Exhibit Name: Premium Calculation						
Exhibit Number: P16_1, Plan 82			**Reinsurance Year:** 2025			
Record Name: LGM Premium			**Version:** Approved			
Record Code: P16_1			**Release Date:** 6/27/2024			

Insurance Plan Code		82 Livestock Gross Margin	
Commodity Code	0803 Cattle 0847 Dairy Cattle	0815 Swine	

Calculations		Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Sections 1-3 are For Swine Only							
Section 1: Gross Margin Guarantee Amount Calculation							
For X where X is months 2 through 6:							
Month X Total Expected Gross Margin Amount	=	Month X Total Expected Gross Margin Amount	Internal		9999999.9999	Round to 4 decimals.	
		Month X Target Market Amount	P16	22-26	999999		
	Month X Target Market Amount * Month X Expected Gross Margin Amount	Month X Expected Gross Margin Amount	ADM		9999.9999		From ADM LGM Gross Margin, "A00600."
Total Expected Gross Margin Amount	= $\sum\limits_{X=2}^{6}$ (Month X Total Expected Gross Margin Amount)	Total Expected Gross Margin Amount	Internal		9999999999.99	Round to 2 decimals.	Dollars and Cents. Sum of Total Expected Gross Margin Amounts for months 2 through 6.
Gross Margin Guarantee Amount	=	Gross Margin Guarantee Amount	P16	69	9999999999.99	Round to 2 decimals.	Value can be negative.
	Total Expected Gross Margin Amount - (Deductible Amount * Total Target Market Amount)	Deductible Amount	P16	52	9999.99		
		Total Target Market Amount	Internal		9999999999		Sum of Target Marketings by month.
Section 2: Liability Calculation							
Liability Amount	=	Liability Amount	P16	70	9999999999	Round to whole number.	Cupped by the standard rule of $1 if applicable.
	Liability Price * 0.74 * 2.6 * Total Target Market Amount	Liability Price	ADM				Liability Price from ADM A00600.
Section 3: Simulated Losses Calculation							
For X where X is months 2 through 6:							
Month X Total Gross Margin Draw Amount(i)	=	Month X Total Gross Margin Draw Amount(i)	Internal		9999999999.99	Round to 2 decimals.	Dollars and Cents. Value can be negative.
		Month X Target Market Amount	P16	22-26	999999		
	Month X Margin Draw Amount(i) * Month X Target Market Amount	Month X Margin Draw Amount(i)	ADM		99999.99		Month X Gross Margin Draw from A00610 ADM LGM Draw.
Total Simulated Gross Margin Amount(i)	= $\sum\limits_{X=2}^{6}$ (Month X Total Gross Margin Draw Amount(i))	Total Simulated Gross Margin Amount(i)	Internal		9999999999.99	Round to 2 decimals.	Dollars and Cents. Sum of Simulated Gross Margins 2 thru 6. Negative simulated gross margins will be included.
Simulated Loss Amount	= $\sum\limits_{i=1}^{500}$ (MAX(Gross Margin Guarantee Amount - Total Simulated Gross Margin Amount(i), 0))	Simulated Loss Amount	Internal		9999999999	Round to whole number.	

Exhibit Name: Premium Calculation						
Exhibit Number: P16_1, Plan 82			**Reinsurance Year:** 2025			
Record Name: LGM Premium			**Version:** Approved			
Record Code: P16_1			**Release Date:** 6/27/2024			

Insurance Plan Code		82 Livestock Gross Margin				
Commodity Code	0803 Cattle 0847 Dairy Cattle	0815 Swine				

Sections 4 - 6 are For Cattle Only

Section 4: Gross Margin Guarantee Amount Calculation

For X where X is months 2 through 11:

Month X Total Expected Gross Margin Amount	=	ROUND((ROUND((Month X Target Market Amount * Live Cattle Target Weight Quantity), 4) * Month X Live Cattle Price), 4) - ROUND((ROUND((Month X Target Market Amount * Feeder Cattle Target Weight Quantity), 4) * Month X Feeder Cattle Price), 4) - ROUND((ROUND((Month X Target Market Amount * Corn Target Weight Quantity), 4) * Month X Corn Price), 4)	Month X Total Expected Gross Margin Amount	Internal		9999999999.99	Round to 2 decimals.	Value can be negative.
			Month X Target Market Amount	P16	22-31	999999		
			Live Cattle Target Weight Quantity	P16	52	99.99		
			Feeder Cattle Target Weight Quantity	P16	53	9.99		
			Corn Target Weight Quantity	P16	54	99.99		
			Month X Live Cattle Price	ADM		9999.9999		Equal to Month X Expected Gross Margin Amount from ADM LGM Gross Margin, "A00600," where Market Symbol Code is 'LE'.
			Month X Feeder Cattle Price	ADM		9999.9999		Equal to Month X Expected Gross Margin Amount from ADM LGM Gross Margin, "A00600," where Market Symbol Code is 'GF'.
			Month X Corn Price	ADM		9999.9999		Equal to Month X Expected Gross Margin Amount from ADM LGM Gross Margin, "A00600," where Market Symbol Code is 'C'.

Exhibit Name: Premium Calculation								
Exhibit Number: P16_1, Plan 82					**Reinsurance Year:** 2025			
Record Name: LGM Premium					**Version:** Approved			
Record Code: P16_1					**Release Date:** 6/27/2024			

Insurance Plan Code			82 Livestock Gross Margin					

Commodity Code		0803 Cattle 0847 Dairy Cattle	0815 Swine					

Name	=	Formula	Data Element	Source	Location	Format	Rounding	Comments
Total Expected Gross Margin Amount	=	11 ∑ (Month X Total Expected Gross Margin Amount) X=2	Total Expected Gross Margin Amount	Internal		9999999999.99	Round to 2 decimals.	Dollars and Cents. Sum of Expected Gross Margin Amounts for months 2 through 11.
Total Target Market Amount	=	11 ∑ (Month X Target Market Amount) X=2	Total Target Market Amount	Internal		9999999999		
			Month X Target Market Amount	P16	22-31	999999		
Gross Margin Guarantee Amount	=	Total Expected Gross Margin Amount - (Deductible Amount * Total Target Market Amount)	Gross Margin Guarantee Amount	P16	53	9999999999.99	Round to 2 decimals.	Value can be negative.
			Deductible Amount	P16	52	9999.99		
			Total Target Market Amount	Internal		9999999999		Sum of Target Marketings by month.
Section 5: Liability Calculation								
Liability Amount	=	Liability Price * Total Target Market Amount * Live Cattle Target Weight Quantity	Liability Amount	P16	70	9999999999	Round to whole number.	
			Live Cattle Target Weight Quantity	P16	52	99.99		
			Liability Price	ADM		999.99		From ADM LGM Gross Margin, "A00600," where Market Symbol Code is 'LE'.
Section 6: Simulated Losses Calculation								
For X where X is months 2 through 11:								
Month X Gross Margin Draw Amount(i)	=	ROUND((ROUND((Month X Target Market Amount * Live Cattle Target Weight Quantity), 4) * Live Cattle Month X Margin Draw Amount(i)), 4) + ROUND((ROUND((Month X Target Market Amount * Feeder Cattle Target Weight Quantity), 4) * Feeder Cattle Month X Margin Draw Amount(i)), 4) - ROUND((ROUND((Month X Target Market Amount * Corn Target Weight Quantity), 4) * Corn Month X), 4)	Month X Gross Margin Draw Amount(i)	Internal		9999999999.99	Round to 2 decimals.	Dollars and Cents. Value can be negative.
			Month X Target Market Amount	P16	22-31	999999		
			Live Cattle Target Weight Quantity	P16	52	99.99		
			Feeder Cattle Target Weight Quantity	P16	53	9.99		
			Corn Target Weight Quantity	P16	54	99.99		
			Corn Month X Margin Draw Amount(i)	ADM		99999.99		From ADM LGM Draw, "A00610."
			Feeder Cattle Month X Margin Draw Amount(i)	ADM		99999.99		From ADM LGM Draw, "A00610."
			Live Cattle Month X Margin Draw Amount(i)	ADM		99999.99		From ADM LGM Draw, "A00610."
Total Simulated Gross Margin Amount(i)	=	11 ∑ (Month X Gross Margin Draw Amount(i)) X=2	Total Simulated Gross Margin Amount(i)	Internal		9999999999.99	Round to 2 decimals.	Dollars and Cents. Sum of Simulated Gross Margins 2 thru 11. Negative simulated gross margins will be included.
Simulated Loss Amount	=	500 ∑ (MAX(Gross Margin Guarantee Amount - Total Simulated Gross Margin Amount(i), 0)) i=1	Simulated Loss Amount	Internal		9999999999	Round to whole number.	

