



What is Risk Management?

- Price risk in the U.S. Dairy Industry
- Supply and Demand
- Political Risk
- Volatility
- Feed Risk
- Margin Risk



Livestock Gross Margin Insurance Dairy Cattle
Revised October 2015

Livestock Gross Margin
The Livestock Gross Margin Insurance Plan for Dairy Cattle (LGM Dairy) provides protection when feed costs rise or milk prices drop and can be tailored to any size farm. Gross margin is the market value of milk minus feed costs. LGM Dairy can return prices for cows, calves, heifers, and milk to determine the expected gross margin and the actual gross margin. 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.

Only milk sold for commercial or private sale and primarily consumed for food (human consumption) from dairy cattle fed on the farm (and below) is eligible for coverage. There is an maximum number of head/bandweight you can insure. The maximum amount of milk that can be insured is 24 million pounds per cow year.

From the LGM Dairy we based on simple average of Chicago Mercantile Exchange Group Future contract daily settlement prices, and use as feed based on the prices you receive at the market.

A premium refund is available for those policies that receive multiple awards during the insurance period. The refund amount is determined by a dollar deductible in the cow share (single basis 10-21 to 30) (maximum) 12 you choose a \$0 deductible you receive a lower premium refund (15 percent) if you choose the highest deductible of 12 you receive a higher premium refund (10 percent). The premium is due at the end of the coverage period. LGM premium depends on your marketing plan, coverage you choose, deductible level, and market and price volatility.

Availability
LGM Dairy is available to any producer who owns dairy cattle in the 48 contiguous states.

Producers enrolled in the Farm Service Agency Margin Protection Program for Dairy (MPP Dairy) are prohibited by law from participating in the LGM Dairy program at the same time. The MPP Dairy program is a new market and more restricted coverage will be limited to the LGM Dairy and the MPP Dairy program can be enrolled.

This fact sheet gives only a general overview of the crop insurance program and is not a complete policy. For further information and an evaluation of your risk management needs, contact a crop insurance agent.

Causes of Loss
LGM Dairy covers the difference between the gross margin premium and the actual gross margin. LGM Dairy does not insure against:

- Dairy cattle theft;
- Unexpected decrease in milk production;
- Unplanned decrease in feed use;
- Anticipated or multiple-year declines in milk prices; or
- Anticipated or multiple-year increases in feed costs.

Buying a Policy
The cow sign up for the LGM Dairy 12 times each year and covers all of the milk production that you expect to market over a rolling 11 month insurance period. LGM Dairy is sold on the last business Friday of each month. The sales period begins 11 days on the Risk Management Agency (RMA) website, the date indicated by the developer after the Chicago Mercantile Exchange Group market close on the last day of the prior insurance period. The sales period ends at 8:00 p.m. Central Standard Time the following day. You purchase a payment 1 day after the end of the insurance period. If expected milk and feed prices are not available on the RMA website, LGM Dairy will not be offered for sale for the insurance period.

The insurance period contains the 11 months following the sales closing date. For example, the insurance period for the January 29 sales closing date contains the months of February through December. Coverage begins the second month of the insurance period, so the coverage period for this example is March through December.

To enroll, you must sign up on the last business Friday of the month. You must also reflect an application with a target marketing report for the milk and cow and calf herd and equivalent. You must also choose to use the default values for cow and calf herd and equivalent.

Indemnity Payments
The indemnity at the end of the 11-month insurance period is the difference, if positive, between the gross margin premium and the actual gross margin. If the actual gross margin is less than the expected gross margin (minus the deductible) for the insurance period, an indemnity may be payable.

Definitions
Actual Marketing - The total amount of milk you sell each month of the insurance period for which there is a proof of sale. Actual marketing is used to verify ownership of milk and determine expected target marketing.
Deductible - The portion of the expected gross margin that you choose not to insure. Allowable deductible amounts range from \$0 to \$2 per head/bandweight, in \$0.10 increments. The deductible equals the average head/bandweight deductible multiplied by the sum of target marketing across all months of the insurance period.
Gross Margin Guarantee - The gross margin guarantee for an insurance period is the expected milk gross margin for an insurance period minus the deductible.
Level of Gross Margin - Market value of milk minus feed cost.
Marketing Report - A report you submit on the insurance company's form showing actual, monthly head/bandweight of milk received under this policy. The marketing report must be accompanied by copies of sales receipts that provide records of the actual marketing claims on the marketing report.
Target Marketing - The determination of the number of head/bandweight of milk received each month during the insurance period. Only the head/bandweight of milk in which you have a share can be reported.
Target Marketing Report - A report that you submit on the insurance company's form showing the target marketing for each month.

For More Information
For LGM Coverage Plans, Rates, and Actual Taking Values go to www.rma.usda.gov/actual_taking_values. For the premium refund rules go to www.rma.usda.gov/actual_taking_values. For the next release go to www.rma.usda.gov/actual_taking_values.

Where to Buy Crop Insurance
All multi-year crop insurance, including Catastrophic Risk Protection policies, are available from private crop insurance agents. A list of crop insurance agents is available at www.usda.gov service centers and on the RMA website at www.rma.usda.gov/actual_taking_values.

Contact Us
USDA/RMA
1400 Independence Ave., SW, Stop 0801
Washington, DC 20250-0801
Phone: (202) 696-2000
Fax: (202) 696-2018
Email: rma@rma.usda.gov
E-mail: RMA.CCO@rma.usda.gov

Download Copies from the Web
Visit our website www.fda.gov/actual_taking_values for more information.

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Whole-Farm Revenue Protection



Whole-Farm Revenue Protection
 Whole-Farm Revenue Protection (WFRP) provides comprehensive coverage for the entire operation, not just the milk production. The comprehensive coverage includes both milk production and other farm revenue, such as crop, livestock, and other farm income. WFRP provides comprehensive coverage for the entire operation, not just the milk production. The comprehensive coverage includes both milk production and other farm revenue, such as crop, livestock, and other farm income.

