

# LGM-Dairy: Livestock Gross Margin for Dairy



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12th Annual Arlington Dairy Day  
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# LGM-Dairy: What is it?

- New Livestock Gross Margin for Dairy Insurance
  - Federally reinsured dairy insurance program
  - Purchased from crop insurance providers
  - Approved July 2007, available August 2008
- Protects Dairy Business against Unexpected declines in Gross Margins
  - $\text{Gross Margin} = \text{Milk Revenue} - \text{Feed Costs}$
- Revenue neutral (No subsidies)
  - $\text{Premium} = \text{Expected Indemnity}$

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# LGM-Dairy: What impacts the premium?

- Insured milk and insured feed (selected)
- Deductible level (selected)
- Average futures prices and their volatility (market determined)

**LGM-DAIRY: LIVESTOCK GROSS MARGIN INSURANCE FOR DAIRY CATTLE**

**How does it work ?**

LGM-Dairy pays the difference, if positive, between an expected gross margin guarantee and actual gross margin, where gross margin is milk price less the feed costs per cow.

The insured margins are calculated using futures prices for milk, corn and soybean meal.

Producers need to estimate the quantity of milk to be marketed, the feed quantity to be used, a deductible level and the months to insure the gross margin.

Farmers can insure any amount of milk up to 240,000 cwt per insurance period.

Deductible level ranges between \$0 and \$1.50 of the gross margin guarantee.

Insurance coverage begins one full month after the sales closing date.

LGM-Dairy is only sold on the 3<sup>rd</sup> to last business day of every month. Sales period starts at 4 P.M. the 3<sup>rd</sup> to last business day and ends at 9 A.M. the following day.

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**Additional information at:**  
[http://futures.ase.wisc.edu/lgm\\_dairy.html](http://futures.ase.wisc.edu/lgm_dairy.html)  
<http://www.uwex.edu/cei/dairy/mgt/>  
<http://www.rma.usda.gov/livestock/>

**LGM-Dairy:  
Livestock Gross Margin  
Insurance for Dairy  
Cattle**



**A New Risk Management  
Tool for Wisconsin Dairy  
Farms!**

**LGM-DAIRY: LIVESTOCK GROSS MARGIN INSURANCE FOR DAIRY CATTLE**



**What is LGM-Dairy?**


LGM-Dairy is a new insurance policy approved by the USDA Risk Management Agency available for dairy producers since August 2008.

LGM-Dairy protects producers against unexpected declines in the gross margins (milk prices less feed costs).

No producer premium subsidy is available for this insurance program, although all administrative and policy subsidies are paid by the federal government.

LGM-Dairy premiums depend on producers' marketing plan, coverage selected, deductible level, futures and price volatility. Producer premiums are average of long-run expected indemnities at sign-up.

**In which states is LGM-Dairy available?**



**States Eligible to Participate in the LGM-Dairy Program (Darker Gray), 2008**

**What are the benefits of LGM-Dairy ?**

**Convenience:** Producers can sign-up for LGM-Dairy insurance 12 times a year over a 11-month rolling period.

**Customization:** LGM-Dairy can be tailored to any size farm and to any month or months of the year.

**Bundled option insurance:** LGM-Dairy is similar to buying both a call option to limit higher feed costs and a put option to set a floor on milk prices.

**LGM-DAIRY: LIVESTOCK GROSS MARGIN INSURANCE FOR DAIRY CATTLE**

**What does LGM-Dairy not insure?**

Risk of dairy cattle death.  
Unexpected production losses.  
Unexpected increase in feed use.  
Anticipated declines in milk prices or increases in feed costs.  
Multiple years of decline in milk prices or increase in feed costs.



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# LGM-Dairy: Who is eligible?

## Milk producers of 32 states



# LGM-Dairy: What it covers?

## Prices of:

- Any milk volume of producer's target marketing for a 10-month period (up to 240,000 cwt)
- Amount of corn and soybean meal equivalents to be fed during insurance period restricted to be in range:
  - 0.00364 – 0.02912 tons corn/cwt milk
    - 0.13 – 1.04 bu corn/cwt milk
  - 0.000805 – 0.006425 tons SBM/cwt milk
    - 1.61 – 12.85 lb SBM/cwt milk



# LGM-Dairy: What it does not cover/protect?

- Production losses
- Risk of dairy cattle death
- Unexpected decrease in milk production or increase in feed use
- Multiple years of declines in milk prices or increases in feed costs
- Anticipated declines in milk prices or increases in feed costs

# LGM-Dairy: What farmer needs to decide?

Three main things to consider:

- Percentage (%) of target marketings to be insured (0% to 100%)
- Level of Gross Margin Deductible or risk assumed
  - \$0 to \$1.50/cwt in \$0.1 increments
- Months to insure

# LGM-Dairy: What farmer needs to provide?

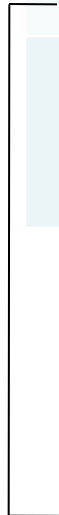
Estimates of:

- Target milk marketing per insured month
- Expected feed per insured month
  - Corn and corn equivalents
  - Soybean meal and soybean meal equivalents
  - Feed Conversion software downloadable from our website
- Verifiable records should be available



# LGM-Dairy: What is the insurance Period?

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		1	2	3	4	5	6	7	8	9	10
<b>LGM-Dairy</b>	No Coverage	<b>Insurance Coverage</b>									
<b>Selected Covered Months</b>		100%	0%	50%	50%	0%	0%	75%	100%	0%	50%



→ From 4 pm on 3<sup>rd</sup> to last business day to to 9 am following day (17-hour period)



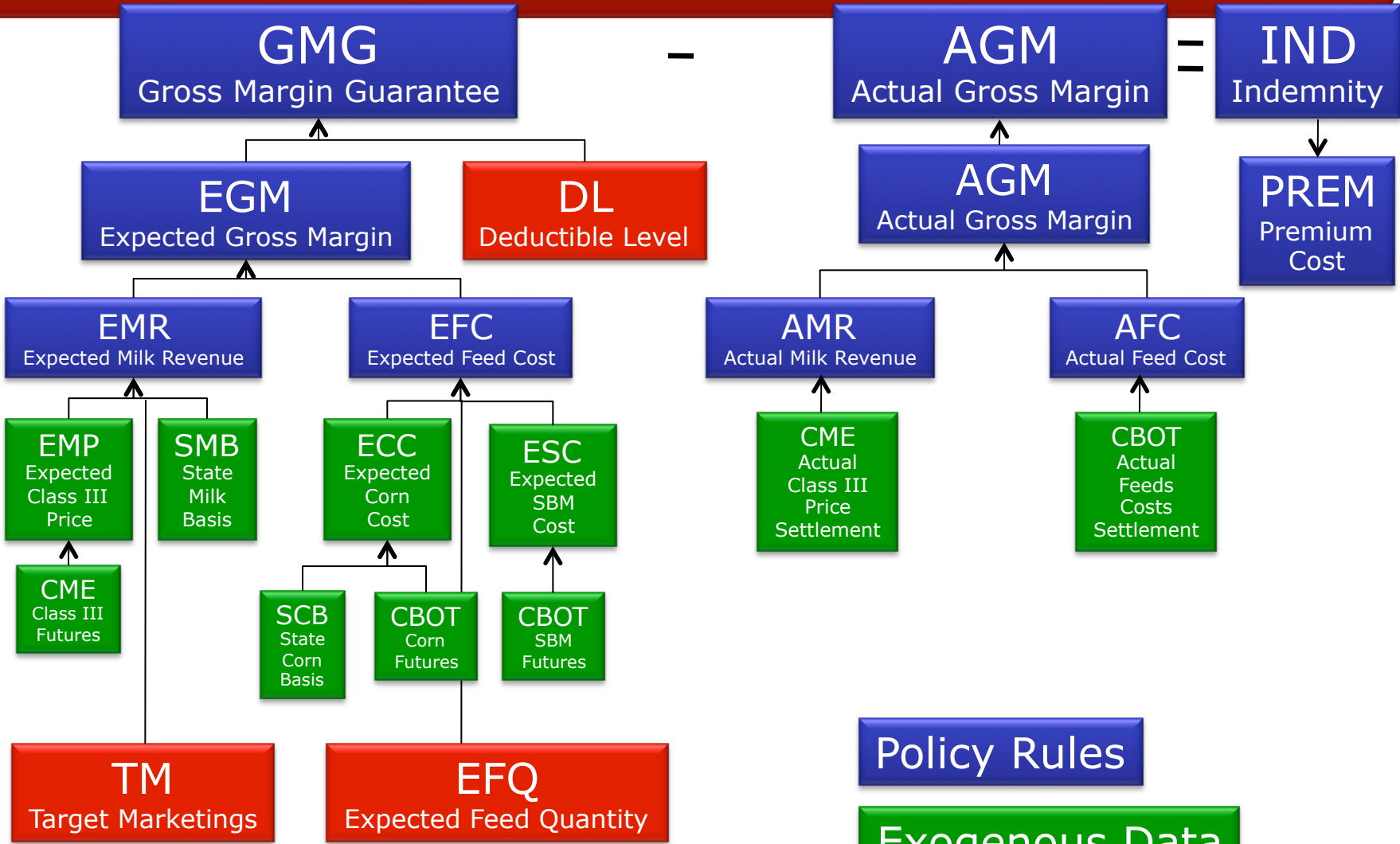
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# LGM-Dairy: How it works?



