

Exhibit Name: Premium Calculation
 Exhibit Number: P11-1, Plan 01, 02, 03
 Record Name: Acreage
 Record Code: P11

Reinsurance Year: 2025
 Version: Draft
 Release Date: 12/5/2024

Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules	
Unit Structure Discount Factor	When the Unit Structure Code is Optional Unit, "OU", "UA", or "UD": = Optional Unit Discount Factor	Unit Structure Discount Factor	Internal		9.99999999	None	capped at 1.0
		Optional Unit Discount Factor	ADM		9.999	None	Edit with ADM Unit Discount, "A01090".
	When Unit Structure Code is Basic Unit, "BU": = Basic Unit Discount Factor	Basic Unit Discount Factor	ADM		9.999	None	Edit with ADM Unit Discount, "A01090".
		Enterprise Unit Discount Factor	ADM		9.999	None	Edit with ADM Unit Discount, "A01090". Enterprise Units will now mandate that all insured acreage for a commodity will be included in the Enterprise Unit. This includes both fall and spring planted acreage. Enterprise Unit Discount Factor is contingent upon the sum of the reported acres which were not prevented from planting for all applicable units being greater than or equal to the Area Low Quantity and less than or equal to Area High Quantity fields contained on the ADM Unit Discount, "A01090". Unit is not eligible as an enterprise unit if summed planted acres are less than 20 acres or 20% of insured crop acreage.

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Otherwise:							
Prior Year Yield Ratio = Rate Yield / Prior Year Reference Amount	Prior Year Yield Ratio	Internal		9.9999	Round to 2 decimals.	Cup at 0.50 and Cap at 1.50.	
	Rate Yield	P15	35	99999999.99	None	For skip row commodities, the rate yield is the converted rate yield from the P15 record with skip row (yield conversion factor) applied.	
	Prior Year Reference Amount	ADM		99999.99	None	Edit with ADM Base Rate, "A01010".	
Current Year Rate Multiplier = Current Year Yield Ratio ^ Exponent Value	Current Year Rate Multiplier	Internal		9999.99999999	Round to 8 decimals.		
	Exponent Value	ADM		\$99.999	None	Edit with ADM Base Rate, "A01010".	
Prior Year Rate Multiplier = Prior Year Yield Ratio ^ Prior Year Exponent Value	Prior Year Rate Multiplier	Internal		9999.99999999	Round to 8 decimals.		
	Prior Year Exponent Value	ADM		\$99.999	None	Edit with ADM Base Rate, "A01010".	
Current Year Base Rate	= When Rate Method Code is Fixed, "F": Sub County Rate	Current Year Base Rate	Internal		9999999999.99999999	Round to 8 decimals.	
		Sub County Rate	ADM		99.9999	None	Edit with ADM Sub County Rate, "A01050".
	= When Rate Method Code is Additive, "A": Sub County Rate + (Current Year Rate Multiplier * Reference Rate + Fixed Rate)	Current Year Rate Multiplier	Internal		9999.99999999	None	
		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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 0018 Rice 0047 Dry Beans 0078 Sunflowers 0805 Weaned Calves
 0021 Cotton

Calculations		Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Current Year Base Premium Rate		Current Year Base Premium Rate	Internal		999999999.99999999	Round to 8 decimals.	If Option Code "QL", "YE" or "TA" is applicable and the effective coverage level exceeds the highest coverage level for the offer in the ADM, see Section 23 for the Current Year Base Premium Rate calculation.
	When Unit Structure Code is equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, "BU":	Rate Differential Factor	ADM		9.999999999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 17 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "YE" (Yield Exclusion), and "QL" (Quality Loss).
	= Round(Current Year Base Rate * Rate Differential Factor * Unit Residual Factor, 8)	Unit Residual Factor	ADM		999.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "YE" (Yield Exclusion), and "QL" (Quality Loss) where Unit Structure Code equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, 'BU'.
	When Unit Structure code is Enterprise Unit, "EU":	Enterprise Unit Residual Factor	ADM		9.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "YE" (Yield Exclusion), and "QL" (Quality Loss) where Unit Structure Code equal to Enterprise Unit, 'EU'.
	When Unit Structure code is Whole Farm Unit, "WU":	Whole Farm Unit Residual Factor	ADM		9.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "YE" (Yield Exclusion), and "QL" (Quality Loss) where Unit Structure Code equal to Whole Farm Unit, 'WU'.
	= Round(Current Year Base Rate * Rate Differential Factor * Whole Farm Unit Residual Factor, 8)						

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When previous year yield limitation code = '03' and Insurance Option Code List contains Yield Cup (YC):

Prior Year Base Premium Rate =	When Unit Structure Code is equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, "BU": Round(Prior Year Base Rate * 1.05 * Prior Year Rate Differential Factor * Prior Year Unit Residual Factor, 8)	Prior Year Base Premium Rate	Internal		999999999.99999999	Round to 8 decimals.	
		Prior Year Rate Differential Factor	ADM		9.999999999	None	Edit with ADM Coverage Level Differential, "A01040."
		Prior Year Unit Residual Factor	ADM		999.9999	None	Edit with ADM Coverage Level Differential, "A01040."
	When Unit Structure code is Enterprise Unit, "EU": Round(Prior Year Base Rate * 1.05* Prior Year Rate Differential Factor * Prior Year Enterprise Unit Residual Factor, 8)	Prior Year Enterprise Unit Residual Factor	ADM		9.9999	None	Edit with ADM Coverage Level Differential, "A01040".
		When Unit Structure code is Whole Farm Unit, 'WU': Round(Prior Year Base Rate * 1.05 * Prior Year Rate Differential Factor * Prior Year Whole Farm Unit Residual Factor, 8)	Prior Year Whole Farm Unit Residual Factor	ADM		9.9999	None

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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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Otherwise:							
Prior Year Base Premium Rate	When Unit Structure Code is equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, "BU": Round(Prior Year Base Rate * Prior Year Rate Differential Factor * Prior Year Unit Residual Factor, 8)	Prior Year Base Premium Rate	Internal		999999999.99999999	Round to 8 decimals.	
	=	Prior Year Rate Differential Factor	ADM		9.999999999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 17 for Option code "TA" (Trend Adjustment), "YC" (Yield Cup), "YE" (Yield Exclusion), and "QL" (Quality Loss).
		Prior Year Unit Residual Factor	ADM		999.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "YE" (Yield Exclusion), "QL" (Quality Loss) where Unit Structure Code equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, "BU".
Prior Year Base Premium Rate	When Unit Structure code is Enterprise Unit, "EU": Round(Prior Year Base Rate * Prior Year Rate Differential Factor * Prior Year Enterprise Unit Residual Factor, 8)	Prior Year Enterprise Unit Residual Factor	ADM		999.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "YE" (Yield Exclusion), and "QL" (Quality Loss) where Unit Structure Code equal to Enterprise Unit, "EU".
	=	Prior Year Whole Farm Unit Residual Factor	ADM		9.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "YE" (Yield Exclusion), and "QL" (Quality Loss) where Unit Structure Code equal to Whole Farm Unit, "WU".
Base Premium Rate =	MIN (Current Year Base Premium Rate, Prior Year Base Premium Rate * 1.2, .999)	Base Premium Rate	P11	97	999999999.99999999	Round to 8 decimals.	
Revenue Lookup Rate =	MIN(Current Year Base Rate, Prior Year Base Rate * 1.2, 0.9999)	Revenue Lookup Rate	Internal		999999999.9999	Round to 4 decimals.	

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 0021 Cotton 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
$\sum_{i=1}^{500} \text{Round}(\text{MAX}(0, \text{AY} * \text{covlvl} * \text{Round}(\text{MAX}(\text{ProjPrice}, \text{Round}(\text{MIN}(2 * \text{ProjPrice}, \text{Round}(e^{(\text{Price}_i * \text{Price} \text{Volatility Factor} + \text{LnMean}), 12)), 12)), 12)) - (\text{Round}(\text{MAX}(0, \text{Yield}_i * \text{AdjStdDev} + \text{AdjMean}), 12)) * \text{Round}(\text{MIN}(2 * \text{ProjPrice}, \text{Round}(e^{(\text{Price}_i * \text{Price} \text{Volatility Factor} + \text{LnMean}), 12)), 12)))$	Simulated Revenue Protection Losses Quantity(SimRPLosses)	Internal		9999999999.9999999999	Round to 12 decimals.	
	Approved Yield (AY)	P11	42	99999999.99	None	For APH Trend, Quality Loss, Yield Cup, and Yield Exclusion, the Approved Yield will be the greater of the calculated approved yield and the adjusted yield. For skip row commodities, the approved yield is the converted approved yield from the P15 record with skip row (yield conversion factor) applied.
	Coverage Level Percent (covlvl)	P14	34	9.9999	None	For Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) this will be Effective Coverage Level Percent. See Section 16 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
	Yield Draw Quantity _i (Yield _i)	ADM		S99.999999999	None	
	Projected Priced or Contract Price (ProjPrice)	ADM		99999.9999	None	Edit with ADM Price, "A00810". Contract Price as addressed in Section 1.

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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
	Simulated Revenue Protection with Harvest Price Exclusion Losses Quantity (SimRPhpeLosses)	Internal		9999999999.9999999999	Round to 12 decimals.	
$\text{Simulated Revenue Protection with Harvest Price Exclusion Losses Quantity} = \sum_{i=1}^{500} \text{Round}(\text{MAX}(0, \text{AY} * \text{covlvl} * \text{ProjPrice} - (\text{Round}(\text{MAX}(0, \text{Yield}_i * \text{AdjStdDev} + \text{AdjMean}), 12) * \text{Round}(\text{MIN}(2 * \text{ProjPrice}, \text{Round}(e^{(\text{price}_i * \text{Price Volatility Factor} + \text{LnMean})}, 12)}, 12))), 12)$	Approved Yield (AY)	P11	42	99999999.99	None	<p>For APH Trend, Quality Loss, and Yield Exclusion, the Approved Yield will be the greater of the calculated approved yield and the adjusted yield.</p> <p>For skip row commodities, the approved yield is the converted approved yield from the P15 record with skip row (yield conversion factor) applied.</p>
	Coverage Level Percent (covlvl)	P14	34	9.9999	None	For Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss) and "YE" (Yield Exclusion) this will be Effective Coverage Level Percent. See Section 16 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
	Projected Priced or Contract Price (ProjPrice)	ADM		99999.9999	None	Edit with ADM Price, "A00810". Contract Price as addressed in Section 1.

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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
$\text{Simulated Yield Protection Base Premium Rate} = \frac{\text{Simulated Yield Protection Losses Quantity} / 500}{\text{Approved Yield} * \text{Coverage Level Percent}}$	Simulated Yield Protection Base Premium Rate	Internal		999999.99999999	Round to 8 decimals.	For Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) Effective Coverage Level Percent will replace Coverage Level Percent.
$\text{Simulated Revenue Protection Base Premium Rate} = \frac{\text{Simulated Revenue Protection Losses} / 500}{\text{Approved Yield} * \text{Coverage Level Percent} * (\text{Projected Price or Contract Price})}$	Simulated Revenue Protection Base Premium Rate	Internal		999999.99999999	Round to 8 decimals.	For Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) Effective Coverage Level Percent will replace Coverage Level Percent.
$\text{Simulated Revenue Protection with Harvest Price Exclusion Base Premium Rate} = \frac{\text{Simulated Revenue Protection with harvest Price Exclusion Losses Quantity} / 500}{\text{Approved Yield} * \text{Coverage level Percent} * (\text{Projected Price or Contract Price})}$	Simulated Revenue Protection with Harvest Price Exclusion Base Premium Rate	Internal		999999.99999999	Round to 8 decimals.	For Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) Effective Coverage Level Percent will replace Coverage Level Percent.
$\text{Preliminary Revenue Protection Premium Add on Rate} = \text{MAX}(\text{Simulated Revenue Protection Base Premium Rate} - \text{Simulated Yield Protection Base Premium Rate}, 0.01 * \text{Base Premium Rate})$	Preliminary Revenue Protection Premium Add on Rate	Internal		999999.99999999	Round to 8 decimals.	This is a control meant to ensure that the premium rate associated with Revenue Protection is at least 1% greater than the basic Base Premium Rate where the Price Volatility Factor is NOT EQUAL to 0.
$\text{Preliminary Revenue Protection with Harvest Price Exclusion Add on Rate} = \text{MAX}(\text{Simulated Revenue Protection with Harvest Price Exclusion Base Premium Rate} - \text{Simulated Yield Protection Base Premium Rate}, -0.5 * \text{Base Premium Rate})$	Preliminary Revenue Protection with Harvest Price Exclusion Add on Rate	Internal		999999.99999999	Round to 8 decimals.	This is a control meant to ensure that the premium rate associated with Revenue Protection with Harvest Price Exclusion will not be less than half of the Base Premium Rate where the Price Volatility Factor is NOT EQUAL to 0.