WFRP annual revenue is the total amount of revenue generated by the policy. The revenue protection amount is based on the total revenue for the year. The revenue protection amount is based on the total revenue for the year.

Coverage	Annual Revenue	Revenue Protection
100%	\$1,000,000	\$1,000,000
90%	\$1,000,000	\$900,000
80%	\$1,000,000	\$800,000
70%	\$1,000,000	\$700,000
60%	\$1,000,000	\$600,000
50%	\$1,000,000	\$500,000
40%	\$1,000,000	\$400,000
30%	\$1,000,000	\$300,000
20%	\$1,000,000	\$200,000
10%	\$1,000,000	\$100,000

Eligibility
 The WFRP coverage is available to all dairy farms. The coverage is available to all dairy farms. The coverage is available to all dairy farms. The coverage is available to all dairy farms.

Additional Information
 For more information on WFRP, please contact your insurance agent. For more information on WFRP, please contact your insurance agent. For more information on WFRP, please contact your insurance agent.

Risk Management Planning

- ▶ Black Swan Events
 - ▶ What is a Black Swan Event and why is it important?
 - ▶ Weather
 - ▶ Price
 - ▶ Wildlife
 - ▶ Value of the US Dollar
 - ▶ Political Instability
 - ▶ Supply and Demand
 - ▶ Speculators

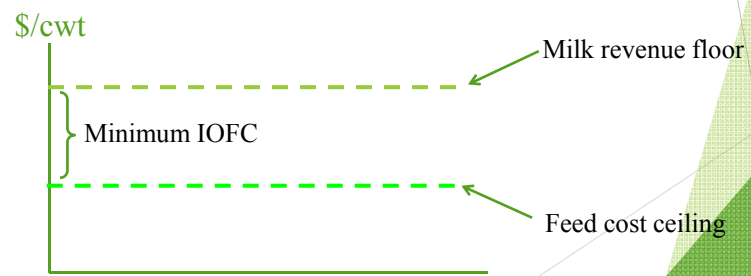


Risk Management Planning

- ▶ LGM monthly planning
 - ▶ Margin
 - ▶ The 2nd and 4th Friday's of each month
- ▶ Traditional Crop Insurance
 - ▶ Input costs
 - ▶ Pre-harvest marketing plan
 - ▶ Minimum cash flow
 - ▶ Buying a PUT on that high price

Margin Risk

- How can a producer establish a *floor* on *Income over Feed Costs* (IOFC)?
 - Class III put options: Creates milk revenue *floor*
 - Feed call options: Establishes feed cost *ceiling*
 - Using this *bundled option* strategy, producer can establish an IOFC floor



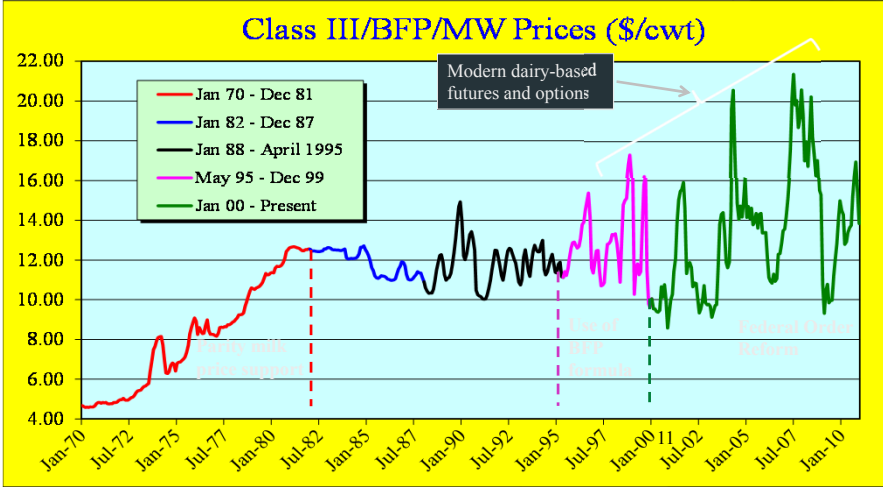
How to read a LGM quote

[LGM Analyzer Homepage](#)