Exhibit Name: Premium Calculation								
Exhibit Number: P16_1, Plan 82				**Reinsurance Year:** 2025				
Record Name: LGM Premium				**Version:** Approved				
Record Code: P16_1				**Release Date:** 6/27/2024				

Insurance Plan Code		82 Livestock Gross Margin
Commodity Code	0803 Cattle 0847 Dairy Cattle	0815 Swine

Sections 7-9 are For Dairy Cattle Only

Section 7: Gross Margin Guarantee Amount Calculation

For X where X is months 2 through 11:

Month X Expected Feed Cost Amount	=	ROUND((ROUND((Month X Corn Equivalent Amount * ROUND((2000/56), 16)), 4) * Month X Corn Price), 4) + ROUND((Month X Soybean Meal Equivalent Amount * Month X Soymeal Price), 4)	Month X Expected Feed Cost Amount	Internal		9999999999.99	Round to 2 decimals.	Dollars and Cents.
			Month X Corn Equivalent Amount	P16	32-41	9999.999999		
			Month X Corn Price	ADM		9999.9999		Equal to Month X Expected Gross Margin Amount from ADM LGM Gross Margin, "A00600," where Market Symbol Code is 'C'.
			Month X Soybean Meal Equivalent Amount	P16	42-51	9999.999999		
			Month X Soymeal Price	ADM		9999.9999		Equal to Month X Expected Gross Margin Amount from ADM LGM Gross Margin, "A00600," where Market Symbol Code is 'SM'.

For X where X is months 2 through 11:

Month X Total Expected Gross Margin Amount	=	ROUND((Month X Target Market Amount * Month X Milk Price), 4) - Month X Expected Feed Cost Amount	Month X Total Expected Gross Margin Amount	Internal		9999999999.99	Round to 2 decimals.	Value can be negative.
			Month X Target Market Amount	P16	22-31	999999		
			Month X Milk Price	ADM		9999.9999		Equal to Month X Expected Gross Margin Amount from ADM LGM Gross Margin, "A00600," where Market Symbol Code is 'DA'.
Total Expected Gross Margin Amount	=	$\sum_{X=2}^{11}$ (Month X Total Expected Gross Margin Amount)	Total Expected Gross Margin Amount	Internal		9999999999.99	Round to 2 decimals.	Dollars and Cents. Sum of Expected Gross Margin Amounts for months 2 through 11.
Total Target Market Amount	=	$\sum_{X=2}^{11}$ (Month X Target Market Amount)	Total Target Market Amount	Internal		9999999999		
			Month X Target Market Amount	P16	22-31	999999		
Gross Margin Guarantee Amount	=	Total Expected Gross Margin Amount - (Deductible Amount * Total Target Market Amount)	Gross Margin Guarantee Amount	P16	53	9999999999.99	Round to 2 decimals.	Value can be negative.
			Deductible Amount	P16	52	9999.99		
			Total Target Market Amount	Internal		9999999999		Sum of Target Marketings by month.

Section 8: Liability Calculation

Liability Amount	=	Liability Price * Total Target Market Amount	Liability Amount	P16	70	9999999999	Round to whole number.	
			Liability Price	ADM		999.99		From ADM LGM Gross Margin, "A00600," where Market Symbol Code is 'DA'.

Insurance Plan Code		82 Livestock Gross Margin
Commodity Code	0803 Cattle 0847 Dairy Cattle	0815 Swine

Section 9: Simulated Losses Calculation

For X where X is months 2 through 11:

Month X Feed Cost Draw Amount(i)	=	ROUND((ROUND((Month X Corn Equivalent Amount * ROUND((2000/56), 16)), 4) * Corn Month X Margin Draw Amount(i)), 4) + ROUND((Month X Soybean Meal Equivalent Amount * SoyM Month X Margin Draw Amount(i)), 4)	Month X Feed Cost Draw Amount(i)	Internal		9999999999.99	Round to 2 decimals.	Dollars and Cents.
			Month X Corn Equivalent Amount	P16	32-41	9999.999999		
			Corn Month X Margin Draw Amount(i)	ADM		99999.99		From ADM LGM Draw, "A00610."
			Month X Soybean Meal Equivalent Amount	ADM	42-51	9999.999999		
			SoyM Month X Margin Draw Amount(i)	ADM		99999.99		From ADM LGM Draw, "A00610."