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Section 6: Historical Revenue Capping (Applicable only for Plans 02 and 03)
 Note: This Section will not apply if record has a Written Agreement.

This section is for calculation the 2010 Revenue Assurance Optional Unit Level Base Premium Rate for coverage level percents 65 thru 85 where applicable. Then it is used in conjunction with the Base Premium Rate and Revenue Add On Rates to compute capped Revenue Add On Rates. This table is set up such that the only value that will change from year to year is the Commodity Year. By doing this we are fixing a point where the premium calculation method was changed and applying an exponential capping over time.

If there is NOT a corresponding row in the Historical Revenue Capping ADM, "A01110", then this calculation does not need to be performed. Furthermore, since coverage level percents 50, 55, 60 did not exist for Revenue Assurance (RA) historically capping does not need to be performed for those coverage level percents as well. If TA is applicable then this will be based on the TA Effective Coverage Level Percent. See next statement.

When TA, QL, and YE Option is selected, this section does not apply when the Effective Coverage Level is less than 65%.

Capping Yield Ratio = Rate Yield / Capping Reference Yield	Capping Yield Ratio	Internal		9.99	Round to 2 decimals.	Cup at 0.50 and Cap at 1.50.
	Rate Yield	P15	35	99999999.99	None	For skip row commodities, the rate yield is the converted rate yield from the P15 record with skip row (yield conversion factor) applied.
	Capping Reference Yield	ADM		99999.99	None	Edit with ADM Historical Revenue Capping, "A01110".

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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Prior Capping Yield Ratio = Rate Yield / Prior Capping Reference Yield	Prior Capping Yield Ratio	Internal		9.99	Round to 2 decimals.	Cup at 0.50 and Cap at 1.50.
	Rate Yield	P15	35	99999999.99	None	For skip row commodities, the rate yield is the converted rate yield from the P15 record with skip row (yield conversion factor) applied.
	Prior Capping Reference Yield	ADM		99999.99	None	Edit with ADM Historical Revenue Capping, "A01110".
Capping Rate Multiplier = Capping Yield Ratio ^Capping Exponent Value	Capping Rate Multiplier	Internal		999999.99999999	Round to 8 decimals.	
	Capping Exponent Value	ADM		S99.999	None	Edit with ADM Historical Revenue Capping, "A01110".
Prior Capping Rate Multiplier = Prior Capping Yield Ratio ^Prior Capping Exponent Value	Prior Capping Rate Multiplier	Internal		999999.99999999	Round to 8 decimals.	
	Prior Capping Exponent Value	ADM		S99.999	None	Edit with ADM Historical Revenue Capping, "A01110".
Historical Capping Base Rate =	If Rate Method Code = Fixed, "F": Sub County Rate	Historical Capping Base Rate	Internal	999999.99999999	Round to 8 decimals.	
	If Rate Method Code = Additive, "A": Sub County Rate + (Capping Rate Multiplier * Capping Reference Rate + Capping Fixed Rate)	Sub County Rate	ADM	9.9999	None	Edit with ADM Sub County Rate, "A01050".
	If Rate Method Code = Multiplicative, "M": Sub County Rate * (Capping Rate Multiplier * Capping Reference Rate + Capping Fixed Rate)	Capping Reference Rate	ADM	9.9999		Edit with ADM Historical Revenue Capping, "A01110".
	Otherwise: (Capping Rate Multiplier * Capping Reference Rate + Capping Fixed Rate)	Capping Fixed Rate	ADM	9.9999		Edit with ADM Historical Revenue Capping, "A01110".

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Historical Prior Capping Base Rate =	If Rate Method Code = Fixed "F": Sub County Rate	Historical Prior Capping Base Rate	Internal		999999.99999999	Round to 8 decimals.	
	If Rate Method Code = Additive, "A": Sub County Rate + (Prior Capping Rate Multiplier * Prior Capping Reference Rate + Prior Capping Fixed Rate)	Sub County Rate	ADM		9.9999	None	Edit with ADM Sub County Rate, "A01050".
	If Rate Method Code = Multiplicative, "M": Sub County Rate * (Prior Capping Rate Multiplier * Prior Capping Reference Rate + Prior Capping Fixed Rate)	Prior Capping Reference Rate	ADM		9.9999		Edit with ADM Historical Revenue Capping, "A01110".
	Otherwise: (Prior Capping Rate Multiplier * Prior Capping Reference Rate + Prior Capping Fixed Rate)	Prior Capping Fixed Rate	ADM		9.9999		Edit with ADM Historical Revenue Capping, "A01110".
Historical Basic Unit Base Rate =	.9 * MIN(.999, Historical Prior Capping Base Rate * 1.2, Historical Capping Base Rate)	Historical Basic Unit Base Rate	Internal		999999.99999999	Round to 8 decimals.	

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 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules	
Historical Revenue Protection Base Premium Rate = When Unit Structure Code is equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, "BU": $[\text{beta}0 \text{ Factor} + \text{Beta} 1 \text{ Factor} * \text{Historical Basic Unit Base Rate} + \text{Beta} 2 \text{ Factor} * \text{Historical Basic Unit Base Rate}^2 + \text{Beta} 3 \text{ Factor} * \text{Coverage Level Percent} + \text{Beta} 4 \text{ Factor} * \text{Coverage Level Percent}^2 + \text{Beta} 5 \text{ Factor} * \text{Approved Yield} / \text{Capping Reference Yield} + \text{Beta} 6 \text{ Factor} * (\text{Approved Yield} / \text{Capping Reference Yield})^2 + \text{Beta} 7 \text{ Factor} * \text{Price Volatility Factor} + \text{Beta} 8 \text{ Factor} * \text{Price Volatility Factor}^2 + \text{Beta} 9 \text{ Factor} * \text{Historical Basic Unit Base Rate} * \text{Coverage Level Percent} + \text{Beta} 10 \text{ Factor} * \text{Historical Basic Unit Base Rate} * \text{Approved Yield} / \text{Capping Reference Yield} + \text{Beta} 11 \text{ Factor} * \text{Historical Basic Unit Base Rate} * \text{Price Volatility Factor} + \text{Beta} 12 \text{ Factor} * \text{Coverage Level Percent} * \text{Approved Yield} / \text{Capping Reference Yield} + \text{Beta} 13 \text{ Factor} * \text{Coverage Level Percent} * \text{Price Volatility Factor} + \text{Beta} 14 \text{ Factor} * (\text{Approved Yield} / \text{Capping Reference Yield}) * \text{Price Volatility Factor}] * \text{Unit Residual Factor} * 1.1$	Coverage Level Percent	P14	34	9.9999	None	For Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) this will be Effective Coverage Level Percent. See Section 16 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).	
	Historical Revenue Protection Base Premium Rate	Historical Revenue Protection Base Premium Rate	Internal		9999999999.99999999	Round each intermittent Beta * calculation to 8 decimals as it has been done historically.	
		Beta 0 Factor - Beta 14 Factor	ADM		S99.999999999	None	Edit with ADM Historical Revenue Capping, "A01110".
		Price Volatility Factor	ADM		9.99	None	Edit with ADM Price, "A00810".
		Unit Residual Factor	ADM		999.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
	= When Unit Structure Code is equal to Enterprise Unit, "EU": Replace 'Unit Residual Factor' with 'Enterprise Unit Residual Factor'	Enterprise Unit Residual Factor	ADM		999.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules	
Historical Revenue Protection with Harvest Price Exclusion Base Premium Rate When Unit Structure Code is equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, "BU": $[\text{beta}0 \text{ Factor} + \text{Beta} 1 \text{ Factor} * \text{Historical Basic Unit Base Rate} + \text{Beta} 2 \text{ Factor} * \text{Historical Basic Unit Base Rate}^2 + \text{Beta} 3 \text{ Factor} * \text{Coverage Level Percent} + \text{Beta} 4 \text{ Factor} * \text{Coverage Level Percent}^2 + \text{Beta} 5 \text{ Factor} * \text{Approved Yield} / \text{Capping Reference Yield} + \text{Beta} 6 \text{ Factor} * (\text{Approved Yield} / \text{Capping Reference Yield})^2 + \text{Beta} 7 \text{ Factor} * \text{Price Volatility Factor} + \text{Beta} 8 \text{ Factor} * \text{Price Volatility Factor}^2 + \text{Beta} 9 \text{ Factor} * \text{Historical Basic Unit Base Rate} * \text{Coverage Level Percent} + \text{Beta} 10 \text{ Factor} * \text{Historical Basic Unit Base Rate} * \text{Approved Yield} / \text{Capping Reference Yield} + \text{Beta} 11 \text{ Factor} * \text{Historical Basic Unit Base Rate} * \text{Price Volatility Factor} + \text{Beta} 12 \text{ Factor} * \text{Coverage Level Percent} * \text{Approved Yield} / \text{Capping Reference Yield} + \text{Beta} 13 \text{ Factor} * \text{Coverage Level Percent} * \text{Price Volatility Factor} + \text{Beta} 14 \text{ Factor} * (\text{Approved Yield} / \text{Capping Reference Yield}) * \text{Price Volatility Factor}] * \text{Unit Residual Factor} \times 1.1$	Coverage Level Percent	P14	34	9.9999	None	For Option Code "TA" (Trend Adjustment) this will be Effective Coverage Level Percent. See Section 16 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).	
	Historical Revenue Protection with Harvest Price Exclusion Base Premium Rate	Internal			9999999999.99999999	Round each intermittent Beta * calculation to 8 decimals as it has been done historically.	
	Beta 0 Factor - Beta 14 Factor	ADM			S99.999999999	None	Edit with ADM Historical Revenue Capping, "A01110".
	Price Volatility Factor	ADM			9.99	None	Edit with ADM Price, "A00810".
	Unit Residual Factor	ADM			999.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
When Unit Structure Code is equal to Enterprise Unit, "EU": = Replace 'Unit Residual Factor' with 'Enterprise Unit Residual Factor'	Enterprise Unit Residual Factor	ADM		999.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).	

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Capped Revenue Protection Add on Rate = $\text{MIN}(\text{Base Premium Rate} + \text{Preliminary Revenue Protection Add On Rate, Historical Revenue Protection Base Premium Rate} * 1.2^{(\text{Commodity Year} - \text{Capping Year})} - \text{Base Premium Rate})$	Capped Revenue Protection Add on Rate	Internal		999999999.99999999	Round to 8 decimals.	Use the Preliminary Add On Rates for Insurance Plan Code Revenue Protection, "02" or Revenue Protection with Harvest Price Exclusion, "03" from section 5, the Base Premium Rate from section 3 to calculate the Capped Revenue add on factors.
	Base Premium Rate	P11	97	999999.99999999	None	
	Commodity Year	P14	10	CCYY	None	
	Capping Year	ADM		CCYY	None	Edit with ADM Historical Revenue Capping, "A01110".
Capped Revenue Protection with Harvest Price Exclusion Add on Rate = $\text{MIN}(\text{Base Premium Rate} + \text{Preliminary Revenue Protection with Harvest Price Exclusion Add On Rate, Historical Revenue Protection with Harvest Price Exclusion Base Premium Rate} * 1.2^{(\text{Commodity Year} - \text{Capping Year})} - \text{Base Premium Rate})$	Capped Revenue Protection with Harvest Price Exclusion Add on Rate	Internal		999999999.99999999	Round to 8 decimal.	Use the Preliminary Add On Rates for Insurance Plan Code Revenue Protection, "02" or Revenue Protection with Harvest Price Exclusion, "03" from section 5, the Base Premium Rate from section 3 to calculate the Capped Revenue add on factors.
	Base Premium Rate	P11	97	999999.99999999	None	
	Commodity Year	P14	10	CCYY	None	
	Capping Year	ADM		CCYY	None	Edit with ADM Historical Revenue Capping, "A01110".

