2,980)
\$4.50	538	189	2,807	1,622	(3,157)
\$5.00	971	447	2,807	1,622	(3,187)
\$5.50	1,403	1,283	2,807	1,622	(2,783)
\$6.00	2,124	3,588	2,807	1,622	(767)
\$6.50	2,845	7,136	2,807	1,622	1,484
\$7.00	12,762	11,614	2,807	1,622	(2,975)
\$7.50	17,259	17,198	2,807	1,622	(3,157)
\$8.00	26,831	24,066	2,807	1,622	(6,379)

- 3-Month Stabilization base and boost based on DMSP “highly effective” scenario: demand elasticity of -0.2, participation of 75%, and 0 leakage.
- DMSP Price Boost figures are highly sensitive to parameterization and should be taken as highly uncertain.

What would \$6.00 coverage level mean under different margin scenarios.

Average Annual Simulated Margin	Milk Check Shortfall relative to "Happy"	Average Simulated Indemnity	DMSP Penalty*	DMSP Price Boost*	Probability this would happen
Less than \$5.00	(104,494)	36,618	(8,626)	11,101	0.32%
\$5.00-\$6.00	(74,240)	16,584	(6,054)	6,615	3.96%
\$6.00-\$7.00	(45,992)	6,459	(3,570)	2,625	17.84%
\$7.00-\$8.00	(15,914)	2,654	(2,573)	1,207	31.00%
Over \$8.00	32,100	1,792	(2,359)	1,028	46.88%

2. Revenue Enhancement



Year	Pounds shipped
2005	30 mil
2006	35 mil
2007	40 mil
2008	43 mil
2009	44 mil
2010	45 mil
2011	50 mil
2012	55 mil

‘North Star Dairy’ has been growing up to 2000 cows

Passive participation: Always insure \$6.50

Year	Fees & Premium	Expected Net Revenue	Realized Net Revenue
2008	\$79,579	(283)	(79,579)
2009	\$85,526	384,336	559,769
2010	\$87,085	(74,798)	(87,085)
2011	\$89,331	173,387	(89,331)
2012	\$99,996	31,928	239,140
Cumulative Net Revenue		514,570	542,914

Premiums are subsidized because cumulative expected net revenue on passive participation strategies is positive and substantial.

Consider a cellphone insurance.



- Let's say that the insurance against accidental damage is \$30. Assume that \$30 is “actuarially fair” price.
- Now amend the contract just a little bit. Insert only one sentence. “*Coverage period can be started retroactively up to 24 hours.*”
- What is the fair premium now?

Consider a cellphone insurance.



- If you can start insurance “yesterday”, then you will only buy “insurance” after the screen is already broken.
- Suddenly the same \$30 premium becomes very heavily subsidized, even though we did not change the nominal cost to the insurance buyer!

How would proposed programs work for you?