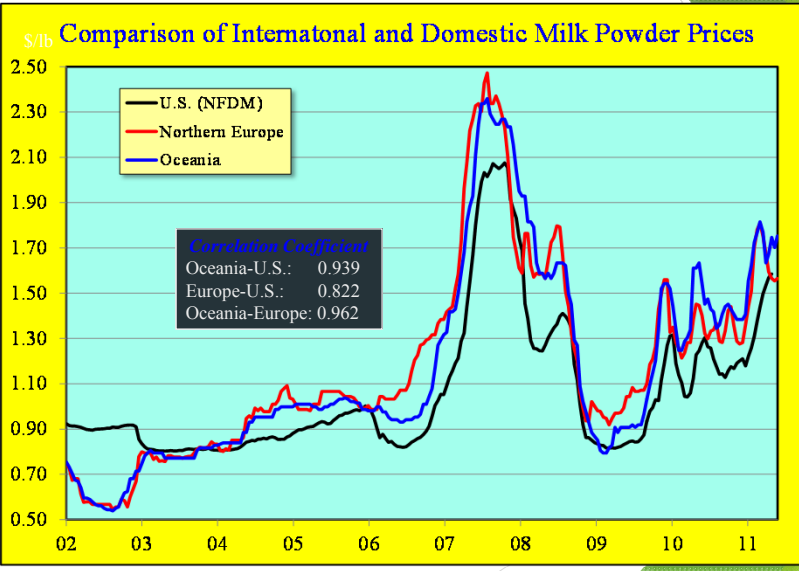
<input checked="" type="checkbox"/> Coverage Month	Production (cwt)		Corn Equiv (tons)		Soybean Meal Equiv (tons)		% covered	Monthly Gross Margin		
Month Year	Milk Qty.	Covered Milk × Expected Price = Milk Revenue	Corn Qty.	Covered Corn × Expected Price = Corn Cost	SBM Qty.	Covered SBM × Expected Price = SBM Cost		Milk Revenue - Corn Cost - SBM Cost - (Deductible × Milk Qty.)	\$/cwt of Farm Milk	\$/cwt of Covered Milk
<input checked="" type="checkbox"/> Aug 2011	6000	4,500 cwt × \$18.80/cwt = \$84,598	84.0	63 tons × \$7.64/bu = \$17,189	12.0	9 tons × \$367.40/ton = \$3,306	75.0	59,602	9.93	13.24
<input checked="" type="checkbox"/> Sep 2011	6000	3,000 cwt × \$18.44/cwt = \$55,318	84.0	42 tons × \$7.49/bu = \$11,234	12.0	6 tons × \$365.62/ton = \$2,193	50.0	38,890	6.48	12.96
<input checked="" type="checkbox"/> Oct 2011	6000	3,000 cwt × \$17.86/cwt = \$53,577	84.0	42 tons × \$7.35/bu = \$11,024	12.0	6 tons × \$362.19/ton = \$2,173	50.0	37,380	6.23	12.46
<input checked="" type="checkbox"/> Nov 2011	6000	3,000 cwt × \$17.72/cwt = \$53,157	84.0	42 tons × \$7.21/bu = \$10,814	12.0	6 tons × \$363.07/ton = \$2,178	50.0	37,165	6.19	12.39
<input checked="" type="checkbox"/> Dec 2011	6000	1,500 cwt × \$17.62/cwt = \$26,428	84.0	21 tons × \$7.07/bu = \$5,301	12.0	3 tons × \$363.96/ton = \$1,091	25.0	18,534	3.09	12.36
<input checked="" type="checkbox"/> Jan 2012	0	0 cwt × \$17.17/cwt = \$0	0.0	0.0 tons × \$7.10/bu = \$0	0.0	0.0 tons × \$365.25/ton = \$0	0.0	0	NA	NA
<input checked="" type="checkbox"/> Feb 2012	0	0 cwt × \$16.63/cwt = \$0	0.0	0.0 tons × \$7.14/bu = \$0	0.0	0.0 tons × \$365.45/ton = \$0	0.0	0	NA	NA
<input checked="" type="checkbox"/> Mar 2012	0	0 cwt × \$16.50/cwt = \$0	0.0	0.0 tons × \$7.17/bu = \$0	0.0	0.0 tons × \$365.65/ton = \$0	0.0	0	NA	NA
<input checked="" type="checkbox"/> Apr 2012	0	0 cwt × \$16.45/cwt = \$0	0.0	0.0 tons × \$7.20/bu = \$0	0.0	0.0 tons × \$364.03/ton = \$0	0.0	0	NA	NA
<input checked="" type="checkbox"/> May 2012	0	0 cwt × \$16.34/cwt = \$0	0.0	0.0 tons × \$7.24/bu = \$0	0.0	0.0 tons × \$362.41/ton = \$0	0.0	0	NA	NA
Total	Farm	30,000 cwt	420 tons	60 tons	50.00%	GMG 191,573	6.39	12.77		
	Covered	15,000 cwt	210 tons	30 tons						

Price Risk in Today's Dairy Industry

- We have seen a tremendous increase in the volatility of farm milk prices over the last 20 years



Price Risk in Today's Dairy Industry



LGM-Dairy: Milk and Feed Prices

- Class III, corn, and SBM futures markets used as information source of *Expected* (forward looking) and *Actual* (“observed”) prices
 - *No futures/options market transactions*
 - Actual farm prices not used
 - No local basis added to Expected/Actual prices
- Prices:
 - Feed: Corn (Chicago), SBM (Chicago)
 - Milk: Class III (standard composition)
 - ✓ 3.5% Fat
 - ✓ Skim Portion: 3.1% Protein/5.9 Other Solids

LGM-Dairy: Expected Milk Production

- Approved target marketings
 - Maximum amount of milk that could be produced
 - Milk production actually produced certified once contract ends
 - Milk production needs to be at least 75% insured without penalty

LGM-Dairy: Expected Feed Use

- *Expected* feed use converted to Corn (Energy) and SBM (Protein) equivalents
 - Allowable range of feed equivalents:
 - ✓ Corn: 0.13 – 1.36 bu/cwt of milk
 - ✓ SBM: 1.61 – 26.00 lb/cwt of milk
 - Program default feed coefficients can be used:
 - ✓ Corn: 0.5 bu/cwt SBM: 4.0 lbs/cwt
 - *No auditing of declared feed use*
 - May only want to declare *purchased* feed
 - Using minimum amounts → approximate synthetic put

LGM-Dairy: Expected Gross Margin

- *All* 10 months of *Expected Prices* are known at sign-up
 - Expected Prices = Average of last 3 days of futures settlement prices for each month including sign-up Friday

July 2011						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4				6	
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Futures market settle prices on these days used to determine *Expected Prices*
Insurance sign-up period

LGM-Dairy: When Purchased?

- *LGM-Dairy* available for purchase each month
 - 12 contracts offered each year
 - ✓ Each contract covers *up to* 10 months
 - Purchase period starts at end of last business Friday of each month
 - ✓ July contract purchase period would have started on July 29th
 - Purchase period ends at 8:00 PM CDT Saturday
 - Points to the reason why planning is needed *well in advance* of contract purchase

LGM-Dairy: Coverage Calendar

- Simple hypothetical insurance strategy
 - Purchase insurance at end of July

By rule: No coverage the month after purchase

Hypothetical LGM Contract

Jul '11	Aug '11	Sep '11	Oct '11	Nov '11	Dec '11	Jan '12	Feb '12	Mar '12	Apr '12	May '12	Jun '12
		1	2	3	4	5	6	7	8	9	10
Purchase at End of Month	No Coverage	Insurance Contract Period									
Production Coverage		75%	50%			25%	25%				

LGM-Dairy: Insurance Deductible

- Producer chooses amount of gross margin not covered by insurance (*i.e.*, *Insurance Deductible*):
 - Portion of *Gross Margin* not protected
 - Program allows \$0 - \$2.00/cwt *Gross Margin* to be excluded from coverage
 - ✓ Same \$/cwt for all months
 - Higher deductible → Lower premium
 - ✓ Producer assumes more risk
- Subsidy *increases* with higher deductible
 - Double impact on reducing premium

LGM-Dairy: Current Premium Subsidy Schedule

Deductible (\$/cwt)	Subsidy (%)	Deductible (\$/cwt)	Subsidy (%)
0	0.18	0.60	0.31
0.10	0.19	0.70	0.34
0.20	0.21	0.80	0.38
0.30	0.23	0.90	0.43
0.40	0.25	1.00	0.48
0.50	0.28	1.10 – 2.00	0.50

Note: There is no subsidy for a 1-month contract. The subsidy % is the percentage by which premium is reduced.

