Exhibit Name: Premium Calculation				
Exhibit Number: P16_1, Plan 82			**Reinsurance Year:** 2023	
Record Name: Acreage			**Version:** Approved	
Record Code: P16_1			**Release Date:** 7/1/2022	

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

Sections 1 - 6 are For Cattle and Swine Only

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Section 1: Gross Margin Guarantee Amount Calculation						
For X where X is months 2 through 11:						
Month X Total Expected Gross Margin Amount = Month X Target Market Amount * Month X Expected Gross Margin Amount	Month X Total Expected Gross Margin Amount	Internal		9999999.9999	Round to 4 decimals	
	Month X Target Market Amount	P16	22-31	999999		
	Month X Expected Gross Margin Amount	ADM		9999.9999		From ADM LGM Gross Margin, "A00600."
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 Total Expected Gross Margin Amounts for months 2 through 11.
Gross Margin Guarantee Amount = Total Expected Gross Margin Amount - (Deductible Amount * Total Target Market Amount)	Gross Margin Guarantee Amount	P16	69	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 2: Liability Calculation						
For Cattle 0803 Yearling Finishing (Type 808):						
Liability Amount = Three Day Cme Cwt Price * 12.5 * Total Target Market Amount	Liability Amount	P16	70	9999999999	Round to whole number	Cupped by the standard rule of $1 if applicable.
	Three Day Cme Cwt Price	ADM				3-Day Avg CME Cwt Price from ADM A00600.
For Cattle 0803 Yearling Finishing (Type 807):						
Liability Amount = Three Day Cme Cwt Price * 11.5 * Total Target Market Amount	Liability Amount	P16	70	9999999999	Round to whole number	Cupped by the standard rule of $1 if applicable.
	Three Day Cme Cwt Price	ADM				3-Day Avg CME Cwt Price from ADM A00600.
For Swine 0815:						
Liability Amount = Three Day Cme Cwt Price * 0.74 * 2.6 * Total Target Market Amount	Liability Amount	P16	70	9999999999	Round to whole number	Cupped by the standard rule of $1 if applicable.
	Three Day Cme Cwt Price	ADM				3-Day Avg CME Cwt Price from ADM A00600.
Section 3: Simulated Losses Calculation						
For X where X is months 2 through 11:						
Month X Total Gross Margin Draw Amount(i) = Month X Margin Draw Amount(i) * Month X Target Market Amount	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	22-31	999999		
	Month X Margin Draw Amount(i)	ADM		99999.99		~~Second~~ Month X Gross Margin Draw from A00610 ADM LGM Draw.
Total Simulated Gross Margin Amount(i) = $\sum_{X=2}^{11}$ (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 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	
Section 4: Total Premium, Subsidy, and Producer Premium Calculation						
Total Premium Amount = 1.03 * (1/500) * Simulated ~~Losses~~ Amount	Total Premium Amount	P16	71	9999999999	Round to whole number	Cupped by the standard rule of $1 if applicable.
Subsidy Amount = Total Premium Amount * Subsidy Percent	Subsidy Amount	P16	72	9999999999	Round to whole number	
	Subsidy Percent	ADM		9.999	None	Subsidy is based on number of months and deductible. Edit with ADM Subsidy Percent, "A00070".

Exhibit Name: Premium Calculation		
Exhibit Number: P16_1, Plan 82	**Reinsurance Year:** 2023	
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Insurance Plan Code	82 Livestock Gross Margin

Commodity Code	0803 Cattle 0847 Dairy Cattle	0815 Swine

<table>
<tr><th colspan="7">Sections 1 - 6 are For Cattle and Swine Only</th></tr>
<tr><th>Calculations</th><th>Field
Name</th><th>Record
Number</th><th>Field
Number</th><th>Field
Format</th><th>Field
Rounding</th><th>Rules</th></tr>
<tr><td>Producer Premium Amount   =   Total Premium Amount - Subsidy Amount</td><td>Producer Premium Amount</td><td>P16</td><td>75</td><td>9999999999</td><td>Round to whole number</td><td></td></tr>
</table>

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

Sections 1 - 6 are For Cattle and Swine Only

Calculations		Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Section 5: 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	None	Edit with ADM Subsidy Percent, "A00070."
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	None	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 6: 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".

The Following Sections are Applicable for Dairy Cattle

Calculations		Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Section 7: Gross Margin Guarantee Amount Calculation							
For X where X is months 2 through 11:							
Month X Expected Feed Cost Amount =	ROUND((Month X Corn Equivalent Amount * (Round (2000/56),16) * 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'.

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Insurance Plan Code	82 Livestock Gross Margin

Commodity Code	0803 Cattle 0847 Dairy Cattle	0815 Swine

Sections 1 - 6 are For Cattle and Swine Only

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Total Expected Gross Margin Amount $= \sum\limits_{X=2}^{11}$ (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.

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

Sections 1 - 6 are For Cattle and Swine Only

	Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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

	Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Liability Amount =	Liability Milk Price * Total Target Market Amount	Liability Amount	P16	70	9999999999		
		Liability Milk Price	ADM		999.99		From ADM LGM Gross Margin, "A00600," where Market Symbol Code is 'DA'.

Section 9: Simulated Losses Calculation

For X where X is months 2 through 11:

	Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Month X Feed Cost Draw Amount(i) =	ROUND((Month X Corn Equivalent Amount * Round (2000/56),16) * 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:

	Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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	

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

	Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Total Premium Amount =	1.03 * (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

	Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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%).

	Exhibit Name:	Premium Calculation				
	Exhibit Number:	P16_1, Plan 82	Reinsurance Year:	2023		
	Record Name:	Acreage	Version:	Approved		
	Record Code:	P16_1	Release Date:	7/1/2022		

Insurance Plan Code	82 Livestock Gross Margin

Commodity Code	0803 Cattle 0847 Dairy Cattle	0815 Swine

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Calculations			**Field Name**	**Record Number**	**Field Number**	**Field Format**	**Field Rounding**	**Rules**
			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	