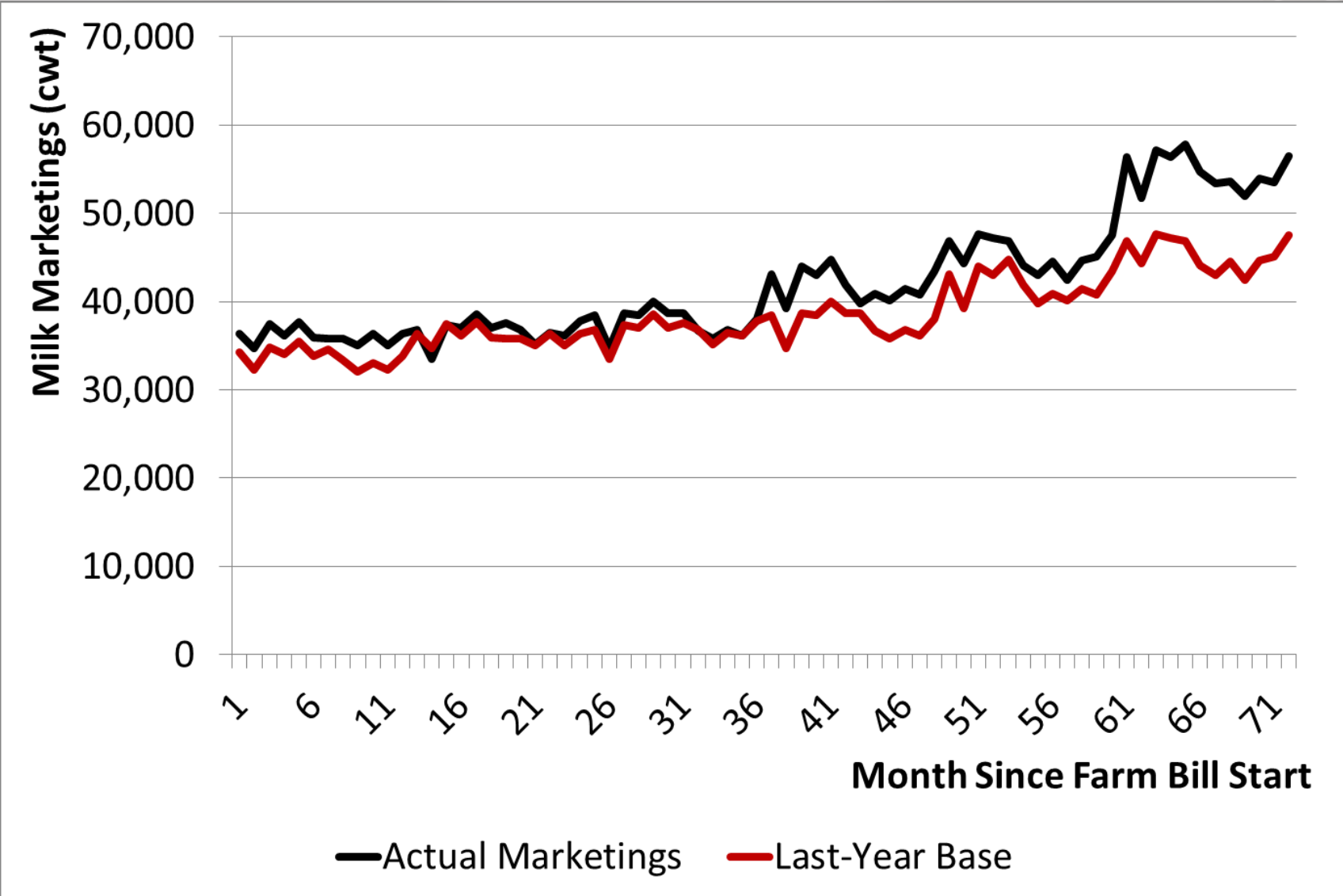
Coverage Level	Premium Per Cwt (under 4 mil lbs)	Premium Per Cwt (over 4 mil lbs)
\$4.00	\$0.000	\$0.000
\$4.50	\$0.010	\$0.015
\$5.00	\$0.025	\$0.036
\$5.50	\$0.040	\$0.081
\$6.00	\$0.065	\$0.155
\$6.50	\$0.090	\$0.230
\$7.00	\$0.434	\$0.434
\$7.50	\$0.590	\$0.590
\$8.00	\$0.922	\$0.922

Active participation: Change coverage level to account for available information.