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
<p>Section 7: Whole Farm Unit Base Premium Rate</p> <p>The Whole Farm Unit Discount is only applicable to the Revenue Protection and Revenue Protection with Harvest Price Exclusion Insurance Plans, unless the Special Provisions allow Whole Farm Units for other Insurance Plans.</p> <p>Whole Farm Units will now mandate that producers include both their spring and fall planted commodities into the whole farm unit for commodity/plans offering Whole Farm Units.</p> <p>Malting Barley Coverage is NOT applicable for Whole Farm Unit.</p>						

$\text{Lookup Rate} = \text{Revenue Lookup Rate} * \text{Revenue Lookup Adjustment Factor}$ $\text{Mean Quantity}_{\text{commodityj}} = \frac{\text{Mean Quantity}_{\text{commodityj}}}{\text{Base Rate}_{\text{commodityj}}} \text{ WHERE } \text{Lookup Rate}_{\text{commodityj}} =$	Lookup Rate	Internal		9999999999.9999	Round to 4 decimals.	
	Revenue Lookup Rate	Internal		9999999999.9999	Round to 4 decimals.	From Section 3.
	Revenue Lookup Adjustment Factor	Internal		9.99999999	None	From Section 2. Edit with ADM Combo Revenue Factor, "A01030".
	Mean Quantity _{commodityj}	ADM		999.999999999	None	Search the Combo Revenue Factor, "A01030" for the Mean Quantity, When the Lookup Rate = Base Rate
	Lookup Rate _{commodityj}	Internal		9.9999	None	
	Base Rate _{commodityj}	ADM		9.9999	None	Edit with ADM Combo Revenue Factor, "A01030".

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Insurance Plan Code 01 Yield Protection 02 Revenue Protection 03 Revenue Protection with Harvest Price Exclusion

Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
 0016 Oats 0043 Popcorn 0075 Peanuts 0094 Rye
 0018 Rice 0047 Dry Beans 0078 Sunflowers 0805 Weaned Calves
 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
$\text{Adjusted Standard Deviation Quantity}_{\text{commodityj}} = \frac{\text{Approved Yield}_{\text{commodityj}} * \text{Standard Deviation Quantity}_{\text{commodityj}}}{100}$	Adjusted Standard Deviation Quantity _{commodityj}	Internal		999999999.99999999	Round to 8 decimals.	
	Approved Yield _{commodityj}	P11	42	99999999.99	None	For APH Trend, Yield Cup, Quality Loss, and Yield Exclusion, the Approved Yield will be the greater of the calculated approved yield and the adjusted yield. For skip row commodities, the approved yield is the converted approved yield from the P15 record with skip row (yield conversion factor) applied.
$\text{LnMean}_{\text{commodityj}} = \frac{\ln(\text{Projected Price or Contract Price}_{\text{commodityj}}) - (\text{Price Volatility Factor}_{\text{commodityj}})^2 / 2}{2}$	log Mean _{commodityj} (LnMean)	Internal		999999.99999999	Round to 8 decimals.	
	Projected Price or Contract Price _{commodityj}	ADM		99999.9999		Edit with ADM Price, "A00810". Contract Price as addressed in Section 1.
	Price Volatility Factor _{commodityj}	ADM		9.99	None	Edit with ADM Price, "A00810".
$\text{Yield Draw Quantity}_{\text{commodityj Sequence Number}} = \text{Yield Draw Quantity}_{\text{commodityj}}$	Yield Draw Quantity	ADM		S99.999999999	None	ADM Insurance Offer, "A00030", and Beta, "A01020", should be used to obtain the applicable draws. There should be 500 Draws (or sequence numbers) per Beta Id in the ADM Beta, "A01020" for every distinct Beta Id in the ADM Insurance Offer, "A00030".

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
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Commodity Code	0011 Wheat	0031 Flax	0051 Grain Sorghum	0081 Soybeans
	0015 Canola	0041 Corn	0067 Dry Peas	0091 Barley
	0016 Oats	0043 Popcorn	0075 Peanuts	0094 Rye
	0018 Rice	0047 Dry Beans	0078 Sunflowers	0805 Weaned Calves
	0021 Cotton			

<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
$\text{Price Draw Quantity}_{\text{commodityj Sequence Number}} = \text{Price Draw Quantity}_{\text{commodity}}$	Price Draw Quantity	ADM		S99.999999999	None	ADM Insurance Offer, "A00030", and Beta, "A01020", should be used to obtain the applicable draws. There should be 500 Draws (or sequence numbers) per Beta Id in the ADM Beta, "A01020" for every distinct Beta Id in the ADM Insurance Offer, "A00030".

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Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
 0016 Oats 0043 Popcorn 0075 Peanuts 0094 Rye
 0018 Rice 0047 Dry Beans 0078 Sunflowers 0805 Weaned Calves
 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
	Simulated Revenue Protection Losses Whole Farm (SimRPLossesWF)	Internal		9999999999.9999999999 9	Round to 12 decimals.	Simulated Revenue Protection Losses for All Commodity/Acreage report line in the Whole Farm Unit.
	Coverage Level Percent _{commodityj} (covlvl)	P14	34	9.9999	None	For Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) this will be Effective Coverage Level Percent. See Section 16 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
$\sum_{i=1}^{500} \text{Round}(\text{MAX}(0, \sum_{j=\text{all Commodities}} \text{AY}_{\text{commodityj}} * \text{Acres}_{\text{commodityj}} * \text{covlvl}_{\text{commodityj}} * \text{Round}(\text{MAX}(\text{ProjPrice}_{\text{commodityj}}, \text{Round}(\text{MIN}(2 * \text{ProjPrice}_{\text{commodityj}}, \text{Round}(e^{(\text{Price}_{\text{commodityj}} * \text{Price Volatility Factor}_{\text{commodityj}} + \text{LnMean}_{\text{commodityj}})}, 12)), 12)), 12)) - \text{Simulated Revenue Protection Losses Whole Farm})$	Approved Yield _{commodityj} (AY)	P11	42	99999999.99	None	Approved Yield for each Commodity/Acreage report line in the Whole Farm Unit. For APH Trend, Quality Loss, Yield Cup, and Yield Exclusion, the Approved Yield will be the greater of the calculated approved yield and the adjusted yield. For skip row commodities, the approved yield is the converted approved yield from the P15 record with skip row (yield conversion factor) applied.
	Reported Acreage _{commodityj} (Acres)	P11	48	999999.99	None	Reported Acreage must equal the sum of all Land, P27, Reported Acreage. Reported Acreage for each Commodity/Acreage report line in the Whole Farm Unit.
	Projected Price or Contract Price _{commodityj} (ProjPrice)	ADM		99999.9999	None	Edit with ADM Price, "A00810". Projected Price or Contract Price for each Commodity/Acreage report line in the Whole Farm Unit.
	Price Draw Quantity _{commodityj} (Price)	ADM		S99.999999999	None	Price Draw Quantity for each Commodity /Acreage report line in the Whole Farm Unit.

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Insurance Plan Code 01 Yield Protection 02 Revenue Protection 03 Revenue Protection with Harvest Price Exclusion

Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
 0016 Oats 0043 Popcorn 0075 Peanuts 0094 Rye
 0018 Rice 0047 Dry Beans 0078 Sunflowers 0805 Weaned Calves
 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
	Price Volatility Factor _{commodityj}	Internal		999999.99999999	None	Price Volatility Factor for each Commodity/Acreage report line in the Whole Farm Unit.
	log Mean _{commodityj} (LnMean)	Internal		999999.99999999	None	Log Mean for each Commodity/Acreage report line in the Whole Farm Unit.
	Yield Draw Quantity _{commodityj} ⁱ (Yield)	ADM		S99.999999999	None	Yield Draw Quantity for each Commodity/Acreage report line in the Whole Farm Unit.
$\sum_{i=1}^{500} \text{Round}(\text{MAX}(0, \sum_{j=\text{all Commodities}} A_{y_{commodityj}} * \text{Acres}_{commodityj} * \text{covl}_{commodityj} * \text{Round}(\text{MIN}(2 * \text{ProjPrice}_{commodityj}, \text{Round}(e^{(\text{Price}_{commodityj} * \text{Price Volatility Factor}_{commodityj} + \text{LnMean}_{commodityj})}, 12)), 12)), 12) -$ <p>Simulated Revenue Protection Losses Whole Farm (continued)</p> $\sum_{j=\text{all Commodities}} \text{Round}(\text{MAX}(0, \text{Round}(\text{Yield}_{commodityj} * \text{AdjStdDev}_{commodityj} + \text{AdjMean}_{commodityj}, 12)), 12) * \text{Round}(\text{MIN}(2 * \text{ProjPrice}_{commodityj}, \text{Round}(e^{(\text{Price}_{commodityj} * \text{Price Volatility Factor}_{commodityj} + \text{LnMean}_{commodityj})}, 12)), 12) * \text{Round}(\text{Acres}_{commodityj}, 12)), 12)$	Adjusted Standard Deviation Quantity _{commodityj} (AdjStnDev)	Internal		999999999.99999999	None	Adjusted Standard Deviation Quantity for each Commodity/Acreage report line in the Whole Farm Unit.
	Adjusted Mean Quantity _{commodityj} (AdjMean)	Internal		999999.999999999	None	Adjusted Mean Quantity for each Commodity/Acreage report line in the Whole Farm Unit.

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Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
 0016 Oats 0043 Popcorn 0075 Peanuts 0094 Rye
 0018 Rice 0047 Dry Beans 0078 Sunflowers 0805 Weaned Calves
 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
$\sum_{i=1}^{500} \text{Round}(\text{MAX}(0, \sum_{j=\text{all commodities}} \text{covlvi}_{\text{commodityj}}) * \text{AY}_{\text{commodityj}} * \text{ProjPrice}_{\text{commodityj}} * \text{Acres}_{\text{commodityj}}) - \sum_{j=\text{all commodities}} \text{Round}(\text{MAX}(0, \text{Round}(\text{Yield}_{\text{commodityji}} * \text{AdjStdDev}_{\text{commodityj}} + \text{AdjMean}_{\text{commodityj},12}), 12) * \text{Round}(\text{MIN}(2 * \text{ProjPrice}_{\text{commodityj}}, \text{Round}(e^{(\text{Price}_{\text{commodityji}} * \text{Price Volatility Factor}_{\text{commodityj}} + \text{LnMean}_{\text{commodityji}}), 12)), 12) * \text{Round}(\text{Acres}_{\text{commodityj},12})), 12)$ <p>Simulated Revenue Protection Harvest Price Excluded Losses Whole Farm</p>	Simulated Revenue Protection Harvest Price Excluded Losses Whole Farm (SimRPhpeLossesWF)	Internal		9999999999.9999999999	Round to 12 decimals.	Simulated Revenue Protection Harvest Price Excluded Losses for All Commodity/Acreage report lines in the Whole Farm Unit.
	Coverage Level Percent _{commodityj} (covlvi)	P14	34	9.9999	None	For Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) this will be Effective Coverage Level Percent. See Section 16 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
	Approved Yield _{commodityj} (AY)	P11	42	99999999.99	None	Approved Yield for each Commodity/Acreage report line in the Whole Farm Unit. For APH Trend, Yield Cup, Quality Loss, Yield Cup, and Yield Exclusion, the Approved Yield will be the greater of the calculated approved yield and the adjusted yield. For skip row commodities, the approved yield is the converted approved yield from the P15 record with skip row (yield conversion factor) applied.
	Reported Acreage _{commodityj} (Acres)	P11	48	999999.99	None	Reported Acreage must equal the sum of all Land, P27, Reported Acreage. Reported Acreage for each Commodity/Acreage report line in the Whole Farm Unit.
	Projected Price or Contract Price _{commodityj} (ProjPrice)	ADM		99999.9999	None	Edit with ADM Price, "A00810". Projected Price or Contract Price (as addressed in Section 1) for each Commodity/Acreage report line in the Whole Farm Unit.
	Yield Draw Quantity _{commodityj} ⁱ (Yield)	ADM		S99.999999999	None	Yield Draw Quantity for each Commodity/Acreage report line in the Whole Farm Unit.

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Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
	Adjusted Standard Deviation Quantity _{commodityj} (AdjStnDev)	Internal		9999999999.99999999	None	Adjusted Standard Deviation Quantity for each Commodity/Acreage report line in the Whole Farm Unit.
	Adjusted Mean Quantity _{commodityj} (AdjMean)	Internal		999999.9999999999	None	Adjusted Mean Quantity for each Commodity/Acreage report line in the Whole Farm Unit.
	Price Draw Quantity _{commodityj} (Price)	ADM		S99.9999999999	None	Price Draw Quantity for each Commodity/Acreage report line in the Whole Farm Unit.
Simulated Revenue Protection Harvest Price Excluded Losses Whole Farm (continued) = $\sum_{i=1}^{500} \text{Round}(\text{MAX}(0, \sum_{j=\text{all commodities}} \text{covl}_{\text{commodityj}} * \text{AY}_{\text{commodityj}} * \text{ProjPrice}_{\text{commodityj}} * \text{Acres}_{\text{commodityj}}) - \sum_{j=\text{all commodities}} \text{Round}(\text{MAX}(0, \text{Round}(\text{Yield}_{\text{commodityj}} * \text{AdjStdDev}_{\text{commodityj}} + \text{AdjMean}_{\text{commodityj},12}), 12) * \text{Round}(\text{MIN}(2 * \text{ProjPrice}_{\text{commodityj}} * \text{Round}(e^{(\text{Price}_{\text{commodityj}} * \text{Price Volatility Factor}_{\text{commodityj}} + \text{LnMean}_{\text{commodityj}})}, 12)), 12) * \text{Round}(\text{Acres}_{\text{commodityj},12}), 12)$	Price Volatility Factor _{commodityj}	Internal		999999.9999999999	None	Price Volatility Factor for each Commodity/Acreage report line in the Whole Farm Unit.
	log Mean _{commodityj} (LnMean)	Internal		999999.9999999999	None	Log Mean for each Commodity/Acreage report line in the Whole Farm Unit.