Policy Rules

Exogenous Data

Producer Data/Decision

# LGM-Dairy: What is the premium?

Premium is the average of expected indemnities in the long-run:

- Proportional to the insured milk and insured feed
- Increases with price volatility
- Decreases with elected deductible (\$0 to \$1.5/cwt in \$0.1 increments)
- Decreases when all months insured together
- Estimates available in RMA website

# LGM-Dairy: Overview

## Advantages:

- Unique bundled insurance protects the margin: milk price less feed cost
- Very flexible and customizable
- Offered every month of the year

## Drawbacks:

- Very short enrollment period
- Total premium due at sign-up
- No farmer subsidies available
- Limited capacity

# LGM-Dairy: More Information



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Understanding Dairy  
Your Source for Market Information

Home | Pub/Software | Dairy Data | Dairy Situation | Graphs | Links | FAPRI All

## Livestock Gross Margin Insurance for Dairy

This section of our website provides information concerning the LGM-Dairy program made available by the [Risk Management Agency](#) of USDA. The site will be updated as new information becomes available and related new materials are added.

As with other sections of this website by clicking on an active link, you may generate an expanded menu. To make this menu disappear, click on the link again. If you have material that you think you would find useful please contact [Prof. Brian W. Gould](#) with your suggestions.

The material contained within this site is for informational and research purposes only. The official website concerning material related to the *Livestock for Gross Margin for Dairy* program is the USDA Risk Management Agency website (<http://www.rma.usda.gov>).

- **[Background Material Made Available by the RMA](#)**  
This is a collection of information provided by USDA as to introduce the LGM-Dairy program
- **[Supporting Software](#)**  
This is a collection of spreadsheet and other software used to exemplify the use of LGM-Dairy
- **[Underlying Data](#)**  
This is a collection of data used in the implementation of LGM-Dairy
- **[Additional Material Explaining LGM-Dairy](#)**  
Background Material Related to LGM-Dairy

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Related Links

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Download a copy of the free [Adobe Acrobat Reader](#) to view and print information provided as PDF files.



## Livestock Gross Margin for Dairy: LGM - Dairy

- [Livestock Gross Margin for Dairy](#), a poster presented at the ANRE 2008 UW-Extension meeting
- [Livestock Gross Margin for Dairy](#), a two-page/three-fold brochure, Sept. 2008
- [Livestock Gross Margin Insurance for Dairy: A New Risk Management Tool Available for Dairy Producers](#), by M. Valvekar, V. Cabrera and B.W. Gould, Univ. of Wisconsin, July 2008
- [USDA's Gross Margin Insurance Program for Dairy: What is it and Can it be Used for Risk Management](#) by B.W. Gould, P. Mitchell and V. Cabrera, Univ. of Wisconsin, Aug. 2008
- [Managing the Newly Created LGM-Dairy Insurance Under Seasonal Climate Variability](#), by V.E. Cabrera and Daniel Solis, University of Wisconsin-Madison, June 2008
- [LGM-Dairy: Livestock Gross Margin for Dairy](#), a Powerpoint Presentation presented at the Eastern Wisconsin Farm Management Update Seminar, Sept. 12, 2008
- [LGM-Dairy: A Wisconsin Example](#), a Powerpoint Presentation presented at the Eastern Wisconsin Farm Management Update Seminar, Sept. 12, 2008
- [Premium Calculator](#) from RMA's
- [LGM for Cattle RMA Website](#)
- [Understanding Dairy Markets - LGM-Dairy](#)

Victor E. Cabrera, PhD, Assistant Professor and Extension Specialist in Dairy Management, is available to [contact for more information](#).

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The screenshot shows the USDA Risk Management Agency website. The header includes the USDA logo and the Risk Management Agency name. The navigation bar contains links for Home, About RMA, Field Offices, News, Opportunities, Publications, Help, and Contact Us. The main content area is titled "Livestock" and features a search bar, a "Browse by Subject" menu with "Livestock" selected, and a list of links including "2009 Livestock Gross Margin (LGM)", "LGM Cattle", and "LGM Dairy".

# LGM-Dairy: A Wisconsin Example (Nov 06)

## Contract

- Purchased Nov 26<sup>th</sup> 08
- Coverage period: Jan-Oct 09
- Feed expected to be used:
  - 39.2 lb corn/cwt milk (68% max allowable)
  - 5.05 lb of SBM/cwt milk (39% max allowable)
- Similar Example in Policy Briefing Paper of Gould, Mitchell and Cabrera Using May 2008 Data (Aug, 2008)



# LGM-Dairy: A Wisconsin Example (Nov 06)

Month	Class III Settle Price (\$/cwt)				Milk Basis (\$/cwt)	All Milk Price (\$/cwt)
	21-Nov	24-Nov	25-Nov	Avg.		
Jan `09	14.15	14.26	14.20	14.20	1.94	16.14
Feb `09	14.10	14.11	14.15	14.12	1.79	15.91
Mar `09	14.10	14.18	14.18	14.15	1.94	16.09
Apr `09	14.17	14.25	14.27	14.23	1.40	15.63
May `09	14.65	14.53	14.49	14.56	1.23	15.79
Jun `09	15.00	14.92	14.88	14.93	1.11	16.04
Jul `09	15.32	15.30	15.27	15.30	1.11	16.41
Aug `09	15.65	15.64	15.60	15.63	1.16	16.79
Sep `09	15.84	15.83	15.76	15.81	1.37	17.18
Oct `09	15.85	15.85	15.80	15.83	1.77	17.60