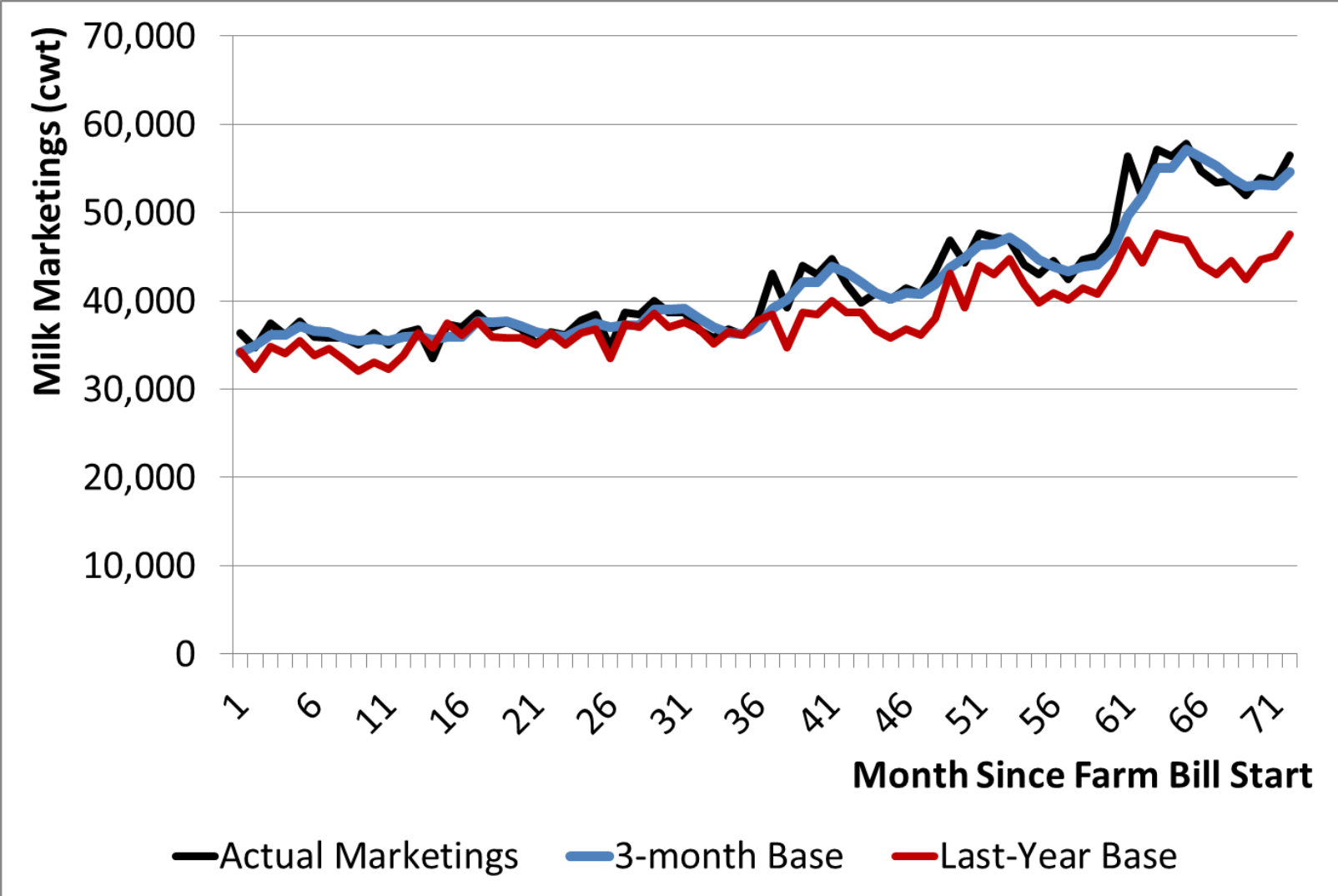
Year	Opportunistic Coverage Level Choice	Fees & Premiums	Expected Net Revenue	Realized Net Revenue
2008	\$5.50	28,972	(3,080)	(28,972)
2009	\$7.00	170,008	445,967	636,519
2010	\$5.50	31,616	(29,795)	(31,616)
2011	\$6.50	\$89,331	173,387	(89,331)
2012	\$6.50	\$99,996	31,928	239,140
Cumulative Net Revenue			618,407	725,740

Expected net revenue increased 20%, realized up 33%.