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Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
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 0018 Rice 0047 Dry Beans 0078 Sunflowers 0094 Rye
 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
$\text{Revenue Protection Whole Farm Rate} = \frac{\text{SimRPLossesWF} \cdot 500}{\sum_{j=\text{all commodities}} (\text{covl}_{\text{commodityj}} * \text{AY}_{\text{commodityj}} * \text{ProjPrice}_{\text{commodityj}} * \text{Acres}_{\text{commodityj}})}$	Coverage Level Percent _{commodityj} (covl _j)	P14	34	9.9999	None	For Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) this will be Effective Coverage Level Percent. See Section 16 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
	Revenue Protection Whole Farm Rate	Internal		9999999999.99999999	Round to 8 decimals.	
	Projected Price or Contract Price _{commodityj} (ProjPrice)	ADM		99999.9999	None	Edit with ADM Price, "A00810". Projected Price or Contract Price (as addressed in Section 1) for each Commodity/Acreage report line in the Whole Farm Unit.

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
$\frac{\text{SimRPhpeLossesWF} \times 500}{\text{Revenue Protection with Harvest Price Exclusion Whole Farm Rate} - \sum_{j=\text{all commodities}} (\text{covlvl}_{\text{commodityj}} * \text{AY}_{\text{commodityj}} * \text{ProjPrice}_{\text{commodityj}} * \text{Acres}_{\text{commodityj}})}$	Coverage Level Percent _{commodityj} (covlvl)	P14	34	9.9999	None	For Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) this will be Effective Coverage Level Percent. See Section 16 for Option Code "TA" (Trend Adjustment), "QL" (Quality Loss), and "YE" (Yield Exclusion).
	Revenue Protection with Harvest Price Exclusion Whole Farm Rate	Internal		9999999999.99999999	Round to 8 decimals.	
	Projected Price or Contract Price _{commodityj} (ProjPrice)	ADM		99999.9999	None	Edit with ADM Price, "A00810". Projected Price or Contract Price (as addressed in Section 1) for each Commodity/Acreage report line in the Whole Farm Unit.
When Insurance Plan Code equals Revenue Protection, "02":						
Whole Farm Base Premium Rate = Revenue Protection Whole Farm Rate	Whole Farm Base Premium Rate	Internal		9999999999.99999999	None	
When Insurance Plan Code equals Revenue Protection with Harvest Price Exclusion, "03":						
Whole Farm Base Premium Rate = Revenue Protection with Harvest Price Exclusion Whole Farm Rate	Whole Farm Base Premium Rate	Internal		9999999999.99999999	None	

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Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
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Section 8: Premium Rate

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.

When Unit Structure Code equals Whole Farm Unit, "WU": Premium Rate = MIN(.999, Round(Whole Farm Base Premium Rate * Sum ((Reported Acreage * Multiplicative Optional Rate Adjustment Factor) / Sum(Total Reported Acreage) for Whole Farm including Prevented Planting) + Sum ((Reported Acreage * Additive Optional Rate Adjustment Factor) / Sum(Total Reported Acreage) for Whole Farm including Prevented Planting), 8))	Premium Rate	Internal		999999999.99999999	Round to 8 decimals.	Premium Rate is capped at 0.99900000. For situations where the option factors vary by Commodity, a reported Acreage weighted average of the Option Factors should be used to determine the Multiplicative and Additive Optional Rate adjustments to be used in the computation of the Premium Rate for Whole Farm Unit.
	Total Reported Acreage	Internal		99999999.99	None	Total Reported Acreage for the Whole Farm including Prevented Planting.

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<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
<p>When Unit Structure Code DOES NOT EQUAL Whole Farm Unit, "WU":</p> $\text{Premium Rate} = \text{MIN}(.999, \text{Base Premium Rate} * \text{Unit Structure Discount Factor} * \text{Multiplicative Optional Rate Adjustment Factor} + \text{Additive Optional Rate Factor} + \text{Capped Revenue Add On Factor})$	Premium Rate	Internal		9999999999.99999999	Round to 8 decimals.	<p>Set Capped Revenue Add On Factor as follows:</p> <p>If Insurance Plan Code equals 01, Capped Revenue Add On Factor will equal zero.</p> <p>If Unit Structure Code does not equal Whole Farm (WU), set Capped Revenue Add On Factor as follows:</p> <p>If Section 6 is applicable, Capped Revenue Add On Factor will equal Capped Revenue Protection Add On Rate when Insurance Plan Code equals 02 or Capped Revenue Protection with Harvest Price Exclusion Add On Rate when Insurance Plan Code equals 03.</p> <p>If Section 6 is not applicable, Capped Revenue Add On Factor will equal Preliminary Revenue Protection Add On Rate when Insurance Plan Code equals 02 or Preliminary Revenue Protection with Harvest Price Exclusion Add On Rate when Insurance Plan Code equals 03.</p>

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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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Section 9: Total Premium Amount, Subsidy Amount, and Producer Premium Amount

$\text{Preliminary Total Premium} = \text{Premium Liability Amount} * \text{Premium Rate} * \text{Experience Factor} * \text{Premium Surcharge Percent} * \text{Total Premium Multiplicative Optional Rate Adjustment Factor}$	Preliminary Total Premium	Internal		9999999999	Round to whole number.	
	Experience Factor	P11	47	9.999	None	Experience Factor is only applicable for Insurance Plan Code Yield Protection, "01".
	Premium Surcharge Percent	Internal				Use when the Approved Yield Had a Cup or Surcharge applied. Does not apply when option "YC" is elected. Set to 1.00.
	Total Premium Multiplicative Optional Rate Adjustment Factor	ADM		9.9999	None	If Option Rate with Rate Method Code equal "T". Edit with ADM Option Rate, "A01060". Currently this will be used for Short Rate Option.
$\text{Total Premium Amount} = \text{Preliminary Total Premium} * \text{Multiple Commodity Adjustment Factor}$	Total Premium Amount	P11	95	9999999999	Round to whole number.	
	Multiple Commodity Adjustment Factor	ICE		9999.999	None	Edit with ICE Multiple Cropping, "D00063". Used when there is a first Commodity Loss.
$\text{Subsidy Amount} = \text{Total Premium Amount} * \text{Subsidy Percent}$	Subsidy Amount	P11	93	9999999999	Round to whole number.	If this record qualifies for Beginning Farmer and Rancher or Native Sod, see Section 18 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	94	9999999999	Round to whole number.	

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Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
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 0018 Rice 0047 Dry Beans 0078 Sunflowers 0805 Weaned Calves
 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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Cottonseed Endorsement Option 'SE'

Information (Approved Yield, Reported Acreage, Insured Share Percent) will be obtained from Cotton P11 record and Rate Yield from P15 record associated with the Cottonseed record. CAT does not apply to Plan 01 Cottonseed. Unit Structure Code 'WU' does not apply to Cottonseed.

Section 10: Liability Calculation

Modified Yield = Approved Yield * Option Conversion Factor	Modified Yield	Internal		99999999.99	Round to whole Number.	
	Approved Yield	P11	42	99999999.99	None	From Cotton P11 record. For skip row cotton, the approved yield is the converted approved yield from the P15 record with skip row (yield conversion factor) applied.
	Option Conversion Factor	ADM		9.9999	None	Edit with ADM Option Rate, "A01060".
Premium Guarantee Per Acre Amount = Modified Yield * Coverage Level Percent	Premium Guarantee Per Acre Amount	Internal		99999999.99	Round to whole number.	
	Coverage Level Percent	P14	34	9.9999	None	
Guarantee Per Acre Amount = Premium Guarantee Per Acre Amount * Guarantee Adjustment Factor	When Guarantee Adjustment Type Code equals Late Planting, "L" OR Prevented Planting, "P": Guarantee Per Acre Amount	Internal		99999999.99	Round to whole number.	
	Guarantee Adjustment Factor	P11	69	0.999	None	Edit with the Guarantee Adjustment ICE, "D00068" or ADM Guarantee Adjustment, "A01220" for Prevented Planting.

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<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
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Section 11: Premium Rate

$\text{Premium Rate} = \text{Factor} * \text{Multiplicative Optional Rate Adjustment Factor} + \text{Additive Optional Rate Factor}$	Premium Rate	Internal		999999999.99999999	Round to 8 decimals.	To Determine the Premium Rate for the Cottonseed records: 1) Use the Rate Yield as determined under normal procedures. 2) Process the Rate Yield through section 3 of these procedures using the rating components for regular Cotton offer. If Yield Exclusion, Yield Cup, or Quality Loss is elected, see section 24 for the current year base premium rate calculation when the Effective Coverage Level exceeds the MAX ADM coverage level. 3) Find the Unit Structure Discount Factor to be applied later from section 2 of these procedures for regular Cotton offer. 4) Find the applicable Option Factors to be applied later from section 4 for regular Cotton offer. 5) Sections 5, 6, 7 are not applicable for Cottonseed records.
	Multiplicative Optional Rate Adjustment Factor	Internal		999999.9999		
	Additive Optional Rate Adjustment Factor	Internal			999999.9999	

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<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
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Section 12: Total Premium Amount, Subsidy Amount, and Producer Premium Amount

$\text{Preliminary Total Premium} = \text{Premium Liability Amount} * \text{Premium Rate} * \text{Experience Factor} * \text{Premium Rate Surcharge Percent}$	Preliminary Total Premium	Internal		999999999	Round to whole number.	
	Experience Factor	P11	47	9.999	None	Experience Factor is only applicable for Insurance Plan Code Yield Protection, "01".
	Premium Rate Surcharge Percent					Does not apply when option "YC" is elected. Set to 1.00.
$\text{Total Premium Amount} = \text{Preliminary Total Premium} * \text{Multiple Commodity Adjustment Factor}$	Total Premium Amount	P11	95	999999999	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	93	999999999	Round to whole number.	If this record qualifies for Beginning Farmer and Rancher or Native Sod, see Section 18 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	94	999999999	Round to whole number.	

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Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
APH Yield Trend (Trend Adjustment Option 'TA'), Yield Cup (Option 'YC'), Quality Loss (Option 'QL'), and Yield Exclusion (Option 'YE')						Trend Adjustment Option (TA), Yield Cup Option (YC), Quality Loss Option (QL), and Yield Exclusion Option (YE) ONLY available in select counties for selected crops. See "white papers" for examples.

Section 13: Effective Coverage Level Calculation

When Commodity Code equals Dry Beans "0047" and Type Code equals Contract "62", or Commodity Code equals Dry Peas "0067" and Type Code equals Spring Contract "98":

$\text{Effective Coverage Level Percent} = \frac{\text{Coverage Level Percent} * \text{Round}(\text{Approved Yield} * \text{Contract Price}, 0)}{\text{Adjusted Yield}}$	Effective Coverage Level Percent	Internal		99.9999	Round to 2 decimals.	
	Coverage Level Percent	P14	34	9.9999	None	
	Approved Yield	P11	42	99999999.99	None	For APH Trend, Yield Cup, Quality Loss, and Yield Exclusion, the Approved Yield will be the greater of the calculated Approved Yield and the Adjusted Yield.
	Contract Price	P11	46	9999.9999	None	
	Adjusted Yield	P15	44	99999999.99	None	

For all others:

$\text{Effective Coverage Level Percent} = \text{Coverage Level Percent} * \text{Approved Yield} / \text{Adjusted Yield}$	Effective Coverage Level Percent	Internal		99.9999	Rounded to 2 decimal places.	
	Coverage Level Percent	P14	34	9.9999	None	
	Approved Yield	P11	42	99999999.99	None	For APH Trend, Yield Cup, Quality Loss, and Yield Exclusion, the Approved Yield will be the greater of the calculated approved yield and the adjusted yield.
	Adjusted Yield	P15	44	99999999.99	None	For skip row commodities, the approved yield is the converted approved yield from the P15 record with skip row (yield conversion factor) applied. For skip row commodities, the adjusted yield is the converted adjusted yield from the P15 record with skip row (yield conversion factor) applied.

