

Exhibit Name: Premium Calculation
 Exhibit Number: P11-4, Plan 41
 Record Name: Acreage
 Record Code: P11

Reinsurance Year: 2022
 Version: Approved
 Release Date: 8/18/2022

Insurance Plan Code 41 Pecan Revenue

Commodity Code 0020 Pecans

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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Second Year of Two-year Coverage Module and no changes

If Reference Commodity Year <> Commodity Year:

Approved Yield (Revenue), Coverage Level Percent, Dollar Amount of Insurance, Base Premium Rate, and Premium Rate will equal what was determined for First Year of Two-year Coverage Module.

First Year of Two-year Coverage Module or if there were changes to Second Year

Section 1: Liability Calculation

Coverage Type Code equals Additional, "A": Dollar Amount of Insurance = Approved Yield (Revenue) * Coverage Level Percent	Dollar Amount of Insurance	P11	112	99999999.99	Round to whole number.	
	Approved Yield(Revenue)	P11	42	99999999.99	None	This will be the Approved Revenue reported in the Approved Yield field.
	Coverage Level Percent	P14	34	9.9999	None	
Coverage Type Code equals Catastrophic, "C": Dollar Amount of Insurance = Approved Yield (Revenue) * Coverage Level Percent * Price Election Percent	Dollar Amount of Insurance	P11	112	99999999.99	Round to whole number.	
	Approved Yield(Revenue)	P11	42	99999999.99	None	This will be the Approved Revenue reported in the Approved Yield field.
	Coverage Level Percent	P14	34	9.9999	None	
	Price Election Percent	P14	35	9.9999	None	When Coverage Type Code equals "C", then Price Election Percent (Protection Factor) equals 0.55.
Acre Guarantee Quantity = Dollar Amount of Insurance * Guarantee Adjustment Factor	Acre Guarantee Quantity	P11	113	99999999.99	Round to whole number.	
	Guarantee Adjustment Factor	P11	69	0.999	None	
Total Guarantee Amount = Acre Guarantee Quantity * Reported Acreage	Total Guarantee Amount	P11	110	99999999.99	Round to whole number.	
	Reported Acreage	P11	48	99999999.99	None	Reported Acreage must equal the sum of all Land, P27, Reported Acreage.
Liability Amount = Total Guarantee Amount * Insured Share Percent	Liability Amount	P11	101	9999999999	Round to whole number.	Cup at \$1.
	Insured Share Percent	P11	43	9.9999	None	

Section 2: Base Premium Rate Calculation

Current Year Yield Ratio = Rate Yield (Revenue) / Reference Revenue	Current Year Yield Ratio	Internal		99999999.99	Round to 2 decimals.	Cup at 0.50 and Cap at 1.50.
	Rate Yield (Revenue)	P15	35	99999999.99	None	This will be the Rate Revenue reported in the Rate Yield field.
	Reference Revenue	ADM		99999.99	None	Edit with ADM Base Rate, "A01010" Reference Amount.

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Prior Year Yield Ratio = Rate Yield / Prior Year Reference Revenue	Prior Year Yield Ratio	Internal		9999999.99	Round to 2 decimals.		
	Rate Yield	P15	35	99999999.99	None	This will be the Rate Yield (Revenue).	
	Prior Year Reference Revenue	ADM		99999.99	None	Edit with ADM Base Rate, "A01010" Prior Year Refernce Amount.	
Current Year Rate Multiplier = Current Year Yield Ratio ^ Exponent Value	Current Year Rate Multiplier	Internal		9999.99999999	Round to 8 decimals.		
	Exponent Value	ADM		S99.999	None	Edit with ADM Base Rate, "A01010".	
Prior Year Rate Multiplier = Prior Year Yield Ratio ^ Prior Year Exponent Value	Prior Year Rate Multiplier	Internal		999999.99999999	Round to 8 decimals.		
	Prior Year Exponent Value	ADM		S99.999	None	Edit with ADM Base Rate, "A01010".	
Current Year Base Rate =	When Rate Method Code equals Fixed Rate, "F": Sub County Rate	Current Year Base Rate	Internal		999999.99999999	Round to 8 decimals.	
	When Rate Method Code equals Additive, "A": (Sub County Rate + Current Year Rate Multiplier * Reference Rate + Fixed Rate)	Sub County Rate	ADM		99.9999	None	Edit with ADM Sub County Rate, "A01050".
	When Rate Method Code equals Multiplicative, "M": Sub County Rate * (Current Year Rate Multiplier * Reference Rate + Fixed Rate)	Reference Rate	ADM		9.9999	None	Edit with ADM Base Rate, "A01010".
	Otherwise: Current Year Rate Multiplier * Reference Rate + Fixed Rate	Fixed Rate	ADM		9.9999	None	Edit with ADM Base Rate, "A01010".