3. Impact of Stabilization Program on Your Farm



3. Impact of Stabilization Program on Your Farm

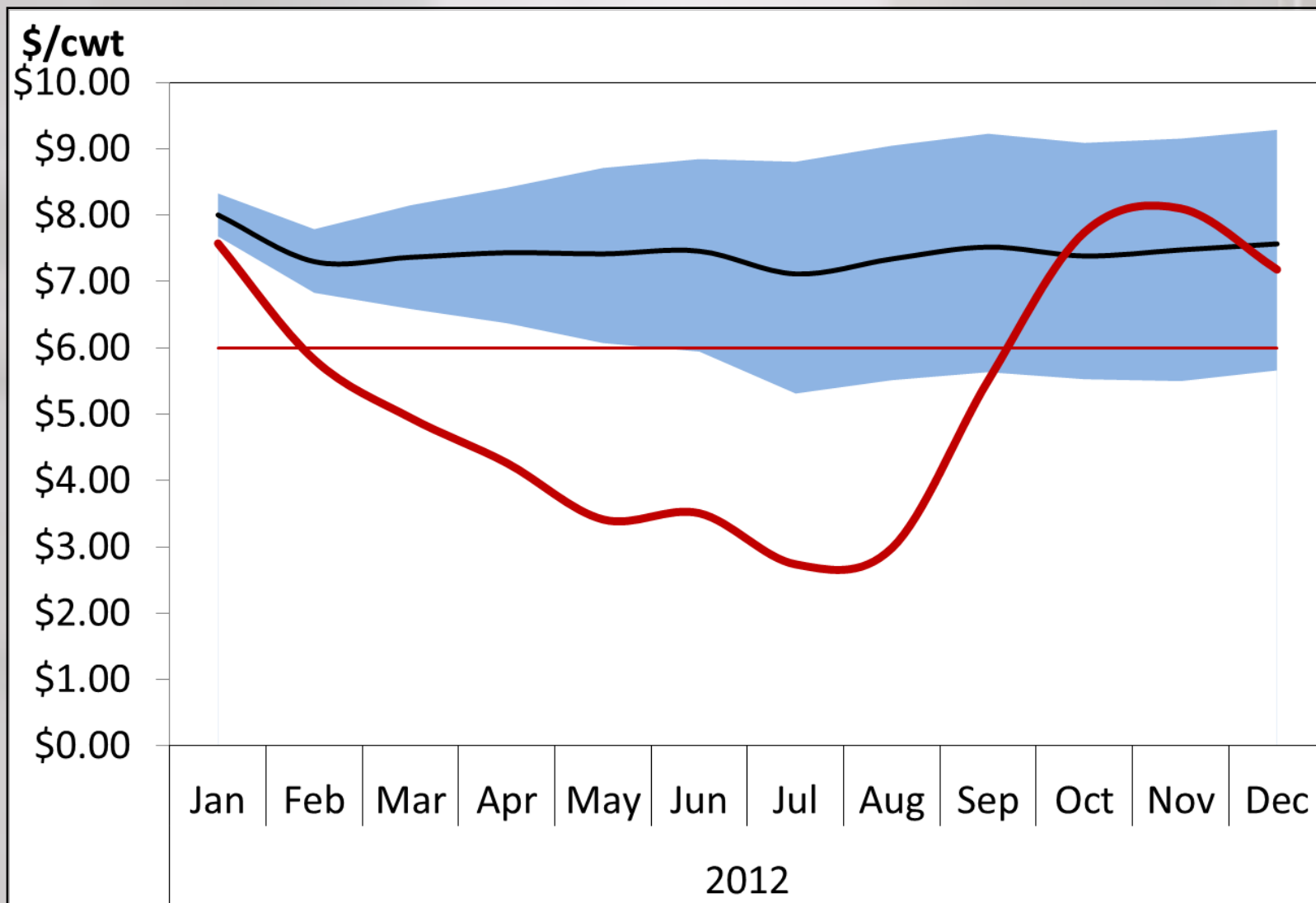


3. Impact of Stabilization Program on Your Farm

Some concerns producers shared with me:

- “You cannot turn a cow on and off.”
- “I tried culling in 2009, but I ended up with more milk as my barns were initially overcrowded.”
- “This will be a major distraction for farmers. They will do their circles trying to avoid the penalty and lose focus from important issues.”

4. Policy Risk: Only government will sell you insurance against *expected* low margins.



4. Policy Risk: Looking Inside Out vs. Looking Outside In



In summary

Is the need for catastrophic risk insurance satisfied with the proposed policy reforms?

- **Yes. Programs effectively reduces extreme margin risk.**

Do proposed policy reforms enhance revenue?

- **Yes. Premiums are affordable even when utilizing passive risk management strategies.**

Will Dairy Market Stabilization Program hurt me?

- **You have to figure it out for your operation. Stabilization base can follow closely growing milk marketings.**

Is there a 'policy risk' – will proposed reforms increase milk supply and reduce milk prices?

- **If *you* believe that 'policy risk' is non-negligible, you should evaluate if staying outside the DSA could hurt you.**

Dairy Security Act Decision Tool

Learn more about the [DSA Decision Tool](#) project here.

See a video (10 min) about the using the [DSA](#) tool here. The video should stream in most browser versions greater than and including: Firefox 3.5, Chrome 3, Internet Explorer 9, Safari 3, Opera 10.5, and IOS (iPhone, iPad, etc.) devices.

Log Off

Update Contact Info

Update Milk Production & Prices

Forecast Margin

Game

You need to enter your monthly milk production for the last 3 calendar years and the farm milk price received. This will be used to determine your Basic Production History and the basis for your forecast milk price.