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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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Section 14: Rate Differential Factor

When Trend Adjustment Option (TA) was chosen and yield reflects a trend or when Yield Cup Option (YC) was chosen or when Quality Loss Option (QL) was chosen or when Yield Exclusion Option (YE) was chosen.

When the Insurance Option Code List contains Options "QL", "YE" or "YC":

Rate Differential Factor = (1+ (ROUND (MIN (((MAX (0.85,Effective Coverage Level Percent) -0.85) / 0.15) ,1) ³ ,7)) * 0.05) * (Round(Base Rate Differential Factor + (Upper Bound Rate Differential Factor - Lower Bound Rate Differential Factor) * (Effective Coverage Level Percent - Floored Effective Coverage Level Percent) * 20, 9))	Rate Differential Factor	Internal		9.99999999	Round to 9 decimal places.	
	Base Rate Differential Factor	ADM		9.99999999	None	Base Rate Differential Factor is equal to Rate Differential for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040".
	Upper Bound Rate Differential Factor	ADM		9.99999999	None	Based on the 'upper bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the higher ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the highest ADM Coverage Level.

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 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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When Trend Adjustment Option "TA" is elected alone (excludes "YC" and "YE")

Round(Base Rate Differential Factor + (Upper Bound Rate Differential Factor - Lower Bound Rate Differential Factor) * (Effective Coverage Level Percent - Floored Effective Coverage Level Percent) * 20, 9)	Rate Differential Factor	Internal		9.99999999	Round to 9 decimal places.	
	Base Rate Differential Factor	ADM		9.99999999	None	Base Rate Differential Factor is equal to Rate Differential for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040".
	Upper Bound Rate Differential Factor	ADM		9.99999999	None	Based on the 'upper bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the higher ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the highest ADM Coverage Level.

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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Section 15: Unit Residual Factor						The lookup/interpolation/extrapolation procedure for 'Unit Residual Factor and Prior Unit Residual Factor' when Trend Adjustment Option (TA) was chosen and yield reflects a trend or when Yield Cup Option was chosen or when Quality Loss Option (QL) was chosen or when Yield Exclusion Option (YE) was chosen.

When Unit Structure Code is equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, "BU", use the following calculations for Unit Residual Factor and Prior Year Unit Residual Factor:

	Unit Residual Factor	Internal		999.9999	Round to 4 decimal places.	The cap value for the Residual Factors is the MAX(Residual Factor) from all coverage levels within the chosen unit structure regardless of Coverage Type Code where applicable (Buy-up/CAT).
	Base Unit Residual Factor	ADM		999.9999	None	Base Unit Residual Factor is equal to Unit Residual for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040".

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<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
Unit Residual Factor = $\text{Round}(\text{Base Unit Residual Factor} + (\text{Upper Bound Unit Residual Factor} - \text{Lower Bound Unit Residual Factor}) * (\text{Effective Coverage Level Percent} - \text{Floored Effective Coverage Level Percent}) * 20, 4)$	Upper Bound Unit Residual Factor	ADM		999.9999	None	Based on the 'upper bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level Percent equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level Percent. If the Effective Coverage Level Percent falls between existing ADM Coverage Levels then this will be based on the higher ADM Coverage Level. If the Effective Coverage Level Percent is greater than the maximum ADM Coverage Level then this will be based on the highest ADM Coverage Level.

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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Unit Residual Factor = Round(Base Unit Residual Factor + (Upper Bound Unit Residual Factor - Lower Bound Unit Residual Factor) * (Effective Coverage Level Percent - Floored Effective Coverage Level Percent) * 20, 4) (continued)	Lower Bound Unit Residual Factor	ADM		999.9999	None	Based on the 'lower bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the lower ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the second highest ADM Coverage Level.
	Effective Coverage Level Percent	Internal		99.9999	None	
	Floored Effective Coverage Level Percent	Internal		99.9999	None	Based on the 'floored' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level Percent equals an existing ADM Coverage Level then this will be the Effective Coverage Level Percent. If the Effective Coverage Level Percent falls between existing ADM Coverage Levels then this will be the lower ADM Coverage Level. If the Effective Coverage Level Percent is greater than the maximum ADM Coverage Level then this will be the highest ADM Coverage Level.

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 0018 Rice 0047 Dry Beans 0078 Sunflowers 0095 Sorghum
 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
$\text{Prior Year Unit Residual Factor} = \text{Round}(\text{Base Prior Year Unit Residual Factor} + (\text{Upper Bound Prior Year Unit Residual Factor} - \text{Lower Bound Prior Year Unit Residual Factor}) * (\text{Effective Coverage Level Percent} - \text{Floored Effective Coverage Level Percent}) * 20, 4)$	Prior Year Unit Residual Factor	Internal		999.9999	Round to 4 decimal places.	The cap value for the Residual Factors is the MAX(Residual Factor) from all coverage levels within the chosen unit structure
	Base Prior Year Unit Residual Factor	ADM		999.9999	None	Base Prior Year Unit Residual Factor is equal to Prior Year Unit Residual for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040".
	Upper Bound Prior Year Unit Residual Factor	ADM		999.9999	None	Based on the 'upper bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the higher ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the highest ADM Coverage Level.
	Lower Bound Prior Year Unit Residual Factor	ADM		999.9999	None	Based on the 'lower bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on lower ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the second highest ADM Coverage Level.
	Effective Coverage Level Percent	Internal			99.9999	None

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
Prior Year Unit Residual Factor = (continued)	Round(Base Prior Year Unit Residual Factor + (Upper Bound Prior Year Unit Residual Factor - Lower Bound Prior Year Unit Residual Factor) * (Effective Coverage Level Percent - Floored Effective Coverage Level Percent) * 20, 4)			99.9999	None	Based on the 'floored' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be the lower ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be the highest ADM Coverage Level.

Exhibit Name: Premium Calculation
Exhibit Number: P11-1, Plan 01, 02, 03
Record Name: Acreage
Record Code: P11

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
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When Unit Structure Code is equal to Enterprise Unit, 'EU', use the following calculations for Enterprise Unit Residual Factor and Prior Year Enterprise Unit Residual Factor:

Enterprise Unit Residual Factor = Round(Base Enterprise Unit Residual Factor + (Upper Bound Enterprise Unit Residual Factor - Lower Bound Enterprise Unit Residual Factor) * (Effective Coverage Level Percent - Floored Effective Coverage Level Percent) * 20, 4)	Enterprise Unit Residual Factor	Internal		999.9999	Round to 4 decimal places.	The cap value for the Residual Factors is the MAX(Residual Factor) from all coverage levels within the chosen unit structure
	Base Enterprise Unit Residual Factor	ADM		999.9999	None	Base Enterprise Unit Residual Factor is equal to Enterprise Unit Residual for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040".
	Upper Bound Enterprise Unit Residual Factor	ADM		999.9999	None	Based on the 'upper bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level Percent equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level Percent. If the Effective Coverage Level Percent falls between existing ADM Coverage Levels then this will be based on the higher ADM Coverage Level. If the Effective Coverage Level Percent is greater than the maximum ADM Coverage Level then this will be based on the highest ADM Coverage Level.

Exhibit Name: Premium Calculation
 Exhibit Number: P11-1, Plan 01, 02, 03
 Record Name: Acreage
 Record Code: P11

Reinsurance Year: 2025
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Insurance Plan Code 01 Yield Protection 02 Revenue Protection 03 Revenue Protection with Harvest Price Exclusion

Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
 0016 Oats 0043 Popcorn 0075 Peanuts 0094 Rye
 0018 Rice 0047 Dry Beans 0078 Sunflowers 0805 Weaned Calves
 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Prior Year Enterprise Unit Residual Factor = Round(Base Enterprise Prior Year Unit Residual Factor + (Upper Bound Prior Year Enterprise Unit Residual Factor - Lower Bound Prior Year Enterprise Unit Residual Factor) * (Effective Coverage Level Percent - Floored Effective Coverage Level Percent) * 20, 4)	Prior Year Enterprise Unit Residual Factor	Internal		999.9999	Round to 4 decimal places.	The cap value for the Residual Factors is the MAX(Residual Factor) from all coverage levels within the chosen unit structure
	Base Enterprise Prior Year Unit Residual Factor	ADM		999.9999	None	Base Enterprise Prior Year Unit Residual Factor is equal to Enterprise Prior Year Unit Residual for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040".
	Upper Bound Prior Year Enterprise Unit Residual Factor	ADM		999.9999	None	Based on the 'upper bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the higher ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the highest ADM Coverage Level.

Exhibit Name: Premium Calculation
 Exhibit Number: P11-1, Plan 01, 02, 03
 Record Name: Acreage
 Record Code: P11

Reinsurance Year: 2025
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 Release Date: 12/5/2024

Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
$\text{Prior Year Whole Farm Unit Residual Factor} = \frac{\text{Round}(\text{Base Whole Farm Prior Year Unit Residual Factor} + (\text{Upper Bound Prior Year Whole Farm Unit Residual Factor} - \text{Lower Bound Prior Year Whole Farm Unit Residual Factor}) * (\text{Effective Coverage Level Percent} - \text{Floored Effective Coverage Level Percent}) * 20, 4)}$	Prior Year Whole Farm Unit Residual Factor	Internal		999.9999	Round to 4 decimal places.	The cap value for the Residual Factors is the MAX(Residual Factor) from all coverage levels within the chosen unit structure
	Base Whole Farm Base Prior Year Unit Residual Factor	ADM		999.9999	None	Base Whole Farm Base Prior Year Unit Residual Factor is equal to Whole Farm Base Prior Year Unit Residual for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040".
$\text{Prior Year Whole Farm Unit Residual Factor} = \frac{\text{Round}(\text{Base Whole Farm Prior Year Unit Residual Factor} + (\text{Upper Bound Prior Year Whole Farm Unit Residual Factor} - \text{Lower Bound Prior Year Whole Farm Unit Residual Factor}) * (\text{Effective Coverage Level Percent} - \text{Floored Effective Coverage Level Percent}) * 20, 4)}$	Upper Bound Prior Year Whole Farm Unit Residual Factor	ADM		999.9999	None	Based on the 'upper bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the higher ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the highest ADM Coverage Level.
	Lower Bound Prior Year Whole Farm Unit Residual Factor	ADM		999.9999	None	Based on the 'lower bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on lower ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the second highest ADM Coverage Level.

Exhibit Name: Premium Calculation
 Exhibit Number: P11-1, Plan 01, 02, 03
 Record Name: Acreage
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Insurance Plan Code 01 Yield Protection 02 Revenue Protection 03 Revenue Protection with Harvest Price Exclusion

Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
 0016 Oats 0043 Popcorn 0075 Peanuts 0094 Rye
 0018 Rice 0047 Dry Beans 0078 Sunflowers 0805 Weaned Calves
 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
	Effective Coverage Level Percent	Internal		99.9999	None	
$\text{Prior Year Whole Farm Unit Residual Factor} = \frac{\text{Round}(\text{Base Whole Farm Prior Year Unit Residual Factor} + (\text{Upper Bound Prior Year Whole Farm Unit Residual Factor} - \text{Lower Bound Prior Year Whole Farm Unit Residual Factor}) * (\text{Effective Coverage Level Percent} - \text{Floored Effective Coverage Level Percent}) * 20, 4)}$	Floored Effective Coverage Level Percent	Internal		99.9999	None	Based on the 'floored' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be the lower ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be the highest ADM Coverage Level.

Section 16: Unit Discount Calculation

The lookup/interpolation/extrapolation procedure for 'Optional Unit Discount Factor, Basic Unit Discount Factor, and Enterprise Unit Discount Factor' when Trend Adjustment Option (TA), Yield Cup Option (YC), Quality Loss Option (QL), or Yield Exclusion Option (YE) was chosen and yield reflects a trend.

When Unit Structure Code is equal to Optional Unit, "OU", "UA", or "UD", use the following calculation for Unit Structure Discount Factor:

Unit Structure Discount Factor	Internal		9.999999999	Round to 4 decimal places.	Capped at 1.0
Base Coverage Level Percent Optional Unit Discount Factor	ADM		9.999999999	None	Base Coverage Level Percent Optional Unit Discount Factor is equal to Percent Optional Discount for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040".

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 Record Code: P11

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Unit Structure Discount Factor = Round(Base Coverage Level Percent Optional Unit Discount Factor + (Upper Bound Coverage Level Percent Optional Unit Discount Factor - Lower Bound Coverage Level Percent Optional Unit Discount Factor) * (Effective Coverage Level Percent - Floored Effective Coverage Level Percent) * 20, 4)	Upper Bound Coverage Level Percent Optional Unit Discount Factor	ADM		9.999999999	None	Based on the 'upper bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the higher ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the highest ADM Coverage Level.
	Lower Bound Coverage Level Percent Optional Unit Discount Factor	ADM		9.999999999	None	Based on the 'lower bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the lower ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the second highest ADM Coverage Level.