# LGM-Dairy: A Wisconsin Example (Nov 06)

Month	Corn Settle Prices (\$/bu)				Imputed Price (\$/bu)	Basis (\$/bu)	Local Price (\$/ bu)
	21-Nov	24-Nov	25-Nov	Avg			
Dec '08	3.385	3.545	3.535	3.488	3.49	-0.22	3.27
Dec '08	3.385	3.545	3.535	3.488	3.49	-0.22	3.27
Jan `09	-----	-----	-----	-----	3.54	-0.14	3.40
Feb `09	-----	-----	-----	-----	3.6	-0.13	3.47
Mar `09	3.5425	3.71	3.705	3.653	3.65	-0.17	3.48
Apr `09	-----	-----	-----	-----	3.71	-0.11	3.60
May `09	3.655	3.8225	3.8175	3.765	3.77	-0.12	3.65
Jun `09	-----	-----	-----	-----	3.82	-0.12	3.70
Jul `09	3.7625	3.935	3.93	3.876	3.88	-0.12	3.76
Aug `09	-----	-----	-----	-----	3.93	-0.15	3.78
Sep `09	3.8675	4.04	4.04	3.983	3.98	-0.11	3.87
Oct `09	-----	-----	-----	-----	4.05	-0.15	3.90
Dec `09	4.0075	4.1775	4.175	4.12	4.12	-0.18	3.94





# LGM-Dairy: A Wisconsin Example (Nov 06)

Month	Soybean Meal Settle Prices (\$/Ton)				Imputed Price (\$/ton)
	21-Nov	24-Nov	25-Nov	Avg.	
Jan `09	250.5	257.4	262	256.63	256.63
Feb `09	-----	-----	-----	-----	257.67
Mar `09	252.9	259.4	263.8	258.7	258.70
Apr `09	-----	-----	-----	-----	260.10
May `09	255.4	262.3	266.8	261.5	261.50
Jun `09	-----	-----	-----	-----	262,95
Jul `09	257.7	265.3	270.2	264.4	264.40
Aug `09	259.2	266.8	271.7	265.9	265.90
Sep `09	258.5	266	271	265.17	265.17
Oct `09	253.9	260.8	265.9	260.2	260.20

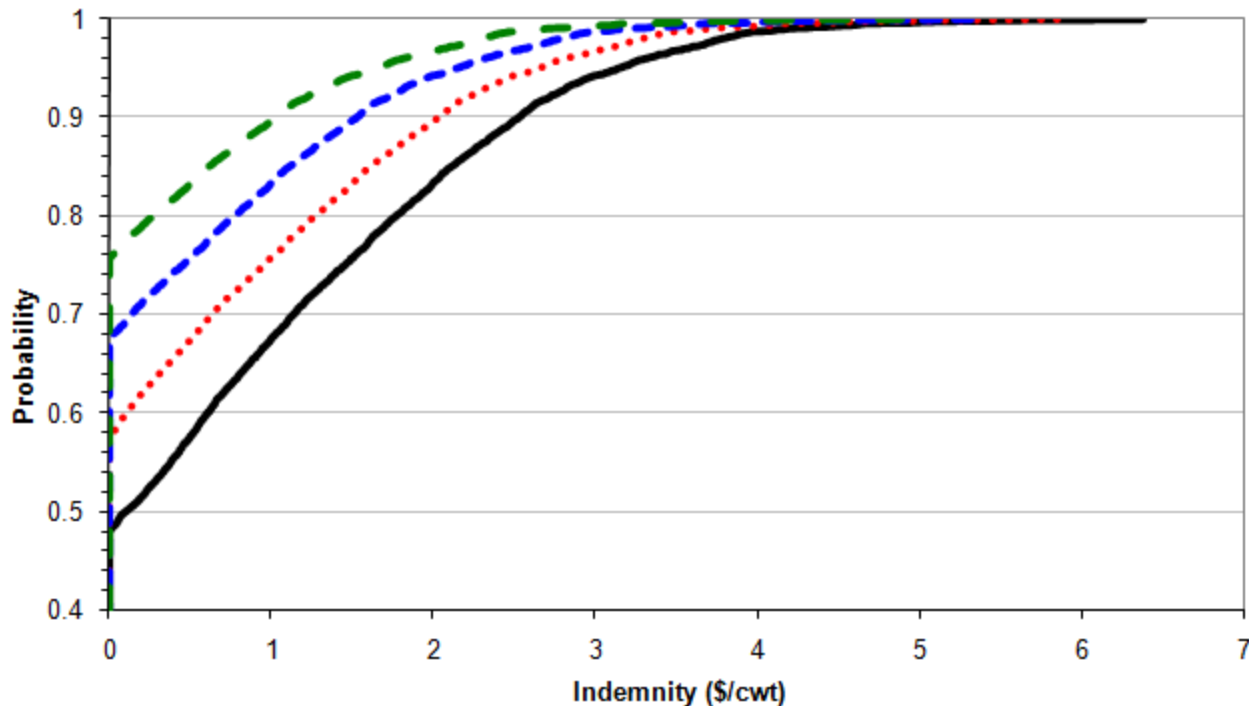


# LGM-Dairy: A Wisconsin Example (Nov 06)

Deductible (\$/cwt)	GMG Total (\$)	Premium	
		(\$/cwt)	% of GMG
0.0	13.13	0.855	6.51
0.1	13.03	0.803	6.16
0.2	12.93	0.752	5.82
0.3	12.83	0.703	5.48
0.4	12.73	0.656	5.16
0.5	12.63	0.612	4.84
0.6	12.53	0.569	4.54
0.7	12.43	0.529	4.26
0.8	12.33	0.491	3.98
0.9	12.23	0.454	3.71
1.0	12.13	0.420	3.46
1.1	12.03	0.387	3.22
1.2	11.93	0.356	2.98
1.3	11.83	0.327	2.76
1.4	11.73	0.299	2.55
1.5	11.63	0.273	2.35