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Prior Year Base Rate = $\begin{cases} \text{When Rate Method Code equals Fixed Rate, "F":} \\ \text{Sub County Rate} \\ \text{When Rate Method Code equals Additive, "A":} \\ \text{Sub County Rate} + (\text{Prior Year Rate Multiplier} * \text{Prior Year Reference Rate} + \text{Prior Year Fixed Rate}) \\ \text{When Rate Method Code equals Multiplicative, "M":} \\ \text{Sub County Rate} * (\text{Prior Year Rate Multiplier} * \text{Prior Year Reference Rate} + \text{Prior Year Fixed Base}) \\ \text{Otherwise:} \\ \text{Prior Year Rate Multiplier} * \text{Prior Reference Rate} + \text{Prior Year Fixed Rate} \end{cases}$	Prior Year Base Rate	Internal		999999.99999999	Round to 8 decimals.	
	Sub County Rate	ADM		99.9999	None	Edit with ADM Sub County Rate, "A01050".
	Prior Year Reference Rate	ADM		9.9999	None	Edit with ADM Base Rate, "A01010".
	Prior Year Fixed Rate	ADM		9.9999	None	Edit with ADM Base Rate, "A01010".
Current Year Base Premium Rate = $\text{Current Year Base Rate} * \text{Rate Differential Factor} * \text{Unit Residual Factor}$	Current Year Base Premium Rate	Internal		999999.99999999	Round to 8 decimals.	
	Rate Differential Factor	ADM		9.99999999	None	Edit with ADM Coverage Level Differential, "A01040". If Sub County Rate applies then associated Sub County Differentials will apply.
	Unit Residual Factor	ADM		9.999	None	Edit with ADM Coverage Level Differential, "A01040". When Unit Structure Code equals "OU" or "BU", then Unit Residual Factor. When Unit Structure Code equals "EU", then Enterprise Unit Residual Factor.
Prior Year Base Premium Rate = $\text{Prior Year Base Rate} * \text{Prior Year Rate Differential Factor} * \text{Prior Year Residual Factor} * 1.2$	Prior Year Base Premium Rate	Internal		999999.99999999	Round to 8 decimals.	
	Prior Year Rate Differential Factor	ADM		9.99999999	None	Edit with ADM Coverage Level Differential, "A01040". If Sub County Rate applies then associated Sub County Differentials will apply.
	Prior Year Unit Residual Factor	ADM		9.999	None	Edit with ADM Coverage Level Differential, "A01040". When Unit Structure Code equals "OU" or "BU", then Prior Year Unit Residual Factor. When Unit Structure Code equals "EU", then Prior Year Enterprise Unit Residual Factor.

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Base Premium Rate = MIN (Current Year Base Premium Rate, Prior Year Base Premium Rate, or .999)	Base Premium Rate	P11	104	999999.99999999	Round to 8 decimals.	Edit with ADM Base Rate, "A01010".

Section 3: Optional Coverage Calculation

When Rate Method Code is Additive, "A": Additive Optional Rate Adjustment Factor = $\sum \text{Option Rate} * \text{Rate Differential Factor}$	Additive Optional Rate Adjustment Factor	Internal		999999.9999	Round to 4 decimals.	
	Option Rate	ADM		99999.9999	None	Option Rate will be the Sum of all Option Rate with Rate Method Code equal to Additive, "A". Edit with ADM Option Rate, "A01060".
	Rate Differential Factor	ADM		9.99999999	None	Edit with ADM Coverage Level Differential, "A01040". If Reference Commodity Year <> Commodity Year use Prior Year Rate Differential Factor.
When Rate Method Code is Multiplicative, "M": Multiplicative Optional Rate Adjustment Factor = $\sum \text{Option Rate1} * \text{Option Rate2} * \text{Option Rate3}...$	Multiplicative Optional Rate Adjustment Factor	Internal		999999.9999	Round to 4 decimals.	
	Option Rate	ADM		9.9999	None	Edit with ADM Option Rate, "A01060".