Exhibit Name: Premium Calculation
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Reinsurance Year: 2025
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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
Unit Structure Discount Factor = Round(Base Coverage Level Percent Basic Unit Discount Factor + (Upper Bound Coverage Level Percent Basic Unit Discount Factor - Lower Bound Coverage Level Percent Basic Unit Discount Factor) * (Effective Coverage Level Percent - Floored Effective Coverage Level Percent) * 20, 4)	Upper Bound Coverage Level Percent Basic Unit Discount Factor	ADM		9.99999999	None	Based on the 'upper bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the higher ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the highest ADM Coverage Level.

Exhibit Name: Premium Calculation
Exhibit Number: P11-1, Plan 01, 02, 03
Record Name: Acreage
Record Code: P11

Reinsurance Year: 2025
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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
	Lower Bound Coverage Level Percent Basic Unit Discount Factor	ADM			None	Based on the 'lower bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the lower ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the second highest ADM Coverage Level.
	Effective Coverage Level Percent	Internal		99.9999	None	
Unit Structure Discount Factor = (continued)	Round(Base Coverage Level Percent Basic Unit Discount Factor + (Upper Bound Coverage Level Percent Basic Unit Discount Factor - Lower Bound Coverage Level Percent Basic Unit Discount Factor) * (Effective Coverage Level Percent - Floored Effective Coverage Level Percent) * 20, 4)	Internal		99.9999	None	Based on the 'floored' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be the lower ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be the highest ADM Coverage Level.

Exhibit Name: Premium Calculation
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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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When Unit Structure Code is equal to Enterprise Unit, 'EU', use the following calculation for Unit Structure Discount Factor:

$\text{Unit Structure Discount Factor} = \frac{\text{Round}(\text{Base Coverage Level Percent Enterprise Unit Discount Factor} + (\text{Upper Bound Coverage Level Percent Enterprise Unit Discount Factor} - \text{Lower Bound Coverage Level Percent Enterprise Unit Discount Factor}) * (\text{Effective Coverage Level Percent} - \text{Floored Effective Coverage Level Percent}) * 20, 4)}{\text{Effective Coverage Level Percent}}$	Unit Structure Discount Factor	Internal		9.99999999	Round to 4 decimal places.	Capped at 1.0.
	Base Coverage Level Percent Enterprise Unit Discount Factor	ADM		9.99999999	None	Base Coverage Level Percent Enterprise Unit Discount Factor is equal to Enterprise Unit Discount Factor for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040".
	Upper Bound Coverage Level Percent Enterprise Unit Discount Factor	ADM		9.99999999	None	Based on the 'upper bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the higher ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the highest ADM Coverage Level.
	Lower Bound Coverage Level Percent Enterprise Unit Discount Factor	ADM			None	Based on the 'lower bound' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be based on the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be based on the lower ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be based on the second highest ADM Coverage Level.
	Effective Coverage Level Percent	Internal		99.9999	None	

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Insurance Plan Code 01 Yield Protection 02 Revenue Protection 03 Revenue Protection with Harvest Price Exclusion

Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
 0016 Oats 0043 Popcorn 0075 Peanuts 0094 Rye
 0018 Rice 0047 Dry Beans 0078 Sunflowers 0094 Rye
 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Unit Structure Discount Factor = (continued) Round(Base Coverage Level Percent Enterprise Unit Discount Factor + (Upper Bound Coverage Level Percent Enterprise Unit Discount Factor - Lower Bound Coverage Level Percent Enterprise Unit Discount Factor) * (Effective Coverage Level Percent - Floored Effective Coverage Level Percent) * 20, 4)	Floored Effective Coverage Level Percent	Internal		99.9999	None	Based on the 'floored' Coverage Level. Edit with ADM Coverage Level Differential, "A01040". If the Effective Coverage Level equals an existing ADM Coverage Level then this will be the Effective Coverage Level. If the Effective Coverage Level falls between existing ADM Coverage Levels then this will be the lower ADM Coverage Level. If the Effective Coverage Level is greater than the maximum ADM Coverage Level then this will be the highest ADM Coverage Level.

Downed Rice Endorsement (DRE) Option 'DC'

CAT does not apply to Downed Rice (DRE). Only Unit Structure Codes 'BU and OU' apply regardless of the base Rice selection. Price Election Percent for base Rice will apply to DRE. Subsidy Level will be 38% for DRE regardless of the base Rice Unit Structure or Coverage Level. Insured Share can be different for DRE than base Rice. Insured Share will be 100%. DRE coverage is not available for high-risk CAT acreage if excluded from additional coverage for Base Rice.

Section 17: Liability Calculation

Premium Liability Amount = Dollar Amount of Insurance * Reported Acreage * Insured Share Percent * Price Election Percent	Premium Liability Amount	Internal		9999999999	Round to whole number.	
	Dollar Amount of Insurance	ADM		99999	None	Edit with ADM Price, "A00810", Fixed Coverage Amount with insurance option = 'DC'.
	Reported Acreage	P11	48	99999999.99	None	
	Insured Share Percent	P11	43	9.9999	None	DRE insured share will always be 100% without regards to base Rice.
	Price Election Percent	ICE		9.9999	None	From base Rice P14 record.

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Liability Amount = Dollar Amount of Insurance * Reported Acreage * Insured Share Percent * Price Election Percent	Liability Amount	P11	94	9999999999	Round to whole number.	
	Dollar Amount of Insurance	ADM		99999	None	Edit with ADM Price, "A00810", Fixed Coverage Amount with insurance option = 'DC'.
	Reported Acreage	P11	48	999999.99	None	
	Insured Share Percent	P11	43	9.9999	None	DRE insured share will always be 100% without regards to base Rice.
	Price Election Percent	ICE		9.9999	None	From base Rice P14 record.

Section 18: Total Premium Amount, Subsidy Amount, and Producer Premium Amount

Preliminary Total Premium = Premium Liability Amount * Premium Rate	Preliminary Total Premium	Internal		9999999999	Round to whole number.	
	Premium Rate	ADM			None	Edit with ADM Option Rate, "A01060", rate with insurance option = 'DC'.
Total Premium Amount = Preliminary Total Premium	Total Premium Amount	P11	95	9999999999	Round to whole number.	
Subsidy Amount = Total Premium Amount * Subsidy Percent	Subsidy Amount	P11	93	9999999999	Round to whole number.	If this record qualifies for Beginning Farmer and Rancher or Native Sod, see Section 18 for subsidy calculations.
	Subsidy Percent	ADM		9.999	None	Edit with ADM Subsidy Percent, "A00070". Will always be 38% for DRE.
Producer Premium Amount = Total Premium Amount - Subsidy Amount	Producer Premium Amount	P11	94	9999999999	Round to whole number.	

Section 19: Beginning Farmer and Rancher (BFR), Veteran Farmer Rancher (VFR), Native Sod (NS) and Conservation Compliance (CC) Subsidy Calculations

Base Subsidy Amount = Total Premium Amount * Subsidy Percent	Base Subsidy Amount	Internal		9999999999	Round to whole number.	Capped by the standard rule of \$1 if applicable.
	Subsidy Percent	ADM		9.999	None	Edit with ADM Subsidy Percent, "A00070".

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
BFR/VFR Subsidy Amount = Total Premium Amount * 0.10 * (1 - CC Subsidy Reduction Percent)	BFR/VFR Subsidy Amount	Internal		999999999	Round to whole number.	Beginning Farmer Rancher/Veteran Farmer Rancher Subsidy Amount. If Applicable; else 0. 0.10 (10%).
Native Sod Subsidy Amount = Total Premium Amount * 0.50	Native Sod Subsidy Amount	Internal		999999999	Round to whole number.	If Applicable; else 0. 0.50 (50%). For CAT coverage, Native Sod Subsidy Amount is always 0.
CC Subsidy Reduction Amount = Base Subsidy Amount * CC Subsidy Reduction Percent	CC Subsidy Reduction Percent	P11	76	9.9999	None	If Applicable; else 0.
	CC Subsidy Reduction Amount	P11	111	999999999	Round to whole number.	CC Subsidy Reduction Amount. If Applicable; else 0.
Subsidy Amount = Base Subsidy Amount + BFR/VFR Subsidy Amount - Native Sod Subsidy Amount - CC Subsidy Reduction Amount	Subsidy Amount	P11	93	999999999	Round to whole number.	Subsidy Amount cannot exceed Total Premium Amount. Subsidy Amount will be capped at \$0.
Producer Premium Amount = Total Premium Amount - Subsidy Amount	Producer Premium Amount	P11	94	999999999	Round to whole number.	

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Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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Section 20: Yield Cup, Yield Exclusion, Quality Loss, and Trend APH Current Year Base Premium Rate Calculations (only use when the Effective Coverage Level for the record exceeds the highest coverage level for the offer in the ADM)

$\text{Unadjusted Liability Amount} = \text{Round}(\frac{\text{Coverage Level Percent}}{\text{Effective Coverage Level Percent}}, 10) * \text{Premium Liability Amount}$	Unadjusted Liability Amount	Internal		9999999999	Round to whole number.	
	Coverage Level Percent	P14	34	9.9999	None	
	Effective Coverage Level Percent	Internal		99.9999		
	Premium Liability Amount	Internal		9999999999	Round to whole number.	
$\text{Max Coverage Level Adjustment Factor} = \frac{\text{ROUND}(1.00 / \text{Current Year Base Rate}, 8) - \text{ROUND}(\text{Unadjusted Liability Amount} / (\text{Current Year Base Rate} * \text{Premium Liability Amount}), 8) + \text{ROUND}(\text{ROUND}(\text{Base Rate Differential Factor} * \text{Base Unit Residual Factor} * \text{Base Optional Unit Structure Discount Factor} * \text{Unadjusted Liability Amount}, 8) / \text{Premium Liability Amount}, 8)}{\text{Base Optional Unit Structure Discount Factor}}$	Max Coverage Level Adjustment Factor	Internal		999999999.99999999	Round to 8 decimals.	
	Unadjusted Liability Amount	Internal		9999999999	Round to whole number.	
	Current Year Base Rate	Internal		9999999999.999999	Round to 8 decimals.	
	Premium Liability Amount	Internal		9999999999	Round to whole number.	
	Base Rate Differential Factor	ADM		9.999999999	None	
	Base Unit Residual Factor	ADM		999.9999	None	
	Base Optional Unit Structure Discount Factor	ADM		9.999999999	None	Base Optional Unit Structure Discount Factor is equal to Optional Unit Discount Factor for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040". See Section 19 for more info.

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
When Unit Structure code is Basic Unit, "BU": ROUND(1.00/ Current Year Base Rate,8) – ROUND(Unadjusted Liability Amount/(Current Year Base Rate * Premium Liability Amount),8) + ROUND(ROUND(Base Rate Differential Factor * Base Unit Residual Factor * Base Basic Unit Structure Discount Factor * Unadjusted Liability Amount,8)/Premium Liability Amount,8)	Base Basic Unit Structure Discount Factor	ADM		9.99999999	None	Base Basic Unit Structure Discount Factor is equal to Basic Unit Discount Factor for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040". See Section 19 for more info. When the total planted acres for the unit is 0 (all acres are prevented planted) set to 1.00.

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Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
 0016 Oats 0043 Popcorn 0075 Peanuts 0094 Rye
 0018 Rice 0047 Dry Beans 0078 Sunflowers 0805 Weaned Calves
 0021 Cotton

Calculations		Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Max Coverage Level Adjustment Factor = (continued)	When Unit Structure code is Enterprise Unit, "EU": $\text{ROUND}(1.00 / \text{Current Year Base Rate}, 8) - \text{ROUND}(\text{Unadjusted Liability Amount} / (\text{Current Year Base Rate} * \text{Premium Liability Amount}), 8) + \text{ROUND}(\text{ROUND}(\text{Base Rate Differential Factor} * \text{Base Enterprise Unit Residual Factor} * \text{Base Enterprise Unit Structure Discount Factor} * \text{Unadjusted Liability Amount}, 8) / \text{Premium Liability Amount}, 8)$	Base Enterprise Unit Structure Discount Factor	ADM		9.99999999	None	Base Enterprise Unit Structure Discount Factor is equal to Enterprise Unit Discount Factor for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040". See Section 19 for more info. When the total planted acres for the unit is 0 (all acres are prevented planted) set to 1.00.
		Base Enterprise Unit Residual Factor	ADM		999.9999	None	Base Enterprise Unit Residual Factor is equal to Enterprise Unit Residual for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040".
	When Unit Structure code is Whole Farm Unit "WU": $\text{ROUND}(1.00 / \text{Current Year Base Rate}, 8) - \text{ROUND}(\text{Unadjusted Liability Amount} / (\text{Current Year Base Rate} * \text{Premium Liability Amount}), 8) + \text{ROUND}(\text{ROUND}(\text{Base Rate Differential Factor} * \text{Base Whole Farm Unit Residual Factor} * \text{Unit Structure Discount Factor} * \text{Unadjusted Liability Amount}, 8) / \text{Premium Liability Amount}, 8)$	Unit Structure Discount Factor	Internal		9.99999999	None	Capped at 1.0 See Section 19 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
		Base Whole Farm Unit Residual Factor	ADM		999.9999	None	Base Whole Farm Unit Residual Factor is equal to Whole Farm Unit Residual for Minimum of 1) Maximum available Coverage Level or; 2) available Coverage Level less than or equal to Effective Coverage Level. Edit with ADM Coverage Level Differential, "A01040".