<i>Edit Your Data</i>		
<i>Year</i>		
2011	<i>Pounds Milk Sold</i>	<i>Farm Milk Price</i>
Jan-2011	<input type="text" value="1,446,385"/>	<input type="text" value="16.36"/>
Feb-2011	<input type="text" value="1,283,387"/>	<input type="text" value="19.49"/>
Mar-2011	<input type="text" value="1,401,269"/>	<input type="text" value="21.96"/>
Apr-2011	<input type="text" value="1,346,419"/>	<input type="text" value="19.93"/>
May-2011	<input type="text" value="1,419,977"/>	<input type="text" value="19.71"/>
Jun-2011	<input type="text" value="1,303,956"/>	<input type="text" value="21.40"/>
Jul-2011	<input type="text" value="1,397,624"/>	<input type="text" value="22.36"/>
Aug-2011	<input type="text" value="1,297,196"/>	<input type="text" value="23.13"/>
Sep-2011	<input type="text" value="1,286,266"/>	<input type="text" value="21.62"/>
Oct-2011	<input type="text" value="1,394,557"/>	<input type="text" value="20.76"/>
Nov-2011	<input type="text" value="1,391,503"/>	<input type="text" value="21.35"/>
Dec-2011	<input type="text" value="1,465,883"/>	<input type="text" value="20.88"/>

Date	Pounds Sold	Milk Price
1/1/10	1,454,923	\$16.25
2/1/10	1,291,768	\$16.07
3/1/10	1,400,639	\$14.82
4/1/10	1,350,221	\$14.98
5/1/10	1,360,105	\$15.38
6/1/10	1,368,588	\$15.43
7/1/10	1,400,022	\$15.56
8/1/10	1,363,464	\$16.62
9/1/10	1,366,449	\$17.83
10/1/10	1,369,109	\$19.07
11/1/10	1,324,780	\$17.91
12/1/10	1,400,025	\$16.42
1/1/11	1,446,385	\$16.36
2/1/11	1,283,387	\$19.49

Dairy Security Act Decision Tool

Learn more about the [DSA Decision Tool](#) project here.

See a video (10 min) about the using the [DSA](#) tool here. The video should stream in most browser versions greater than and including: Firefox 3.5, Chrome 3, Internet Explorer 9, Safari 3, Opera 10.5, and IOS (iPhone, iPad, etc.) devices.

Log Off

Update Contact Info

Update Milk Production & Prices

Forecast Margin

Game

2008, Hilly Acres Dairy

Market Stabilization Production Pattern

- Same Month Previous Year
- Trailing 3 Months

% of APH protection

\$4.00 of margin covered



Basic Margin Protection: No cost

Supplemental Protection: None

Administrative Fees: \$250

Total Annual Cost: \$250

The date is January 15, 2008. Your Basic Production History is 8,894,722 pounds of milk produced in 2007. 80 percent of your BPH will be protected at a \$4 margin at no cost. Last year's Annual Production History was 8,894,722. You can choose to protect between 25-90 percent of your APH with a supplemental coverage margin of between \$4.50-\$8.00 at an increasing premium cost. Please choose your strategy given the information from the futures markets below and then press "End of Year Report"

Coverage Level	Fee & Premium	Exp Indemnity	DMSP Penalty	Net Revenue
\$4.00	\$250	\$6,054	\$14,275	\$-8,471
\$4.50	\$472	\$7,824	\$14,275	\$-6,924
\$5.00	\$806	\$10,607	\$14,275	\$-4,474
\$5.50	\$1,139	\$14,749	\$14,275	\$-665
\$6.00	\$1,695	\$20,349	\$14,275	\$4,378
\$6.50	\$2,251	\$27,932	\$14,275	\$11,406
\$7.00	\$9,901	\$37,542	\$14,275	\$13,366
\$7.50	\$13,370	\$48,697	\$14,275	\$21,052
\$8.00	\$20,753	\$61,444	\$14,275	\$26,417

Show Graphs

End of Year Report

Decision-support tools will be ready on Day 1.

- **No matter which policy proposal ultimately becomes the law, D-MAP Task Force will have an interactive online decision support tool ready for you on day 1.**
- **You will be able to enter your exact milk pounds and mailbox prices, and evaluate if new federal dairy safety net helps your farm.**

Dairy Markets and Policy Farm Bill Task Force are...

John Newton, Cameron Thraen
The Ohio State University

Mark Stephenson, Brian W. Gould
University of Wisconsin-Madison

Christopher Wolf
Michigan State University

Marin Bozic
University of Minnesota

Dairy Programs in the 2013 Farm Bill: Economic Analysis and Farm-level Impacts



presented at the
2013 National Dairy Producers
Conference.

Monday, April 8, 2013
Indianapolis, IN

Dr. Marin Bozic
mbozic@umn.edu
Department of Applied Economics
University of Minnesota-Twin
Cities

You may download this
presentation at
<http://marinbozic.info/>