# Simulated Indemnities (Nov 08)

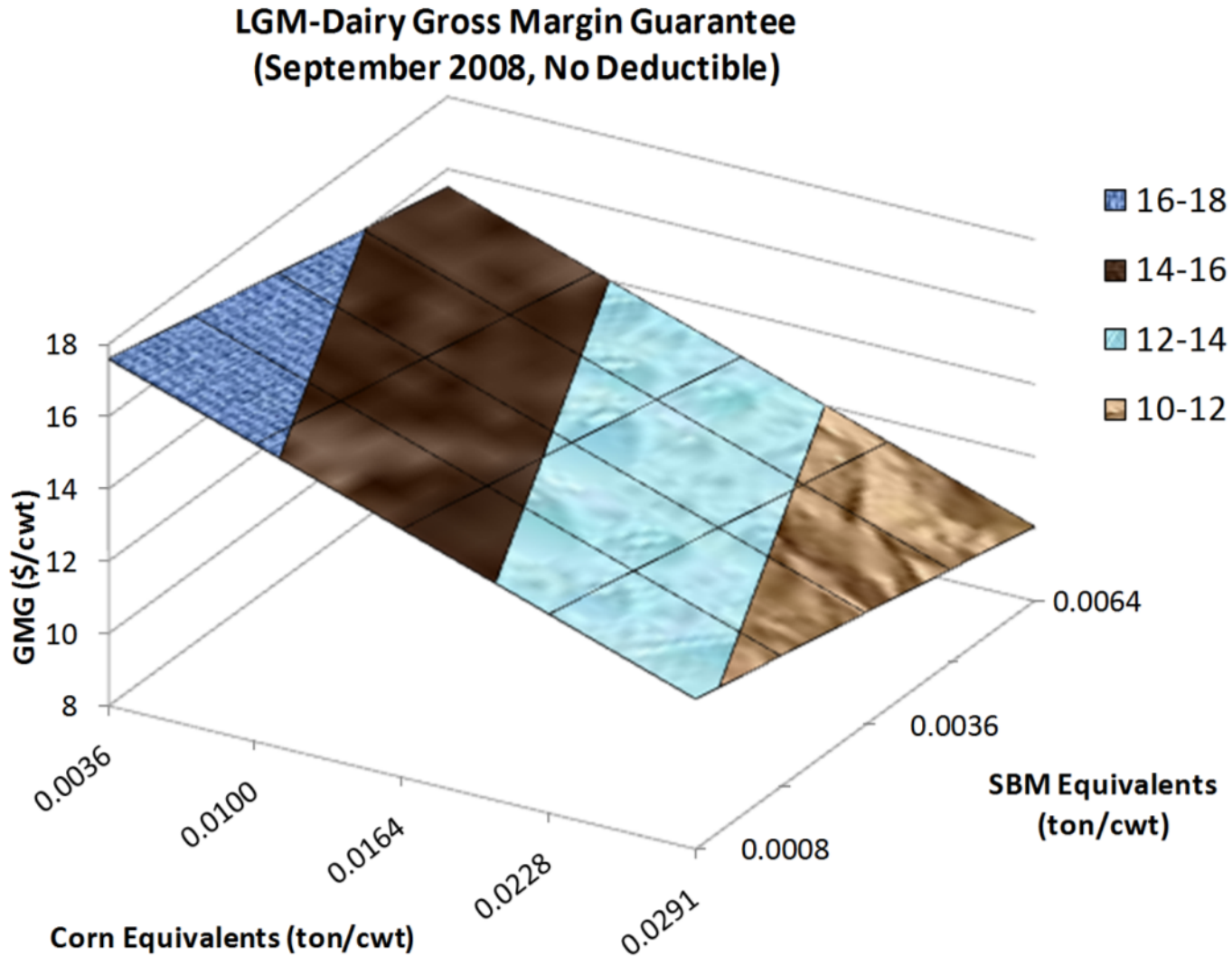


DL (\$/cwt):    — 0.00    ··· 0.5    - - - 1    - - - 1.5

Premium (\$/cwt):    0.86    0.61    0.42    0.27

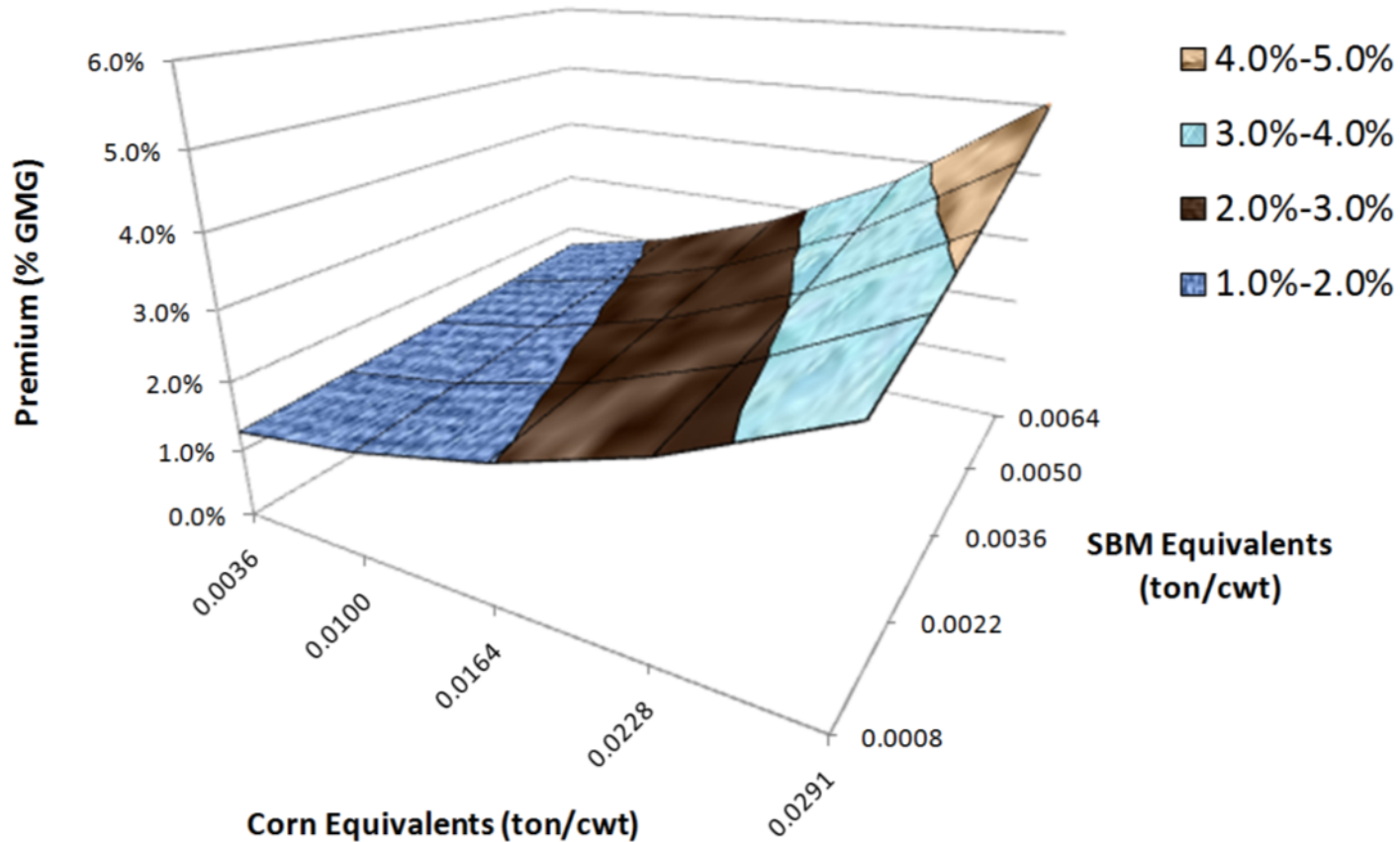
GMG (\$/cwt):    13.1    12.6    12.1    11.6