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Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
 0016 Oats 0043 Popcorn 0075 Peanuts 0094 Rye
 0018 Rice 0047 Dry Beans 0078 Sunflowers 0095 Soybeans
 0021 Cotton

Calculations		Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Marginal Rate Adjustment Factor	Marginal rate Adjustment	Marginal rate Adjustment	Internal		9.99999999	Round to 8 decimals.	
	Marginal Adjustment Rate Factor	Marginal Adjustment Rate Factor	Internal		9.99999999	Round to 8 decimals.	
	Max Coverage Level Adjustment Factor	Max Coverage Level Adjustment Factor	Internal		999999999.99999999	Round to 8 decimals.	
	Rate Differential Factor	Rate Differential Factor	ADM		9.999999999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 17 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
	Unit Residual Factor	Unit Residual Factor	ADM		999.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
	Unit Structure Discount Factor	Unit Structure Discount Factor	Internal		9.99999999	None	Capped at 1.0 See Section 19 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
	When Unit Structure code is Enterprise Unit, "EU": Max Coverage Level Adjustment Factor / (Rate Differential Factor * Enterprise Unit Residual Factor * Unit Structure Discount Factor)	Enterprise Unit Residual Factor	ADM		9.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) where Unit Structure Code equal to Enterprise Unit, 'EU'.
When Unit Structure code is Whole Farm Unit, "WU": Max Coverage Level Adjustment Factor / (Rate Differential Factor * Whole Farm Unit Residual Factor * Unit Structure Discount Factor)	Whole Farm Unit Residual Factor	ADM		9.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), and "YE" (Yield Exclusion) where Unit Structure Code equal to Whole Farm Unit, 'WU'.	

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Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
 0016 Oats 0043 Popcorn 0075 Peanuts 0094 Rye
 0018 Rice 0047 Dry Beans 0078 Sunflowers 0805 Weaned Calves
 0021 Cotton

Calculations		Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Current Year Base Premium Rate		Current Year Base Premium Rate	Internal		9999999999.99999999	Round to 8 decimals.	
	When Unit Structure Code is equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, "BU":	Rate Differential Factor	ADM		9.999999999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 17 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
	= Round(Current Year Base Rate * Rate Differential Factor * Unit Residual Factor, 8) * MIN(Marginal Rate Adjustment Factor, 1.00)	Unit Residual Factor	ADM		999.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) where Unit Structure Code equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, 'BU'.
		Marginal Rate Adjustment Factor	Internal		9999999999.99999999	Round to 8 decimals.	
	When Unit Structure code is Enterprise Unit, "EU":	Enterprise Unit Residual Factor	ADM		9.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) where Unit Structure Code equal to Enterprise Unit, 'EU'.
	= Round(Current Year Base Rate * Rate Differential Factor * Enterprise Unit Residual Factor, 8) * MIN(Marginal Rate Adjustment Factor, 1.00)	Whole Farm Unit Residual Factor	ADM		9.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) where Unit Structure Code equal to Whole Farm Unit, 'WU'.
When Unit Structure code is Whole Farm Unit, "WU":		Whole Farm Unit Residual Factor	ADM		9.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) where Unit Structure Code equal to Whole Farm Unit, 'WU'.
= Round(Current Year Base Rate * Rate Differential Factor * Whole Farm Unit Residual Factor, 8) * MIN(Marginal Rate Adjustment Factor, 1.00)							

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Commodity Code 0011 Wheat 0031 Flax 0051 Grain Sorghum 0081 Soybeans
 0015 Canola 0041 Corn 0067 Dry Peas 0091 Barley
 0016 Oats 0043 Popcorn 0075 Peanuts 0094 Rye
 0018 Rice 0047 Dry Beans 0078 Sunflowers 0094 Rye
 0021 Cotton 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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Section 21: Yield Cup, Yield Exclusion, Quality Loss, and Trend APH for Cottonseed--Current Year Base Premium Rate Calculations (only use when the Effective Coverage Level for the record exceeds the highest coverage level for the offer in the ADM).

Current Year Base Premium Rate	Current Year Base Premium Rate	Internal		9999999999.99999999	Round to 8 decimals.	
	When Unit Structure Code is equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, "BU":	Rate Differential Factor	ADM	9.999999999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 17 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion).
	Round(Current Year Base Rate * Rate Differential Factor * Unit Residual Factor, 8) * MIN(Marginal Rate Adjustment Factor, 1.00)	Unit Residual Factor	ADM	999.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) where Unit Structure Code equal to Optional Unit, "OU", "UA", "UD", or Basic Unit, 'BU'.
		Marginal Rate Adjustment Factor	Internal	9999999999.99999999	Round to 8 decimals.	Copy value over from the base lint line.
	When Unit Structure Code is Enterprise Unit, "EU":	Enterprise Unit Residual Factor	ADM	9.9999	None	Edit with ADM Coverage Level Differential, "A01040". See Section 18 for Option Code "TA" (Trend Adjustment), "YC" (Yield Cup), "QL" (Quality Loss), and "YE" (Yield Exclusion) where Unit Structure Code equal to Enterprise Unit, 'EU'.
	Round(Current Year Base Rate * Rate Differential Factor * Enterprise Unit Residual Factor, 8) * MIN(Marginal Rate Adjustment Factor, 1.00)					

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Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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This Section is Specifically for Weaned Calf Risk Protection, Commodity Code, "0805," Premium Calculations.

Section 1: Liability Calculation

$\text{Premium Guarantee Per Head Amount} = \text{Approved Yield} * \text{Coverage Level Percent}$	Premium Guarantee Per Head Amount	Internal		99999999.99	If Unit of Measure equals Pounds "LBS", then round to whole number.	Common Crop Insurance Policy definition 'production guarantee (per head)'.
	Approved Yield	P11	42	99999999.99	None	Approved Yield must be in whole pounds when Commodity Code equals Weaned Calf, "0805."
	Coverage Level Percent	P14	34	9.9999	None	The Coverage Level Percent in this section is ALWAYS the chosen coverage level and NOT the Effective Coverage Level.
$\text{Guarantee Per Head Amount} = \frac{\text{Premium Guarantee Per Head Amount} * \text{Guarantee Adjustment Factor}}{\text{Adjustment Factor}}$	Guarantee Per Head Amount	Internal		99999999.99	If Unit of Measure equals Pounds "LBS", then round to whole number.	Guarantee Per Head Amount should be rounded to whole pounds for Weaned Calf, "0805".
	Guarantee Adjustment Factor	P11	69	0.999	None	Edit with the Guarantee Adjustment ICE, "D00068".
$\text{Formulated Producer Projected Price} = \frac{\text{Projected Price} * (1 + \text{Projected Price Adjustment Factor} * (650 - \text{MAX}(200, \text{MIN}(750, \text{Approved Yield})))}{\text{Projected Price}}$	Formulated Producer Projected Price	Internal		9.9999		
	Projected Price	ADM		99999.9999		Liability for Yield Protection, "01" allows the producer the opportunity to choose a percentage of the Projected Price. Liability for Revenue Protection, "02", or Revenue Protection with Harvest Price Exclusion, "03", requires the producer to choose 100 percent of the Projected Price. Edit with ADM Price, "00810".
	Projected Price Adjustment Factor	ADM		9.99999	None	Edit with ADM Price, "00810".
	Approved Yield	P11	42	99999999.99	None	Approved Yield must be in whole pounds when Commodity Code equals Weaned Calf, "0805."

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Price Election Amount = Formulated Producer Projected Price * Price Election Percent	Price Election Amount	Internal		9999.9999		When Commodity Code equals Weaned Calf, "0805", round to nearest whole cent [\$9.99].
	Formulated Producer Projected Price	Internal		9.9999		
	Price Election Percent	ICE		9.9999	None	Price Election Percent must equal 1.000, when Insurance Plan Code is Revenue Protection, "02", or Revenue Protection with Harvest Price Exclusion, "03". Edit with ICE Price Election Percent, "D00007".
Premium Total Guarantee Amount = Premium Guarantee Per Head Amount * Price Election Amount * Reported Head Count	Premium Total Guarantee Amount	Internal		99999999.99	Round to 2 decimals.	
	Price Election Amount	Internal		9999.9999	None	
	Reported Head Count	P11	90	99999999.99	None	
Total Guarantee Amount = Guarantee Per Head Amount * Price Election Amount * Reported Head Count	Total Guarantee Amount	P11	103	99999999.99	Round to 2 decimals.	
	Price Election Amount	Internal		9999.9999	None	
	Reported Head Count	P11	90	999999.99	None	
Premium Liability Amount = Premium Total Guarantee Amount * Insured Share Percent	Premium Liability Amount	Internal		9999999999	Round to whole number.	
	Insured Share Percent	P11	43	9.9999	None	
Liability Amount = Total Guarantee Amount * Insured Share Percent	Liability Amount	P11	94	9999999999	Round to whole number.	
	Insured Share Percent	P11	43	9.9999	None	

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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Section 2: Unit Discount Calculation

The appropriate discount factor should be looked up and applied.

Unit Structure Discount Factor	When Unit Structure Code is Basic Unit, "BU":	Unit Structure Discount Factor	Internal		9.99999999	None	capped at 1.0
	Basic Unit Discount Factor	Basic Unit Discount Factor	ADM		9.999	None	Edit with ADM Unit Discount, "A01090".
Revenue Lookup Adjustment Factor	When the Unit Structure Code is Basic Unit, "BU":	Revenue Lookup Adjustment Factor	Internal		9.99999999	None	
	Unit Structure Discount Factor	Unit Structure Discount Factor	Internal		9.99999999	None	

Section 3: Base Premium Rate Calculation

Current Year Yield Ratio = Rate Yield / Reference Amount	Current Year Yield Ratio	Internal			9.9999	Round to 2 decimals.	Cup at 0.50 and Cap at 1.50.
	Rate Yield	P15	35		99999999.99	None	
	Reference Yield	ADM			99999.99	None	Edit with ADM Base Rate, "A01010".
Prior Year Yield Ratio = Rate Yield / Prior Year Reference Amount	Prior Year Yield Ratio	Internal			9.9999	Round to 2 decimals.	Cup at 0.50 and Cap at 1.50.
	Rate Yield	P15	35		99999999.99	None	
	Prior Year Reference Amount	ADM			99999.99	None	Edit with ADM Base Rate, "A01010".
Current Year Rate Multiplier = Current Year Yield Ratio ^ Exponent Value	Current Year Rate Multiplier	Internal			9999.99999999	Round to 8 decimals.	
	Exponent Value	ADM			999.999	None	Edit with ADM Base Rate, "A01010".
Prior Year Rate Multiplier = Prior Year Yield Ratio ^ Prior Year Exponent Value	Prior Year Rate Multiplier	Internal			9999.99999999	Round to 8 decimals.	
	Prior Year Exponent Value	ADM			999.999	None	Edit with ADM Base Rate, "A01010".
Current Year Base Rate = Current Year Rate Multiplier * Reference Rate + Fixed rate	Current Year Base Rate	Internal			9999999999.99999999	Round to 8 decimals.	
	Current Year Rate Multiplier	Internal			9999.99999999	None	
	Reference Rate	ADM			9.9999	None	Edit with ADM Base Rate, "A01010".
Prior Year Base Rate = Prior Year Rate Multiplier * Prior Year Reference Rate + Prior Year Fixed rate	Fixed Rate	ADM			9.9999	None	Edit with ADM Base Rate, "A01010".
	Prior Year Base Rate	Internal			9999999999.99999999	Round to 8 decimals.	
	Prior Year Rate Multiplier	Internal			9999.99999999	None	
	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".