LGM-Dairy: 2010/11 Measures of Activity

State	Policies Sold		CWT Insured		Liabilities		Premiums		Subsidies		Subsidy %
	No.	% of Total	000	% of Total	\$000	% of Total	\$000	% of Total	\$000	% of Total	
CA	40	2.8	4,381	9.5	73,628	9.6	2,445	11.1	1,132	10.5	46.3
ID	28	2.0	1,405	3.0	22,132	2.9	628	2.8	217	2.0	34.5
IA	45	3.2	939	2.0	16,658	2.2	493	2.2	231	2.2	46.8
MI	119	8.4	4,723	10.2	80,072	10.4	2,503	11.4	956	8.9	37.9
MN	163	11.6	2,268	4.9	38,150	5.0	1,342	6.1	548	5.1	40.8
NY	86	6.1	3,259	7.1	55,355	7.2	1,950	8.8	773	7.2	39.6
PA	133	9.4	2,269	4.9	37,543	4.9	1,376	6.2	548	5.1	39.8
VT	94	6.7	4,746	10.3	76,965	10.0	2,172	9.9	1,066	9.9	49.1
WA	40	2.8	2,427	5.3	39,415	5.1	1,216	5.5	560	5.2	46.0
WI	422	30.0	9,273	20.1	154,487	20.1	5,038	22.9	2,083	19.4	41.3
Other	239	17.0	10,473	22.8	175,864	22.8	2,878	13.1	2,629	24.5	44.7
Total	1,409		44,209		770,270		25,041		10,743		42.0

LGM-Dairy: Summary

- LGM-Dairy a flexible insurance program
 - Need not insure all months or production
 - Could make sense to overlap contracts
 - Substantial premium subsidies

- Similar to combined use of Class III puts and corn/SBM calls as in a bundled option
 - Premiums are very sensitive to elected deductible

- LGM-Dairy Major Drawbacks
 - Short sign-up window at the end of each month
 - Need to wait until end of contract for indemnity
 - ✓ After last actual price is determined



[Return to Understanding Dairy Markets Web](#)

LGM Analyzer

Software Overview Premium Estimator Least Cost Optimizer Bundled Options (Beta)

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](#)

} Help on Specific Topics

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	14,909	12,226	206,573	194,347	52	5.92	-	-
0.1	14,118	11,435	205,073	193,637	50	5.58	-6.47	-0.73
0.2	13,349	10,546	203,573	193,026	48	5.18	-13.74	-1.45
0.3	12,604	9,705	202,073	192,367	47	4.80	-20.62	-2.18
0.4	11,881	8,911	200,573	191,661	45	4.44	-27.11	-2.90
0.5	↑ Subsidy w/↑ Deductible	8,054	199,073	191,018	44	4.05	-34.12	-3.63
0.6		7,257	197,573	190,315	42	3.67	-40.64	-4.36
0.7	9,879	6,520	196,073	189,552	40	3.33	-46.67	-5.08
0.8	9,264	5,744	194,573	188,828	39	2.95	-53.02	-5.81
0.9	8,672	5,203	193,073	187,869	37	2.70	-57.44	-6.54
1.0	8,111	4,218	191,573	187,354	35	2.20	-65.50	-7.26
1.1	7,578	3,789	190,073	186,283	33	1.99	-69.01	-7.99
1.2	7,071	3,535	188,573	185,037	32	1.87	-71.08	-8.71
1.3	6,590	3,295	187,073	183,777	30	1.76	-73.05	-9.44
1.4	6,133	3,066	185,573	182,506	28	1.65	-74.92	-10.17
1.5	5,695	2,849	184,073	181,223	27	1.55	-76.69	-10.89
1.6	5,265	2,641	182,573	179,931	26	1.45	-78.39	-11.62
1.7	4,887	2,443	181,073	178,629	24	1.35	-80.01	-12.34
1.8	4,514	2,257	179,573	177,316	23	1.25	-81.52	-13.07
1.9	4,164	2,082	178,073	175,991	22	1.17	-82.97	-13.80
2.0	3,835	1,917	176,573	174,655	20	1.09	-84.31	-14.52