# LGM-Dairy: Aug 08 (Oct 08 – Jul 09)

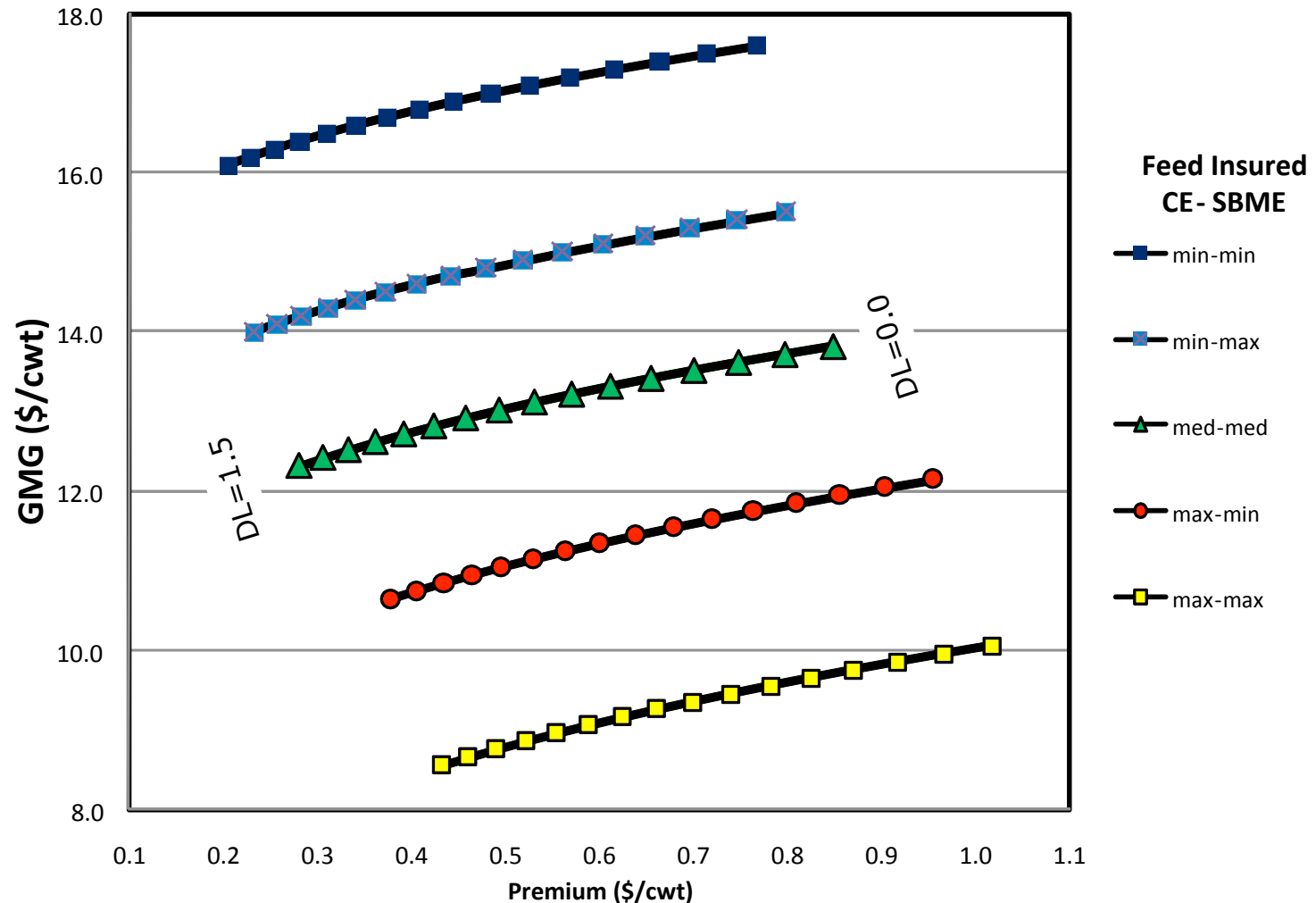


# LGM-Dairy: Aug 08 (Oct 08 – Jul 09)

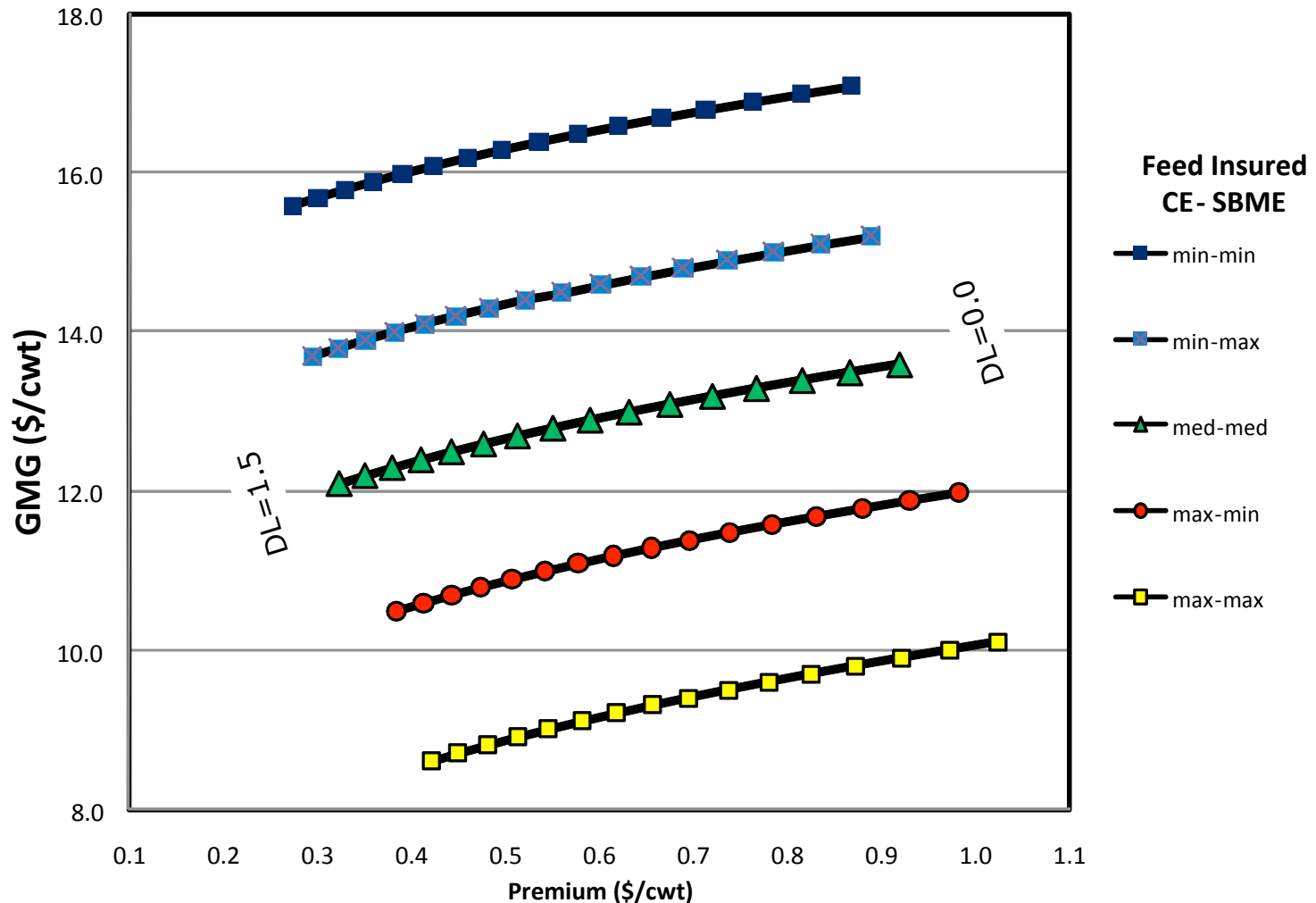
LGM-Dairy Gross Margin Guarantee  
(September 2008, \$1.5/cwt deductible)