For X where X is months 2 through 11:

Month X Gross Margin Draw Amount(i)	=	ROUND((Month X Target Market Amount * Dairy Month X Margin Draw Amount(i)), 2) - Month X Feed Cost Draw Amount(i)	Month X Gross Margin Draw Amount(i)	Internal		9999999999.99	Round to 2 decimals.	Dollars and Cents. Value can be negative.
			Month X Target Market Amount	P16	22-31	999999		
			Dairy Month X Margin Draw Amount(i)	ADM		99999.99		From ADM LGM Draw, "A00610."

Total Simulated Gross Margin Amount(i)	=	$\sum_{X=2}^{11}$ (Month X Gross Margin Draw Amount(i))	Total Simulated Gross Margin Amount(i)	Internal		9999999999.99	Round to 2 decimals.	Dollars and Cents. Sum of Simulated Gross Margins 2 thru 11. Negative simulated gross margins will be included.
Simulated Loss Amount	=	$\sum_{i=1}^{500}$ (MAX(Gross Margin Guarantee Amount - Total Simulated Gross Margin Amount(i), 0))	Simulated Loss Amount	Internal		9999999999	Round to whole number.	

Sections 10 - 12 are For Swine, Cattle and Dairy Cattle

Section 10: Total Premium, Subsidy, and Producer Premium Calculation

Total Premium Amount	=	1.0870 * (1/500) * Simulated Loss Amount	Total Premium Amount	P16	71	9999999999	Round to whole number.	
Subsidy Amount	=	Total Premium Amount * Subsidy Percent	Subsidy Amount	P16	72	9999999999	Round to whole number.	
			Subsidy Percent	ADM		9.999		Subsidy is based on number of months and deductible Edit with ADM Subsidy Percent, "A00070".
Producer Premium Amount	=	Total Premium Amount - Subsidy Amount	Producer Premium Amount	P16	75	9999999999	Round to whole number.	

Section 11: Beginning Farmer and Rancher (BFR), Veteran Farmer Rancher (VFR) and Conservation Compliance (CC) Subsidy Calculations

Base Subsidy Amount	=	Total Premium Amount * Subsidy Percent	Base Subsidy Amount	Internal		9999999999	Round to whole number.	Cupped by the standard rule of $1 if applicable.
			Subsidy Percent	ADM		9.999		
BFR/VFR Subsidy Amount	=	Total Premium Amount * 0.10 * (1 - CC Subsidy Reduction Percent)	BFR/VFR Subsidy Amount	Internal		9999999999	Round to whole number.	Beginning Farmer Rancher/Veteran Farmer Rancher Subsidy Amount. If Applicable; else 0. 0.10 (10%).
			CC Subsidy Reduction Percent	P16	60	9.9999		If Applicable; else 0.
CC Subsidy Reduction Amount	=	Base Subsidy Amount * CC Subsidy Reduction Percent	CC Subsidy Reduction Amount	P16	69	9999999999	Round to whole number.	CC Subsidy Reduction Amount. If Applicable; else 0.
Subsidy Amount	=	Base Subsidy Amount + BFR/VFR Subsidy Amount - CC Subsidy Reduction Amount	Subsidy Amount	P16	72	9999999999	Round to whole number.	Subsidy Amount cannot exceed Total Premium Amount. Subsidy Amount will be cupped at $0.
Producer Premium Amount	=	Total Premium Amount - Subsidy Amount	Producer Premium Amount	P16	75	9999999999	Round to whole number.	

Section 12: A&O Expense Subsidy

A&O Expense Subsidy Amount	=	Total Premium Amount * A&O Expense Subsidy Percent	A&O Expense Subsidy Amount	P16	76	9999999999.99	Round to whole number.	Cupped by the standard rule of $1 if applicable.
			A&O Expense Subsidy Percent	ICE				Edit with A & O Expense Subsidy Percent from the A & O Expense Subsidy ICE, "D00097".