LGM-Dairy: Example Premium Estimation

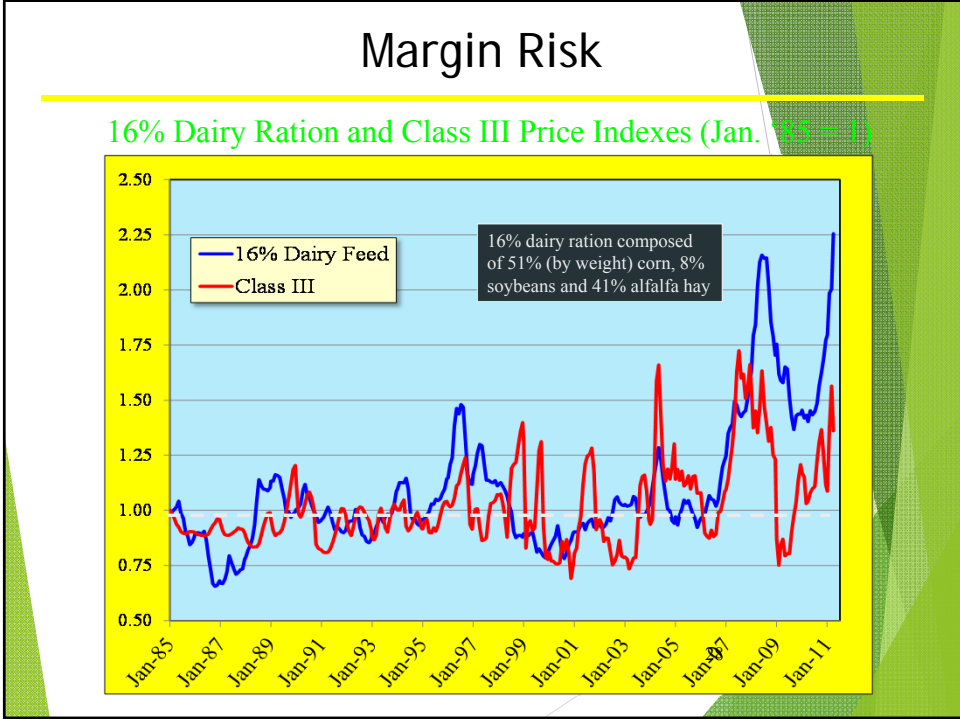
50% Allocation Results, \$1 Deductible

Summary

Unit	Premium	GMG	Net GMG
Total (\$)	4,218	191,573	187,354
Per cwt of Farm Milk (\$/cwt)	0.14	6.39	6.25
Per cwt of Covered Milk (\$/cwt)	0.28	12.77	12.49

Deductible Level (\$/cwt)	Net Prem/cwt of Farm Milk (\$/cwt)	GMG/cwt of Farm Milk (\$/cwt)	Net GMG/cwt of Farm Milk (\$/cwt)	Net Prem/cwt of Covered Milk (\$/cwt)	GMG/cwt of Covered Milk (\$/cwt)	Net GMG/cwt of Covered Milk (\$/cwt)
0.0	0.41	6.89	6.48	0.82	13.77	12.96
0.1	0.38	Farm Milk	6.45	0.76	Covered Milk	12.91
0.2	0.35	6.79	6.43	0.70	13.57	12.87
0.3	0.32	6.74	6.41	0.65	13.47	12.82
0.4	0.30	6.69	6.39	0.59	13.37	12.78
0.5	0.27	6.64	6.37	0.54	13.27	12.73
0.6	0.24	6.59	6.34	0.48	13.17	12.69
0.7	0.22	6.54	6.32	0.43	13.07	12.64
0.8	0.19	6.49	6.29	0.38	12.97	12.59
0.9	0.17	6.44	6.26	0.35	12.87	12.52
1.0	0.14	6.39	6.25	0.28	12.77	12.49
1.1	0.13	6.34	6.21	0.25	12.67	12.42
1.2	0.12	6.29	6.17	0.24	12.57	12.34
1.3	0.11	6.24	6.13	0.22	12.47	12.25
1.4	0.10	6.19	6.08	0.20	12.37	12.17
1.5	0.09	6.14	6.04	0.19	12.27	12.08
1.6	0.09	6.09	6.00	0.18	12.17	12.00
1.7	0.08	6.04	5.95	0.16	12.07	11.91
1.8	0.08	5.99	5.91	0.15	11.97	11.82
1.9	0.07	5.94	5.87	0.14	11.87	11.73
2.0	0.06	5.89	5.82	0.13	11.77	11.64

Base Analysis



LGM-Dairy: An Overview

- Aug. 2008: Livestock Gross Margin Insurance for Dairy (*LGM-Dairy*) became available
 - Objective: Establish minimum IOFC
 - Similar to bundled options strategy except:
 - ✓ *No* options purchased
 - ✓ *No* minimum size limit
 - ✓ *Upper limit*: 240,000 cwt over 10 mo. or within insurance year
 - ✓ Premium not due until *after* contract period
 - ✓ Subsidized premiums
 - USDA-RMA administered and purchased from firms selling Federal crop insurance
 - ✓ July 2010: Available in lower 48 states

LGM-Dairy: An Overview

- LGM-Dairy is customizable with respect to:
 - Number of months insured by 1 contract
 - ✓ 1 – 10 months
 - % of monthly IOFC (production) covered
 - ✓ 0 – 100% of certified production each month
 - ✓ % coverage can vary across months
 - *Farm specific* production, declared feed use, deductible and premium
 - ✓ NMPF proposed revenue insurance program would be much less flexible

LGM-Dairy: An Overview

Expected Prices: Today's estimate of future milk and feed prices

- Gross Margin (GM) = Total contract *Expected* value of milk – Total contract *Expected* feed costs
 - Sum of monthly (*Expected* milk price x *Insured* milk) – Sum of monthly (*Expected* feed price x *Insured* feed use)
 - 1 GM per contract regardless of number of months insured
 - ✓ One month's low value can offset another month's relatively high value as only total sum matters

- Gross Margin Guarantee (GMG) =
GM – *Total Deductible*

LGM-Dairy: An Overview

Actual Prices: Milk and feed prices observed over insurance contract life

- Actual Gross Margin (AGM) = Total contract *Actual* milk value – Total contract *Actual* insured feed cost
 - Sum of monthly (*Actual* milk price x *Insured* milk) – Sum of monthly (*Actual* feed price x *Insured* feed use)
 - 1 AGM per contract regardless of number of months insured
 - ✓ A month with a low value can offset a month with a relatively high value

QUIZ

- ▶ The _____ is your friend.
- ▶ A milk contract is available the _____ Friday of every month.
- ▶ What is the web address for contract discovery information?
- ▶ What popular Dairy product uses flavoring from an Orchid seed pod?