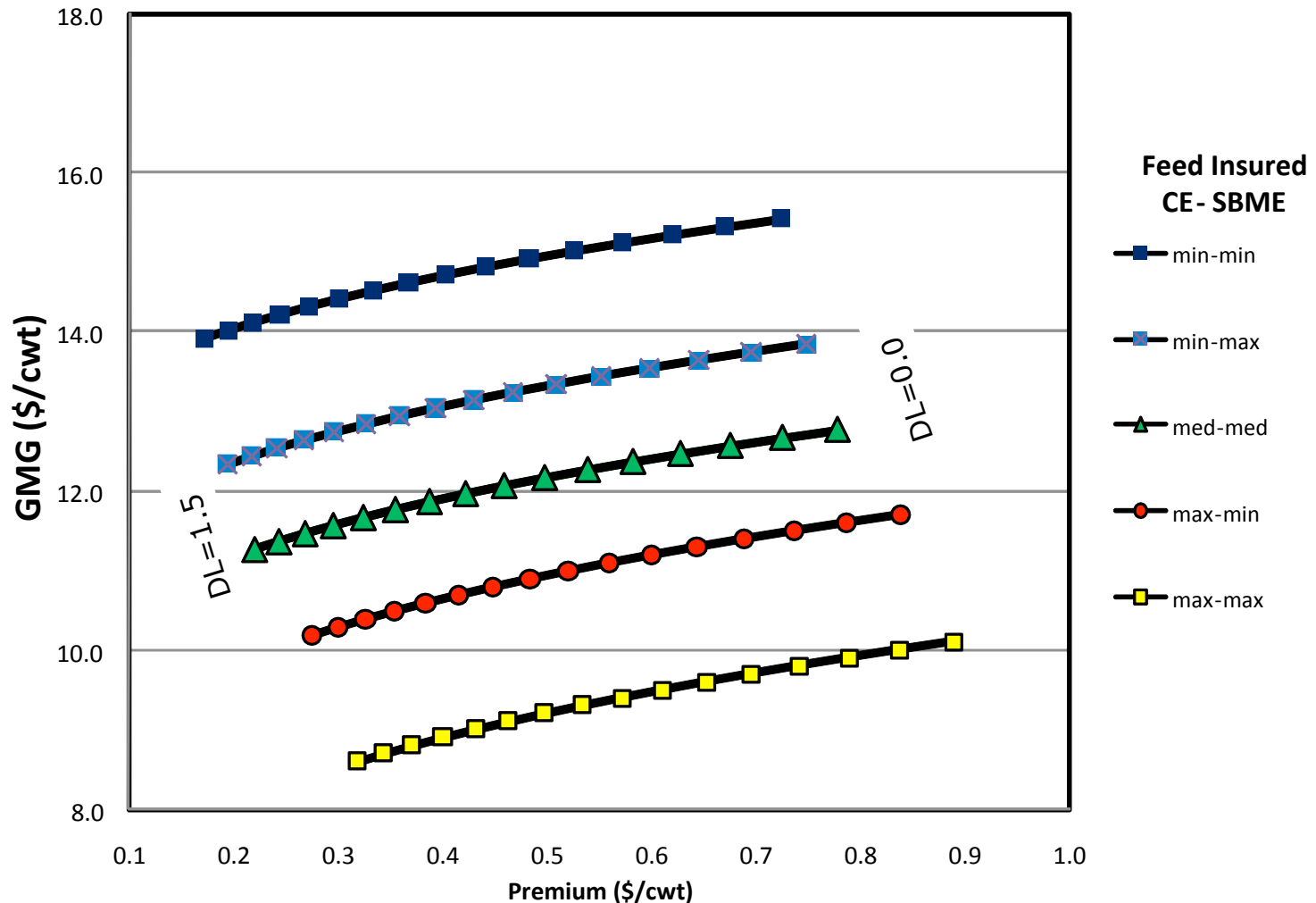
# LGM-Dairy: GMG and Premium (Aug 2008)



