

# 2016 Livestock Gross Margin- LGM

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# 2014 Farm Bill Dairy Provisions

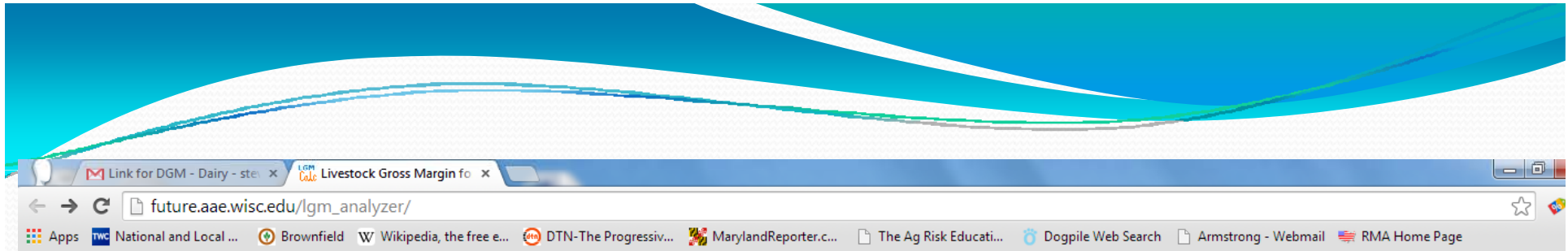
**Table 1. Contract Design Features of MPP and LGM-Dairy**

	<b>MPP</b>	<b>LGM-Dairy</b>
<b>Coverage Level</b>	Coverage is available each year from \$4 to \$8 per cwt in \$0.50 increments on up to 90% of the maximum production over the 2011, 2012, and 2013 calendar years. The same percentage of milk covered is the same over all months of the contract.	Coverage is available at prevailing market prices. Insurable milk marketings are certified by the producer and subject to inspection from the insurance company. The percentage of milk covered can vary from month to month. Multiple contracts can be used to cover a month's production until 100% of a month's production is insured.
<b>Sales Period</b>	Farmer may change coverage options annually and coverage lasts one calendar year.	LGM-Dairy is available for purchase each month. Farmers may sign up 12 times per year. LGM-Dairy is offered on a first come, first serve basis and is subject to underwriting capacity.
<b>Indemnity Payments</b>	Payments made for consecutive two-month periods of Jan/Feb, Mar/Apr, ..., Nov/Dec.	Payments made at the end of the coverage period.
<b>Premium Rates</b>	Fixed for the life of the Farm Bill (25% discount applied to 2014 and 2015 calendar year premium rates).	Designed to be actuarially fair. Sets the policy premium equal to 1.03 times the expected indemnity less the declared deductible.
<b>Government Subsidy</b>	No direct subsidy. There may exist significant indirect subsidies given the fixed premiums.	Premium subsidy up to 50% depending on a farmer's declared deductible.
<b>Farmer Customization</b>	Fixed contract design with respect to feed ration and percent of milk covered. Dairy production margin formula is fixed. Feed quantities do not change.	LGM-Dairy can be tailored to farm size and feed usage (includes feed equivalent conversion) and to reflect actual feed market risk. Ration quantities are not fixed.
<b>Agricultural Prices Used</b>	Uses USDA announced prices for all-milk, corn, soybean meal, and alfalfa hay.	Uses simple average of futures prices for class III milk, corn, and soybean meal.

Source: Information Letter 14-01 by Marin Bozic, John Newton, Andrew M. Novaković, Mark W. Stephenson, and Cameron S. Thraen

# LGM- Dairy Enrollment in Maryland

Commodity (\$)	Policies Sold	Policies Earning Indemnified	Policies	Quantity	Liabilities (\$)	Total Prem (\$)	Subsidy (\$ Premium)	Indemnity
2014	34	3	0	68000	1379080	38458	10849	0
2015	37	7	7	244500	4562537	167326	55133	223348
2016	41	3	1	140050	2207507	120758	22129	70205



## LGM Analyzer

[Return to Understanding Dairy Markets We](#)

Software Overview

Premium Estimator

Least Cost Optimizer

Bundled Options

Tutorial

### Overview

The LGM-Analyzer is a software suite developed at the [University of Wisconsin](#) that can be used to assist in the use of the Livestock Gross Margin for Dairy (*LGM-Dairy*) insurance program for revenue risk management. The user can evaluate the performance and cost of LGM-Dairy either using historical data or in anticipation of the upcoming LGM-Dairy contract offering the cost of a yet to be LGM-Dairy offering.