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USDA United States Department of Agriculture | Risk Management Agency Field Office | 2016 Crop Year

Raleigh Regional Office — Raleigh, NC

Revised February 2016

Corn

CT, DE, MA, MD, ME, NH, NJ, NY, NC, PA, RI, VT, VA, WV

Crop Insured
All corn grown in the county on insurable acreage is insurable if:

- Producers are provided either as grain or silage, and
- You have a lease

Countries Available
See your state's national document at <http://www.usda.gov/soybean/soybean/soybean.htm> for available countries. Corn may be insurable in other countries by written agreement of specific crops we sell. Talk to your crop insurance agent for more details.

Causes of Loss
These perils protect against the following:

- Abnormal weather conditions, including natural perils such as hail, frost, freeze, wind, drought, and insect infestation.
- Failure of irrigation water supply, if used by an insured party, during the insurance period.
- Tax if caused by an insured party during the insurance period.
- Harvest damage and plant disease, except the insufficient or improper application of chemical substances, as provided.
- Wildfire.

Insurance Period
Coverage begins on the later of the date we accept your application or the date when the crop is planted, and ends with the earliest occurrence of one of the following:

- Total destruction of the crop.
- Harvest of the crop.
- Fall adjustment of a loss.
- Occurrence of the crop.
- October 31 for silage, or
- December 31 for grain.

Important Dates

Non-Croping Date - NC	February 28, 2016
Non-Croping Date - Other States	March 15, 2016
Harvest Period - Grain	July 15, 2016
Final planting date (not by county). Contact your crop insurance agent for the latest information on http://www.usda.gov/soybean/	

The final planting date, general harvest, and a crop insurance agent will be available for your state government website at <http://www.usda.gov/soybean/> For further information and an illustration of your state government website at <http://www.usda.gov/soybean/>

Reporting Requirements
You must file a report of planted acreage with your crop insurance agent for the acreage reporting date. Your acreage reporting date varies by crop and county. Contact your crop insurance agent for more information on <http://www.usda.gov/soybean/>

Duration for the Event of Damage or Loss
Notice of Loss - 72 hours from the date of the loss.

- Provide the crop loss further damage by providing additional info.
- Notify your crop insurance agent within 72 hours of your initial discovery of damage that you have 15 days after the end of the insurance period, and
- Late application requests must be made within of the damaged crop.

Price Election
The Commodity Exchange Price Provision (CEPP) contains additional elections to determine the projected price and the harvest price for the insured crop. The projected price is used to calculate the premium, higher premium, and not permitted planting program. The harvest price is used to value production to meet under the Revenue Protection, and for Revenue Protection with Harvest Price Election plans. The CEPP includes the price discovery period, interim date, board of trade vote, and additional pricing suboptions. The option harvest price equals the projected price. Talk to your crop insurance agent or the agent's representative for more information on <http://www.usda.gov/soybean/>

Coverage Levels and Premium Suboptions
The premium subsidy percentage and available coverage levels are shown below. Your date of the premium will be 100 percent unless for subsidy amount.

Form	From Level	To Level	Subsidy
Form 1000	50	55	40
Form 1000	55	60	30
Form 1000	60	65	20
Form 1000	65	70	10
Form 1000	70	75	0

Contingent Risk Protection (CRP) coverage is based on 50 percent of your average yield and 55 percent of the price election. The cost for CRP coverage is an administration fee of \$300.

Coverage Options
You may buy crop insurance coverage under one of three insurance plans offered.

Revenue Protection provides protection against loss of revenue due to production loss, price decline or increase, or a combination of both.

Revenue Protection with Harvest Price Election provides revenue protection based on the projected price used.

Yield Protection provides protection against production loss.

Supplemental Coverage Option (SCO) is a crop insurance option that provides additional coverage for a portion of your underlying crop insurance policy deductible. If elected, SCO provides additional coverage for a portion of your underlying crop insurance policy deductible.

Trend Adjusted (TA) Yield Option adjusts yields on Actual Production History databases to reflect increases in yields through time in the county. Check with your crop insurance agent for availability.

Yield Election (YE) allows you to exclude yields an acreage history based on your production history value (including yields used to establish your crop insurance coverage).

Insurance Limits
Basic, optional, enterprise, and whole farm unit structures are available in crop program counties. Premium discounts apply for basic, enterprise, and whole farm unit. Additional subsidy is available for enterprise and whole farm unit structures. Yield protection is not available for the whole farm unit structure.

Later and Prevented Planting
These provisions provide protection to acreage planted after the final planting date or that cannot be planted. Contact your crop insurance agent for details.

Loss Example
Assume corn with an approved yield of 90 bushels per acre, 70 percent coverage level, \$4.42 projected price, \$1.40 harvest price, and \$2 bushels produced. For Revenue Protection, the approved price is equal to the projected price, the harvest price or the latest price. In this example, the Revenue Protection harvest price guarantee is \$11.87 (\$7.3 bushels per acre guarantee multiplied by \$4.42 projected price).


	Yield Protection	Revenue Protection
Approved yield per acre	90	90
Coverage level	70	70
Active guarantee	\$7.30	\$7.30
Projected price	\$4.42	\$4.42
Insurance guarantee	\$11.87	\$11.87
Harvest price	\$1.40	\$1.40
Production-to-cost value	\$134.90	\$139.90
Insurance guarantee	\$11.87	\$11.87
Production-to-cost value	\$134.90	\$139.90
Indemnity per acre	\$127.08	\$137.25

Where to Buy Crop Insurance
All multi-peril crop insurance, including CAT policies, are available from private crop insurance agents. A list of crop insurance agents is available at all USDA service centers and on the USDA website at <http://www.usda.gov/soybean/>

Contact Us
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Raleigh, NC 27609
Telephone: (919) 775-4800
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E-mail: corn@usda.gov

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A Risk Management Agency Fact Sheet 2016 Crop Year

Raleigh Regional Office — Raleigh, NC

Revised February 2016

Soybeans

DE, MD, NJ, NY, NC, PA, VT, VA, WV

Crop Insured
All soybean grown in the county on insurable acreage as reported.