# LGM-Dairy: GMG and Premium (Sep 2008)

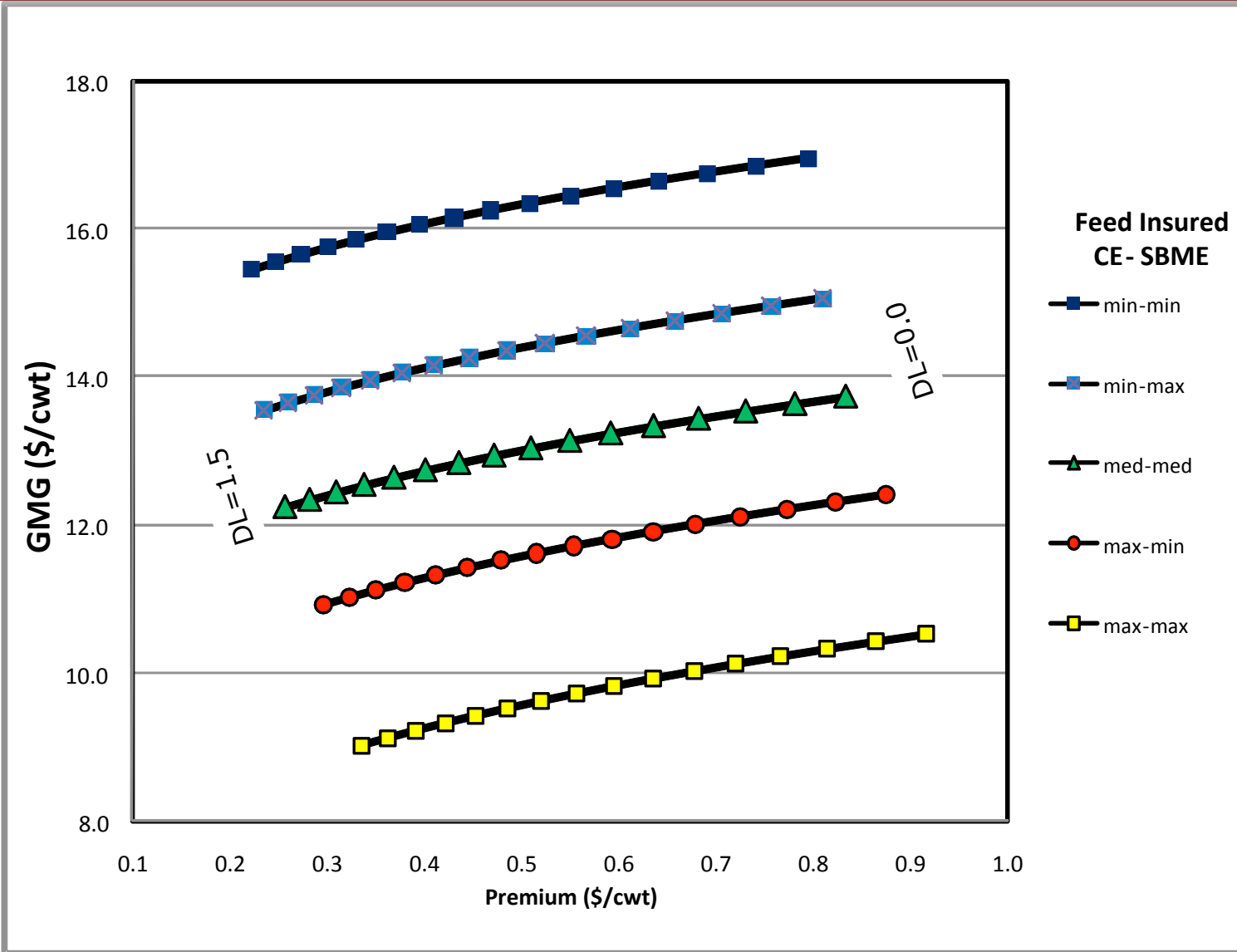


# LGM-Dairy: GMG and Premium (Oct 2008)

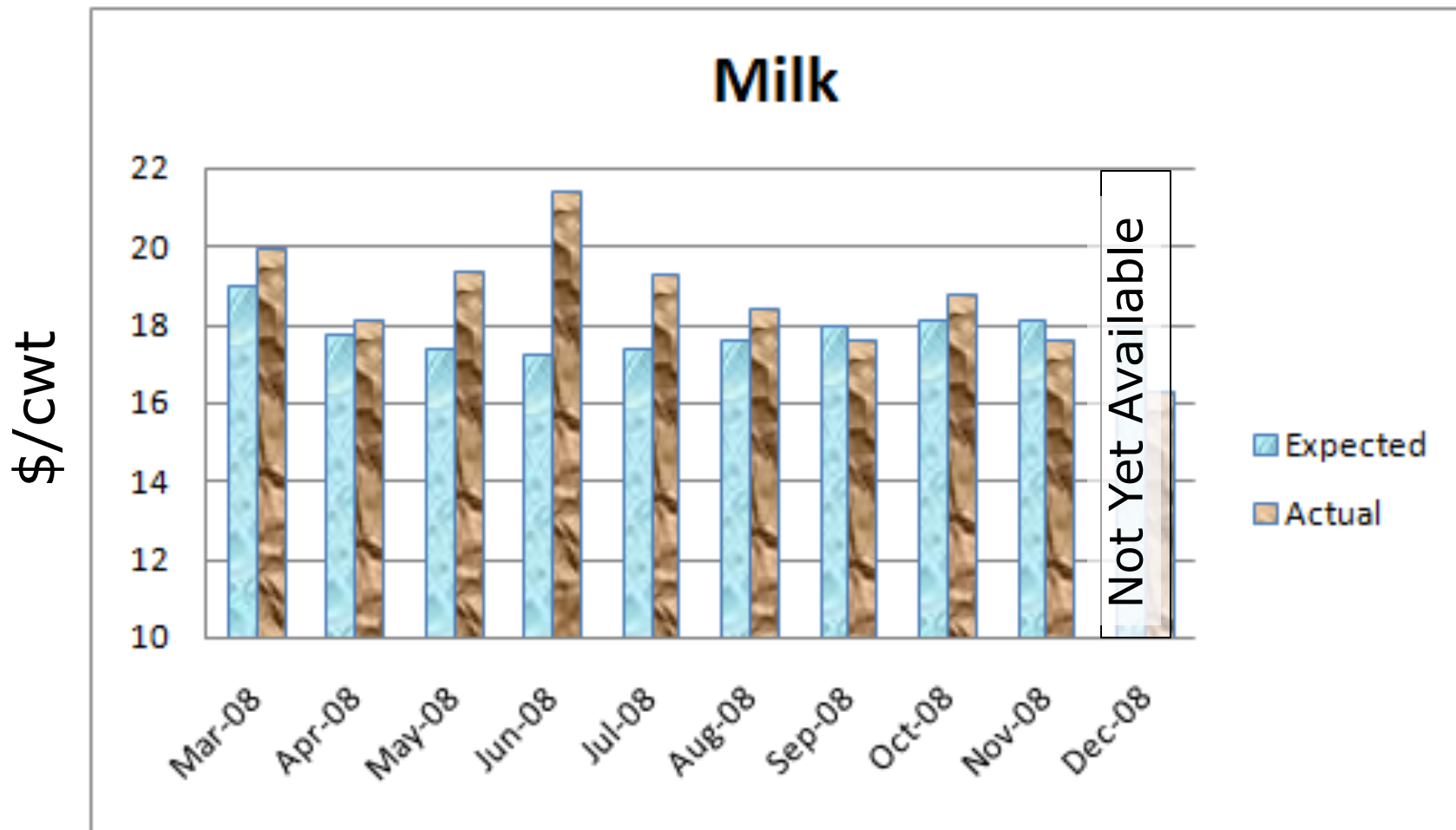




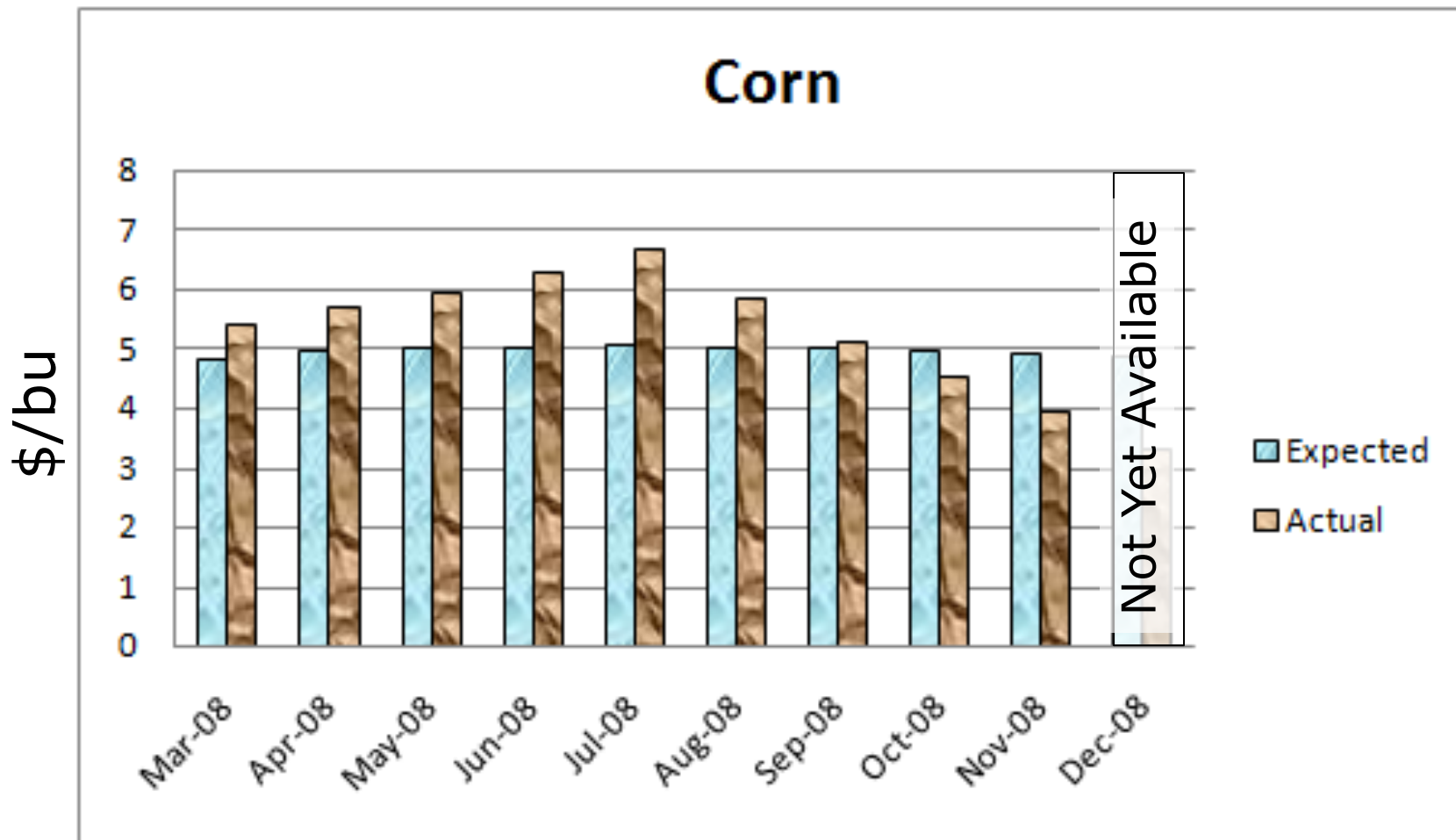
# LGM-Dairy: GMG and Premium (Jan 2008)