### The LGM-Analyzer Suite of Programs

There are currently three separate programs that comprise the LGM-Analyzer suite. These programs are the: (i) *LGM-Dairy Premium Estimator*, (ii) *LGM-Dairy Optimizer* and (iii) *Bundled Options Estimator*. Below is a brief description of each of these software systems. Although the above three programs are standalone the input data is shared across application and thus minimizing duplicate data entry.

#### The Premium Estimator

This program can be used if you want to estimate LGM-Dairy premiums for a *user-defined LGM-Dairy contract*. An LGM-Dairy contract is specified by the % of production insured each month over the life of the contract and deductible level.

#### The LGM-Dairy Least Cost Optimizer

Select this if you want to minimize the premium costs for attaining a pre-defined level of target Income over Feed Cost (IOFC) for all milk produced on-farm. Note that for some target IOFC's less than 100% of milk will need to be insured to achieve the total target IOFC. In contrast to the *Premium Estimator* when using the *Optimizer*, the user does not supply the contract. The *Optimizer* designs the least cost contract for you.

#### Bundled Options Comparison

This software can be used to compare the cost of using a traditional bundled options strategy to establish a similar level of IOFC floor as provided by a particular LGM-Dairy contract design. Under the bundled options strategy, Class III puts are used to establish a revenue minimum and corn/SBM call options are used to establish a feed cost ceiling. With the establishment of a revenue minimum and a feed cost maximum, the producer has established a minimum IOFC. When the options contracts mature, the value of the options will be added to help offset the options premium costs.

### Topic Specific Help Documents

- [Using the Premium Estimator](#)
- [Using the Least Cost Optimizer](#)
- [Bundled Options Cost Comparison](#)
- [How to Evaluate Contract Performance for an Active LGM-Dairy Contract](#)
- [Evaluating Actual Contract Performance for a Completed LGM-Dairy Contract](#)



# LGM Analyzer

[Return to Understanding Dairy Markets Website](#)

[Software Overview](#) | 
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 [Bundled Options](#) | 
 [Tutorial](#)

If you have saved CSV data from a previous run, you can upload it instead of typing in your farm's data again

[Upload a file](#)

## Input

Insurance contract month: 2016 Jun

Choose your deductible level \$1.0/cwt

Feed Values: [Enter Manually](#) | [Lowest Allowed](#) | [Default](#) | [Highest Allowed](#)

The prices we use for the Gross Margin Calculation correspond to future and option prices retrieved on the trade dates: **2016-06-06, 2016-06-07, 2016-06-08**

Coverage Month	Production (cwt)		Corn Equiv (tons)		Soybean Meal Equiv (tons)		% covered	Monthly Gross Margin		
	Month Year	Milk Qty.	Corn Qty.	SBM Qty.	Milk Revenue - Corn Cost - SBM Cost - (Deductible x Milk Qty.)	\$/cwt of Farm Milk		\$/cwt of Covered Milk		
<input checked="" type="checkbox"/> Aug 2016	4113	4,113 cwt x \$14.81/cwt = \$60,913	95.8	95.8 tons x \$4.30/bu = \$41,712	21.1	21.1 tons x \$404.19/ton = \$8,528	100	33,560	8.16	8.16
<input checked="" type="checkbox"/> Sep 2016	4340	4,340 cwt x \$15.24/cwt = \$66,140	101.1	101.1 tons x \$4.31/bu = \$43,562	22.3	22.3 tons x \$399.55/ton = \$8,910	100	37,329	8.60	8.60
<input checked="" type="checkbox"/> Oct 2016	4188	4,188 cwt x \$15.17/cwt = \$63,468	97.6	97.6 tons x \$4.32/bu = \$42,366	21.5	21.5 tons x \$396.35/ton = \$8,522	100	36,613	8.74	8.74
<input checked="" type="checkbox"/> Nov 2016	4240	4,240 cwt x \$15.40/cwt = \$65,296	98.8	98.8 tons x \$4.32/bu = \$42,682	21.8	21.8 tons x \$395.75/ton = \$8,627	100	37,173	8.77	8.77
<input checked="" type="checkbox"/> Dec 2016	4188	4,188 cwt x \$15.27/cwt = \$63,949	97.6	97.6 tons x \$4.33/bu = \$42,461	21.5	21.5 tons x \$395.15/ton = \$8,496	100	36,173	8.64	8.64
<input checked="" type="checkbox"/> Jan 2017	4023	4,023 cwt x \$15.32/cwt = \$61,630	93.7	93.7 tons x \$4.35/bu = \$40,856	20.7	20.7 tons x \$389.88/ton = \$8,070	100	34,981	8.70	8.70
<input checked="" type="checkbox"/> Feb 2017	4075	4,075 cwt x \$15.36/cwt = \$62,590	94.9	94.9 tons x \$4.37/bu = \$41,460	20.9	20.9 tons x \$378.69/ton = \$7,915	100	35,790	8.78	8.78
<input checked="" type="checkbox"/> Mar 2017	4038	4,038 cwt x \$15.53/cwt = \$62,708	94.1	94.1 tons x \$4.39/bu = \$41,472	20.8	20.8 tons x \$367.51/ton = \$7,644	100	36,273	8.98	8.98
<input checked="" type="checkbox"/> Apr 2017	4063	4,063 cwt x \$15.59/cwt = \$63,339	94.7	94.7 tons x \$4.40/bu = \$41,880	20.9	20.9 tons x \$361.68/ton = \$7,559	100	36,837	9.07	9.07
<input checked="" type="checkbox"/> May 2017	4149	4,149 cwt x \$15.66/cwt = \$64,970	96.7	96.7 tons x \$4.41/bu = \$42,629	21.3	21.3 tons x \$355.85/ton = \$7,580	100	38,013	9.16	9.16
<b>Total</b>	Farm	41,417 cwt	965 tons	213 tons	100.00%	GMG 362,742	8.76	8.76		
	Covered	41,417 cwt	965 tons	213 tons						
	Weighted Avg Price	15.35 \$/cwt	4.35 \$/bu	384.64 \$/tons						