- Provision rates are provided.
- You have a claim, and
- Planted for harvest or grain that is a combine-type crop.

Coverages Available
You may elect to purchase the following coverages:

- Yield Protection
- Revenue Protection
- Revenue Protection with Harvest Price Exclusion
- Yield Protection with Harvest Price Exclusion
- Price Election
- Supplemental Coverage Option (SCO)
- Supplemental Coverage Option (SCO) with Actual Production History (APH)
- Supplemental Coverage Option (SCO) with Actual Production History (APH) and Revenue Protection
- Supplemental Coverage Option (SCO) with Actual Production History (APH) and Revenue Protection with Harvest Price Exclusion
- Supplemental Coverage Option (SCO) with Actual Production History (APH) and Revenue Protection with Harvest Price Exclusion and Revenue Protection with Harvest Price Exclusion

Insurance Period
Coverage begins on the date of the date we accept your application for the date that the crop is planted, insured, and with the actual occurrence of loss of the following:

- Planting of the crop.
- Harvest of the crop.
- Final adjustment of the crop.
- Abandonment of the crop.
- December 31.

Important Dates

Sales Closing Date - NC	February 28, 2016
Sales Closing Date - Other States	March 11, 2016
Average Reporting Date	July 15, 2016

Reporting Requirements
You must file a report of planted acreage to your insurance agent by the average reporting date established for your county. Have average reporting dates vary by crop and county. Contact your insurance agent for the exact information on www.fsa.usda.gov/fsc.

Options in the Event of Damage or Loss
Notice of Loss - If a loss occurs you should:

- Notify your agent within 72 hours of your actual discovery of damage from an event that is 11 days after the end of the insurance period, and
- Leave representative samples intact for each field of the damaged crop.

Price Elections
The Commodity Exchange Price (CEP) contains information necessary to derive the projected price and the harvest price for the insured crop. The projected price is used to calculate the premium, higher protection, and any premium planning program. The harvest price is used to calculate the revenue for the insured crop. The CEP includes the price discovery period, release date, based on trade and additional pricing information. Talk to your crop insurance agent for more information on www.fsa.usda.gov/fsc.

Coverage Levels and Premium Subsidies
The premium subsidy program provides available coverage levels on a sliding scale. Your share of the premium is 100 percent of the actual revenue.

Crop Level	Percent
100	100
90	90
80	80
70	70
60	60
50	50
40	40
30	30
20	20
10	10
0	0

Catastrophic Risk Protection (CAT) coverage is based on 70 percent of your average yield and 75 percent of the price election. The cost for CAT coverage is an administrative fee of \$100.

Price Elections
The Commodity Exchange Price (CEP) contains information necessary to develop the projected price and the harvest price for the insured crop. CEP includes the price discovery period, release date, based on trade and additional pricing information. Talk to your crop insurance agent for more information on www.fsa.usda.gov/fsc.

Insurance Plans
Revenue Protection - Guarantees coverage provides protection against revenue loss due to a production loss, price decline or a combination of both.
Revenue Protection with Harvest Price Exclusion - Guarantees coverage provides protection only against revenue loss due to a production loss, price decline, or a combination of both.
Yield Protection - Insurance coverage only providing protection against a production loss.

Area Revenue Protection - Area Revenue Protection with Harvest Price and Area Yield Protection plan are available for wheat in North Carolina and Maryland only.

Supplemental Coverage Option (SCO)
SCO is available for barley and wheat. It allows you to purchase additional coverage for a portion of your underlying crop insurance policy deductible. For further information visit the SCO fact sheet at www.fsa.usda.gov/fsc.

Late and Prevented Planting
These provisions provide protection on eligible acreage that is planted late or that cannot be planted by the final planting date. Please talk to your agent for more details.

Loss Example
Assume the crop is wheat with an approved yield of 60 bushels per acre. 75 percent coverage level, 100 percent claim and a loss area basis. The projected price is \$11.35 and the harvest price is \$14.00. Due to a variable cause of loss, the production is only 10 bushels per acre.


Yield Protection

Yield Protection	Revenue Protection
Approved yield per acre	60
Coverage level	75
Actual Guarantee	\$11.35
Projected price	\$11.35
Insurance guarantee	\$11.35
Actual production	10
Harvest price	\$14.00
Production-to-cost value	\$14.00
Insurance guarantee	\$11.35
Production-to-cost value	\$14.00
Indemnity per acre	\$14.00

Where to Buy Crop Insurance
All major crop insurance, including CAT policies, are available from private insurance agents. A list of crop insurance agents is available at all USDA service centers and on the FSA website at www.fsa.usda.gov.

Contact Us
USDA Risk Management Agency
Raleigh Regional Office
4427 Broad Road, Suite 140
Raleigh, NC 27609
Telephone: (919) 875-4800
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E-mail: rma@fsa.usda.gov

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A Risk Management Agency Fact Sheet 2016 Crop Year

Raleigh Regional Office — Raleigh, NC

Revised September 2015

Small Grains

Delaware, Illinois, Maryland, New Jersey, New York, North Carolina, Pennsylvania, Vermont, Virginia, West Virginia

Crop Insured
All small grain (barley, rye, and oats) on insurable acreage as reported.

- There are grains in a county on insurable acreage where provision rates are provided.
- You have a claim, and
- Planted for harvest or grain that is a combine-type crop.

Coverages Available
You may elect to purchase the following coverages:

- Yield Protection
- Revenue Protection
- Revenue Protection with Harvest Price Exclusion
- Yield Protection with Harvest Price Exclusion
- Price Election
- Supplemental Coverage Option (SCO)
- Supplemental Coverage Option (SCO) with Actual Production History (APH)
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Insurance Period
Coverage begins on the date of the date we accept your application for the date that the crop is planted, insured, and with the actual occurrence of loss of the following:

- Planting of the crop.
- Harvest of the crop.
- Final adjustment of the crop.
- Abandonment of the crop.
- December 31.