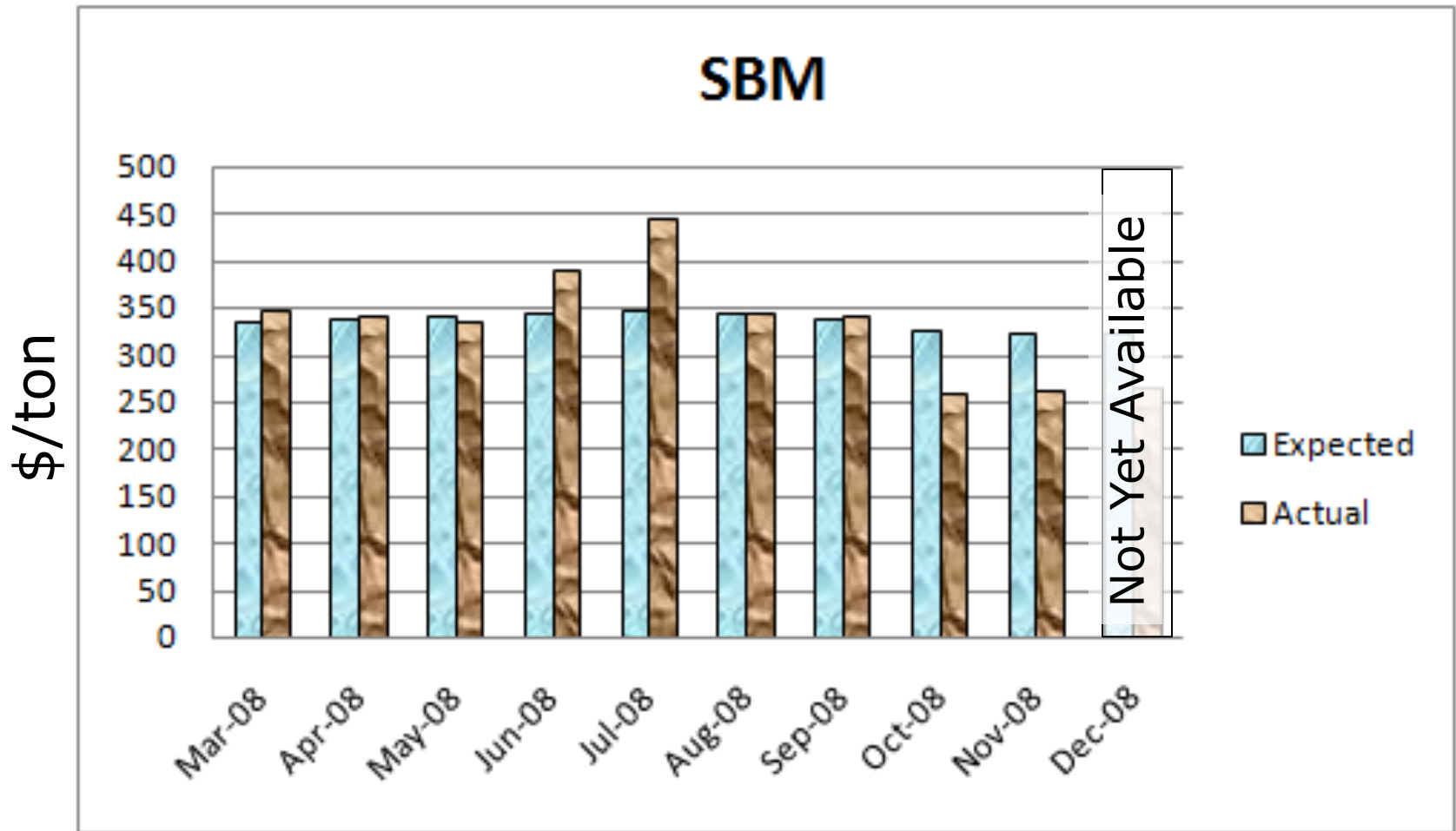
# Wisconsin Expected and Actual (Jan 2008)



# Wisconsin Expected and Actual (Jan 2008)

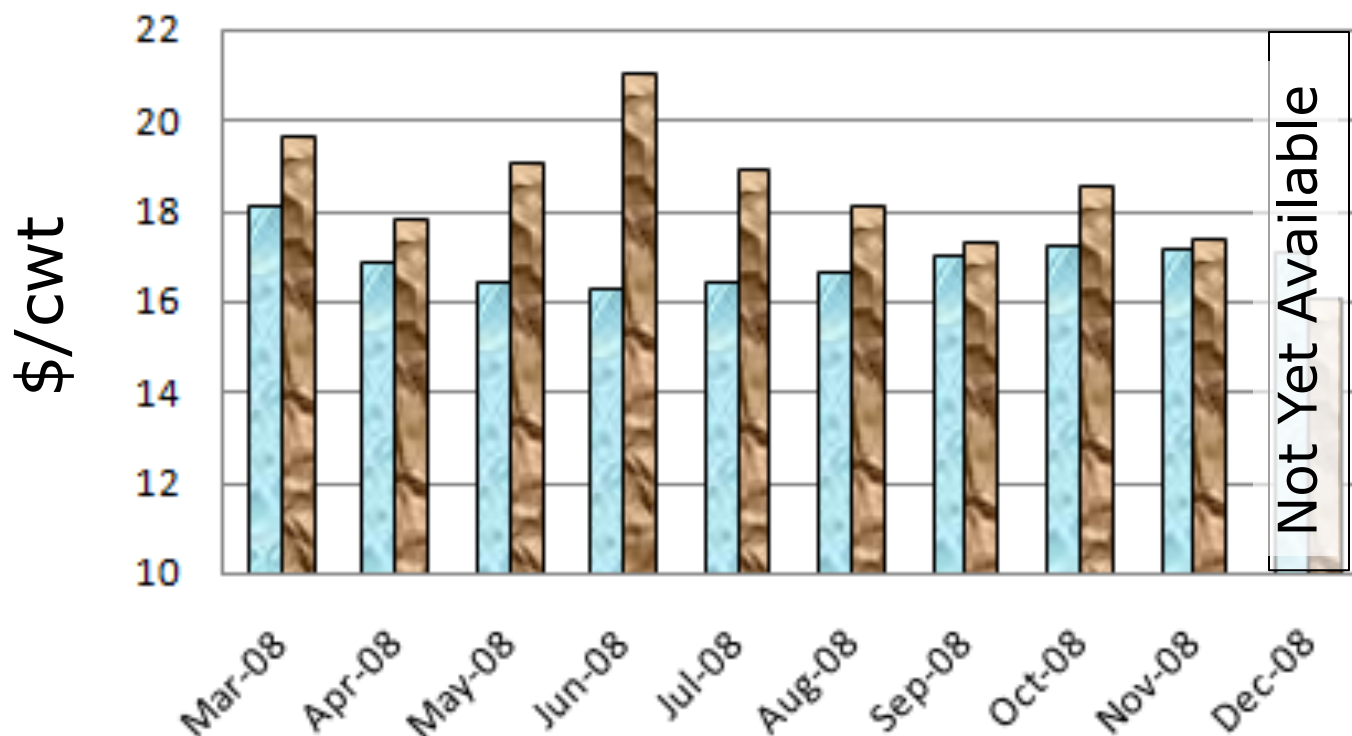


# Wisconsin Expected and Actual (Jan 2008)



# Wisconsin Expected and Actual (Jan 2008)

## Gross Margin



Would have paid:  
\$0.00/cwt in indemnities

Expected  
Actual

Would have cost:  
\$0.87/cwt in premium

# LGM-Dairy: Livestock Gross Margin for Dairy



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<http://www.uwex.edu/ces/dairymgt/dairy.cfm>

<http://future.aae.wisc.edu/>

[http://future.aae.wisc.edu/lgm\\_dairy.html#5](http://future.aae.wisc.edu/lgm_dairy.html#5)