[Save Input](#) | 
 [Calculate LGM Premium](#) | 
 [Calculate Options Cost](#) | 
 [Save GMG Calculations](#)

## Summary

Unit	Premium	GMG	Net GMG
Total (\$)	7,385	362,742	355,358
Per cwt of Farm Milk (\$/cwt)	0.18	8.76	8.58
Per cwt of Covered Milk (\$/cwt)	0.18	8.76	8.58

Save GMG Calculations and Results

## Sensitivity Analysis

Show per cwt Results

Deductible Level (\$/cwt)	Total Premium (\$)	Subsidized Premium (\$)	GMG (\$)	Net GMG (\$)	Prob. of Payout (%)	Net Premium as % of GMG (%)	% Net Prem. change	% GMG Change
0.0	31,416	25,761	404,159	378,398	51	6.37	-	-
0.1	29,273	23,711	400,018	376,306	49	5.93	-7.96	-1.02
0.2	27,222	21,506	395,876	374,370	46	5.43	-16.52	-2.05
0.3	25,274	19,461	391,734	372,273	44	4.97	-24.45	-3.07
0.4	23,428	17,571	387,593	370,022	42	4.53	-31.79	-4.10
0.5	21,678	15,608	383,451	367,843	39	4.07	-39.41	-5.12
0.6	20,021	13,814	379,309	365,495	37	3.64	-46.38	-6.15
0.7	18,444	12,173	375,167	362,994	36	3.24	-52.75	-7.17
0.8	16,947	10,507	371,026	360,519	34	2.83	-59.21	-8.20
0.9	15,535	9,321	366,884	357,563	32	2.54	-63.82	-9.22
<b>1.0</b>	<b>14,201</b>	<b>7,385</b>	<b>362,742</b>	<b>355,358</b>	<b>30</b>	<b>2.04</b>	<b>-71.33</b>	<b>-10.25</b>
1.1	12,947	6,474	358,601	352,127	28	1.81	-74.87	-11.27
1.2	11,775	5,887	354,459	348,572	26	1.66	-77.15	-12.30
1.3	10,682	5,341	350,317	344,976	24	1.52	-79.27	-13.32
1.4	9,675	4,838	346,176	341,338	22	1.40	-81.22	-14.35
1.5	8,745	4,373	342,034	337,661	20	1.28	-83.03	-15.37
1.6	7,884	3,942	337,892	333,950	19	1.17	-84.70	-16.40
1.7	7,093	3,547	333,750	330,204	17	1.06	-86.23	-17.42
1.8	6,361	3,180	329,609	326,428	16	0.96	-87.65	-18.45
1.9	5,701	2,851	325,467	322,616	14	0.88	-88.93	-19.47
2.0	5,103	2,551	321,325	318,774	13	0.79	-90.10	-20.50

[Go back to the input Form](#)