Important Dates

Sales Closing Date - NC	September 10, 2015
Sales Closing Date - Other States	March 11, 2016
Average Reporting Date	July 15, 2016

Reporting Requirements
You must file a report of planted acreage to your insurance agent by the average reporting date established for your county. Have average reporting dates vary by crop and county. Contact your insurance agent for the exact information on www.fsa.usda.gov/fsc.

Options in the Event of Damage or Loss
Notice of Loss - If a loss occurs you should:

- Notify your agent within 72 hours of your actual discovery of damage from an event that is 11 days after the end of the insurance period.

Price Elections
The Commodity Exchange Price (CEP) contains information necessary to develop the projected price and the harvest price for the insured crop. CEP includes the price discovery period, release date, based on trade and additional pricing information. Talk to your crop insurance agent for more information on www.fsa.usda.gov/fsc.

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Yield Protection	Revenue Protection
Approved yield per acre	60
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Actual Guarantee	\$11.35
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Actual production	10
Harvest price	\$14.00
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Production-to-cost value	\$14.00
Indemnity per acre	\$14.00

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Traditional Crop Insurance Quote

State: 19 MD	Unit Number: 0001-0000	Projected Price: \$3.86
County: 025 Harford	Acres: 100.00	Price Percent: 1.00
Crop: 001 Corn	Share: 1.000	Price Volatility: 0.17
Plan: 02 RP	Approved Yield: 160.00	Experience Factor: 1.000
Practice: 003 Non-Irrigated	Rate Yield: 160.00	
Type: 016 Grain	Total Acres: 500.0	

Coverage Level	Plan	Unit	Gaar - BU	Total Gaar	Coverage Per Acres	Total Coverage	Base Premium	Subsidy	Producer Premium	Producer Premium / Coverage BU	Producer Premium / Acre
75%	RP-02	EU	135.0	13,500.00	\$521.10	\$52,110	\$3,372	\$2,506	\$776	\$0.060	\$7.76
75%	SCO-RP-32	EU			\$76.43	\$7,643	\$1,938	\$1,260	\$678		\$6.78
75%	RP-02	OU	135.0	13,500.00	\$521.10	\$52,110	\$5,486	\$3,017	\$2,469	\$0.180	\$24.69
75%	SCO-RP-32	OU			\$76.43	\$7,643	\$1,938	\$1,260	\$678		\$6.78
80%	RP-02	EU	144.0	14,400.00	\$555.84	\$55,584	\$4,367	\$2,970	\$1,397	\$0.100	\$13.97
80%	SCO-RP-32	EU			\$41.69	\$4,169	\$1,300	\$845	\$455		\$4.55
80%	RP-02	OU	144.0	14,400.00	\$555.84	\$55,584	\$6,664	\$3,199	\$3,465	\$0.240	\$34.65
80%	SCO-RP-32	OU			\$41.69	\$4,169	\$1,300	\$845	\$455		\$4.55
85%	RP-02	EU	153.0	15,300.00	\$590.58	\$59,058	\$5,603	\$2,970	\$2,633	\$0.170	\$26.33
85%	SCO-RP-32	EU			\$6.95	\$6,95	\$264	\$172	\$92		\$9.92
85%	RP-02	OU	153.0	15,300.00	\$590.58	\$59,058	\$7,971	\$3,029	\$4,942	\$0.320	\$49.42
85%	SCO-RP-32	OU			\$6.95	\$6,95	\$264	\$172	\$92		\$9.92

USMA Pasture, Rangeland, Forage Pilot Insurance Program

Pasture, Rangeland, Forage
 The Risk Management Agency's (RMA) Pasture, Rangeland, Forage (PRF) Pilot Insurance Program is designed to provide insurance coverage on your pasture, rangeland, or forage acres. This innovative pilot program is based on precipitation. Rainfall Index. This program is designed to give you the ability to buy insurance protection for losses of forage produced for grazing or harvested for hay, which result in increased costs for feed, detouring, depleting, or other actions.

Availability
 PRF is available in the 48 contiguous states with the exception of a few grids that cross international borders. The Rainfall Index will replace the Vegetation Index beginning in the 2018 crop year.

Coverage and Claims
 The Rainfall Index uses National Oceanic and Atmospheric Administration Climate Prediction Center (NOAA CPC) data and each grid is 0.25 degrees in latitude by 0.25 degrees in longitude, which translates to approximately 17.17 miles of the equator. You must select at least two, 2-month periods where precipitation is important to your operation. These periods are called index months.

Your insurance payments are determined by using NOAA CPC data for the grid(s) and index month(s) you have chosen to insure. When the final grid index falls below your "trigger grid index", you may receive an indemnity. The insurance coverage is for a single peak of precipitation. Coverage is based on the experience of the entire grid. It is not based on individual farms or ranches or specific weather stations in the general area. You can find more detailed information on the NOAA website at www.cpc.ncep.noaa.gov/products/insurance/prf_index.html.

This list of states gives only a general overview of the crop insurance program and is not a complete policy. For further information and an estimate of your crop insurance needs, contact your crop insurance agent.

production. Please review the historical indices tools for your grid along with past production records to determine if these programs will work for your operation and which periods work best for your forage production.

Buying a PRF Policy
 You can buy a PRF policy from a crop insurance agent by the sales closing date shown for each county in the historical documents at prf.usma.usda.gov. A list of crop insurance agents is available at all USDA service centers and on the RMA website at www.usma.usda.gov/tools/agent.html.

Contact Us
 USDA RMA
 Mail Stop 0801
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 Washington, DC 20250
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 Fax: (202) 496-2818
 Website: www.usda.usda.gov
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To be a recipient of documentation, requests, you will need a program documentation request form, available at www.usda.gov/foia. Contact the Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Ave., SW, Washington, DC 20250-4102. Or call toll free at 1-800-665-4689. You may also submit additional comments, the response office is required to respond to your comments on the final draft of the policy, and you may participate and comment on the final draft of the policy. For further information, contact the Public Room service at 2025 47-1016 or 2025 301-4516.

Pasture, Rangeland, Forage