Section 4: Premium Rate Calculation

The Premium Rate for ALL Unit Structures should be capped at .999 in the event various adjustments to the Base Premium Rate would cause it to exceed 1.0.

Premium Rate = Base Premium Rate * Unit Structure Discount Factor * Multiplicative Optional Rate Adjustment Factor + Additive Optional Rate Adjustment Factor	Premium Rate	Internal		999999999.99999999	Round to 8 decimals.	Premium Rate is capped at 0.99900000.
	Unit Structure Discount Factor	ADM		9.999	None	Edit with ADM Unit Discount, "A01090". When Unit Structure Code equals "BU", then Unit Structure Discount Factor equals Basic Unit Discount Factor. When Unit Structure Code equals "EU", then Unit Structure Discount Factor equals Enterprise Unit Discount Factor.

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Section 5: Total Premium, Subsidy, and Producer Premium Calculation

$\text{Preliminary Total Premium Amount} = \frac{\text{Liability Amount} * \text{Premium Rate} * \text{Premium Surcharge Percent}}{\text{Percent}}$	Preliminary Total Premium Amount	Internal		9999999999	Round to whole number.	
	Premium Surcharge Percent	Internal		9.99	None	When Surcharge Applied Flag equals "Y", then Premium-Surcharge Percent must equal 1.05, otherwise must equal 1.00.
$\text{Total Premium Amount} = \text{Preliminary Total Premium Amount} * \text{Multiple Commodity Adjustment Factor}$	Total Premium Amount	P11	102	9999999999	Round to whole number.	
	Multiple Commodity Adjustment Factor	ICE		9999.999	None	Edit with ICE Multiple Cropping, "D00063".
$\text{Subsidy Amount} = \text{Total Premium Amount} * \text{Subsidy Percent}$	Subsidy Amount	P11	100	9999999999	Round to whole number.	If this record qualifies for Beginning Farmer and Rancher, see Section 6 for subsidy calculations.
	Subsidy Percent	ADM		9.999	None	Edit with ADM Subsidy Percent, "A00070".
$\text{Producer Premium Amount} = \text{Total Premium Amount} - \text{Subsidy Amount}$	Producer Premium Amount	P11	103	9999999999	Round to whole number.	

Section 6: Beginning Farmer and Rancher (BFR), Veteran Farmer Rancher (VFR), and Conservation Compliance (CC) Subsidy Calculations

$\text{Base Subsidy Amount} = \text{Total Premium Amount} * \text{Subsidy Percent}$	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".
$\text{BFR/VFR Subsidy Amount} = \text{Total Premium Amount} * 0.10 * (1 - \text{CC Subsidy Reduction Percent})$	BFR/VFR Subsidy Amount	Internal		9999999999	Round to whole number	Beginning Farmer Rancher/Veteran Farmer Rancher Subsidy Amount. If Applicable; else 0.
$\text{CC Subsidy Reduction Amount} = \text{Base Subsidy Amount} * \text{CC Subsidy Reduction Percent}$	CC Subsidy Reduction Percent	P11	76	9.9999	None	If Applicable; else 0.
	CC Reduction Subsidy Amount	P11	118	9999999999	Round to whole number	CC Subsidy Reduction Amount. If Applicable; else 0.
$\text{Subsidy Amount} = \text{Base Subsidy Amount} + \text{BFR/VFR Subsidy Amount} - \text{CC Subsidy Reduction Amount}$	Subsidy Amount	P11	100	9999999999	Round to whole number	Subsidy Amount cannot exceed Total Premium Amount. Subsidy Amount will be cupped at \$0.
$\text{Producer Premium Amount} = \text{Total Premium Amount} - \text{Subsidy Amount}$	Producer Premium Amount	P11	103	9999999999	Round to whole number	