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 0018 Rice 0047 Dry Beans 0078 Sunflowers 0805 Weaned Calves
 0021 Cotton

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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Section 4: Optional Coverage (Additive "A" and Multiplicative "M")

Additive Optional Rate Adjustment Factor = $\sum \text{Option Rate} * \text{Rate Differential Factor}$ When Rate Method Code is Additive, "A":	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".
Multiplicative Optional Rate Adjustment Factor = $\sum \text{Option Rate1} * \text{Option Rate2} * \text{Option Rate3}...$ When Rate Method Code is Multiplicative, "M":	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 5: Revenue Coverage Add on Rates (Applicable only for Plans 02 and 03)

Lookup Rate = Revenue Lookup Rate * Revenue Lookup Adjustment Factor	Lookup Rate	Internal		9999999999.9999	Round to 4 decimals.	
	Revenue Lookup Rate	Internal		9999999999.9999	Round to 4 decimals.	From Section 3.
	Revenue Lookup Adjustment Factor	Internal		9.99999999	None	From Section 2.
Adjusted Mean Quantity = Approved Yield * Mean Quantity / 100	Adjusted Mean Quantity (AdjMean)	Internal		999999.99999999	Round to 8 decimals.	
	Approved Yield (AY)	P11	42	99999999.99	None	
	Mean Quantity	ADM		999.9999999999	None	Edit with ADM Combo Revenue Factor, "A01030". Search the Combo Revenue Factor, "A01030" for the Mean Quantity using Lookup Rate.

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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
$\text{Simulated Yield Protection Losses} = \sum_{i=1}^{500} \text{Round}(\text{MAX}(0, \text{AY} * \text{covlvl} * \text{FormPPP} - (\text{Round}(\text{MAX}(0, \text{Yieldi} * \text{AdjStdDev} + \text{AdjMean}), 12) * \text{Round}((1 + \text{PPAF} * (650 - \text{MAX}(200, \text{MIN}(750, (-\text{Round}(\text{MAX}(0, \text{Yieldi} * \text{AdjStdDev} + \text{AdjMean}), 12)))) * \text{ProjPrice}, 12))), 12)$	Simulated Yield Protection Losses Quantity(SimYPLosses)	Internal		9999999999.9999999999	Round to 12 decimals.	
	Formulated Producer Projected Price (FormPPP)	Internal		9.9999		
	Projected Priced (ProjPrice)	ADM		99999.9999	None	Edit with ADM Price, "A00810".
	log Mean Quantity (LnMean)	Internal		999999.999999999	Round to 8 decimals.	
	Projected Price Adjustment Factor (PPAF)	ADM		9.99999	None	Edit with ADM Price, "00810".
	Approved Yield (AY)	P11	42	99999999.99	None	
	Adjusted Standard Deviation Quantity (AdjStdDev)	Internal		9999999999.99999999	Round to 8 decimals.	
	Adjusted Mean Quantity (AdjMean)	Internal		999999.999999999	Round to 8 decimals.	
	Coverage Level Percent (covlvl)	P14	34	9.9999	None	
	Price Draw Quantity, (Price,)	ADM		99.9999999999	None	
Yield Draw Quantity, (Yield,)	ADM		99.9999999999	None		
$\text{Simulated Revenue Protection Losses} = \sum_{i=1}^{500} \text{Round}(\text{MAX}(0, \text{AY} * \text{covlvl} * \text{Round}(\text{MAX}(\text{FormPPP}, \text{Round}(\text{MIN}(2 * \text{FormPPP}, \text{Round}((1 + \text{PPAF} * (650 - \text{MAX}(200, \text{MIN}(750, \text{AY})))) * e^{(\text{Priceci} * \text{PVF} + \text{LnMean}), 12)), 12)), 12) - (\text{Round}(\text{MAX}(0, \text{Yieldi} * \text{AdjStdDev} + \text{AdjMean}), 12) * \text{Round}(\text{MIN}(2 * \text{FormPPP}, \text{Round}((1 + \text{PPAF} * (650 - \text{MAX}(200, \text{MIN}(750, (\text{Round}(\text{MAX}(0, \text{Yieldi} * \text{AdjStdDev} + \text{AdjMean}), 12)))) * e^{(\text{Priceci} * \text{PVF} + \text{LnMean}), 12)), 12))), 12)$	Simulated Revenue Protection Losses Quantity(SimRPLosses)	Internal		9999999999.9999999999	Round to 12 decimals.	
	Formulated Producer Projected Price (FormPPP)	Internal		9.9999		
	Price Volatility Factor (PVF)	ADM		9.99		Edit with ADM Price, "A00810".
	log Mean Quantity (LnMean)	Internal		999999.999999999	Round to 8 decimals.	
	Projected Price Adjustment Factor (PPAF)	ADM		9.99999	None	Edit with ADM Price, "00810".
	Approved Yield (AY)	P11	42	99999999.99	None	
	Adjusted Standard Deviation Quantity (AdjStdDev)	Internal		9999999999.99999999	Round to 8 decimals.	

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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
	Adjusted Mean Quantity (AdjMean)	Internal		999999.99999999	Round to 8 decimals.	
	Coverage Level Percent (covlvl)	P14	34	9.9999	None	
	Price Draw Quantity, (Price,)	ADM		\$99.999999999	None	
	Yield Draw Quantity, (Yield,)	ADM		\$99.999999999	None	
	Simulated Revenue Protection with Harvest Price Exclusion Losses Quantity (SimRPhpeLosses)	Internal		9999999999.9999999999	Round to 12 decimals.	
	Formulated Producer Projected Price (FormPPP)	Internal		9.9999		
	Price Volatility Factor (PVF)	ADM		9.99		Edit with ADM Price, "A00810".
	log Mean Quantity (LnMean)	Internal		999999.99999999	Round to 8 decimals.	
	Projected Price Adjustment Factor (PPAF)	ADM		9.99999	None	Edit with ADM Price, "00810".
	Approved Yield (AY)	P11	42	99999999.99	None	
	Adjusted Standard Deviation Quantity (AdjStdDev)	Internal		999999999.99999999	Round to 8 decimals.	
	Adjusted Mean Quantity (AdjMean)	Internal		999999.99999999	Round to 8 decimals.	
	Coverage Level Percent (covlvl)	P14	34	9.9999	None	
	Price Draw Quantity, (Price,)	ADM		\$99.999999999	None	
	Yield Draw Quantity, (Yield,)	ADM		\$99.999999999	None	
$\text{Simulated Revenue Protection with Harvest Price Exclusion Losses Quantity} = \sum_{i=1}^{500} \text{Round}(\text{MAX}(0, \text{AY} * \text{covlvl} * \text{FormPPP} - (\text{Round}(\text{Max}(0, \text{Yield}_i * \text{AdjStdDev} + \text{AdjMean}), 12) * \text{Round}(\text{MIN}(2 * \text{FormPPP}, \text{Round}((1 + \text{PPAF}) * (650 - \text{MAX}(200, \text{MIN}(750, (\text{Round}(\text{MAX}(0, \text{Yield}_i * \text{AdjStdDev} + \text{AdjMean}), 12)))))) * e^{(\text{Price}_i * \text{PVF} + \text{LnMean}), 12}), 12)), 12)$	Simulated Yield Protection Base Premium Rate	Internal		999999.99999999	Round to 8 decimals.	
$\text{Simulated Revenue Protection Base Premium Rate} = \text{Yield} * \text{Coverage Level Percent} * \text{Formulated Producer Projected Price}$	Simulated Revenue Protection Base Premium Rate	Internal		999999.99999999	Round to 8 decimals.	

Exhibit Name: Premium Calculation
Exhibit Number: P11-1, Plan 01, 02, 03
Record Name: Acreage
Record Code: P11

Reinsurance Year: 2025
Version: Draft
Release Date: 12/5/2024

Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
Simulated Revenue Protection with Harvest Price Exclusion Base Premium Rate = (Simulated Revenue Protection with harvest Price Exclusion Losses Quantity / 500) / (Approved Yield * Coverage level Percent * Formulated Producer Projected Price)	Simulated Revenue Protection with Harvest Price Exclusion Base Premium Rate	Internal		999999.99999999	Round to 8 decimals.	
Preliminary Revenue Protection Premium Add on Rate = MAX(Simulated Revenue Protection Base Premium Rate - Simulated Yield Protection Base Premium Rate, 0.01 * Base Premium Rate)	Preliminary Revenue Protection Premium Add on Rate	Internal		999999.99999999	Round to 8 decimals.	This is a control meant to ensure that the premium rate associated with Revenue Protection is at least 1% greater than the basic Base Premium Rate where the Price Volatility Factor is NOT EQUAL to 0.
Preliminary Revenue Protection with Harvest Price Exclusion Add on Rate = MAX(Simulated Revenue Protection with Harvest Price Exclusion Base Premium Rate - Simulated Yield Protection Base Premium Rate, -0.5 * Base Premium Rate)	Preliminary Revenue Protection with Harvest Price Exclusion Add on Rate	Internal		999999.99999999	Round to 8 decimals.	This is a control meant to ensure that the premium rate associated with Revenue Protection with Harvest Price Exclusion will not be less than half of the Base Premium Rate where the Price Volatility Factor is NOT EQUAL to 0.

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Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
Section 6: Premium Rate						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.

$\text{Premium Rate} = \text{MIN}(.999, \text{Base Premium Rate} * \text{Unit Structure Discount Factor} * \text{Multiplicative Optional Rate Adjustment Factor} + \text{Additive Optional Rate Factor} + \text{Capped Revenue Add On Factor})$	Premium Rate	Internal		9999999999.99999999	Round to 8 decimals.	<p>Set Capped Revenue Add On Factor as follows:</p> <p>If Insurance Plan Code equals 01, Capped Revenue Add On Factor will equal zero.</p> <p>Set Capped Revenue Add On Factor as follows: If Section 6 is applicable, Capped Revenue Add On Factor will equal Capped Revenue Protection Add On Rate when Insurance Plan Code equals 02 or Capped Revenue Protection with Harvest Price Exclusion Add On Rate when Insurance Plan Code equals 03. If Section 6 is not applicable, Capped Revenue Add On Factor will equal Preliminary Revenue Protection Add On Rate when Insurance Plan Code equals 02 or Preliminary Revenue Protection with Harvest Price Exclusion Add On Rate when Insurance Plan Code equals 03.</p>
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 Exhibit Number: P11-1, Plan 01, 02, 03
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Reinsurance Year: 2025
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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
Commodity Code	0011 Wheat 0015 Canola 0016 Oats 0018 Rice 0021 Cotton	0031 Flax 0041 Corn 0043 Popcorn 0047 Dry Beans	0051 Grain Sorghum 0067 Dry Peas 0075 Peanuts 0078 Sunflowers 0081 Soybeans 0091 Barley 0094 Rye 0805 Weaned Calves

Calculations	Field Name	Record Number	Field Number	Field Format	Field Rounding	Rules
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Section 7: Total Premium Amount, Subsidy Amount, and Producer Premium Amount

$\text{Preliminary Total Premium} = \text{Premium Liability Amount} * \text{Premium Rate} * \text{Experience Factor} * \text{Premium Surcharge Percent} * \text{Total Premium Multiplicative Optional Rate Adjustment Factor}$	Preliminary Total Premium	Internal		9999999999	Round to whole number.	
	Experience Factor	P11	47	9.999	None	Experience Factor is only applicable for Insurance Plan Code Yield Protection, "01".
	Premium Surcharge Percent	Internal				Use when the Approved Yield Had a Cup or Surcharge applied.
	Total Premium Multiplicative Optional Rate Adjustment Factor	ADM		9.9999	None	If Option Rate with Rate Method Code equal "T". Edit with ADM Option Rate, "A01060". Currently this will be used for Short Rate Option.
$\text{Total Premium Amount} = \text{Preliminary Total Premium} * \text{Multiple Commodity Adjustment Factor}$	Total Premium Amount	P11	95	9999999999	Round to whole number.	
	Multiple Commodity Adjustment Factor	ICE		9999.999	None	Edit with ICE Multiple Cropping, "D00063". Used when there is a first Commodity Loss.
$\text{Subsidy Amount} = \text{Total Premium Amount} * \text{Subsidy Percent}$	Subsidy Amount	P11	93	9999999999	Round to whole number.	If this record qualifies for Beginning Farmer and Rancher, see Section 18 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	94	9999999999	Round to whole number.	

Section 8: Total Premium Amount, Subsidy Amount, and Producer Premium Amount

$\text{Preliminary Total Premium} = \text{Premium Liability Amount} * \text{Premium Rate} * \text{Experience Factor} * \text{Premium Rate Surcharge Percent}$	Preliminary Total Premium	Internal		9999999999	Round to whole number.	
	Experience Factor	P11	47	9.999	None	Experience Factor is only applicable for Insurance Plan Code Yield Protection, "01".
	Premium Rate Surcharge Percent					Use when the Approved Yield Had a Cup or Surcharge applied.

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Insurance Plan Code	01 Yield Protection	02 Revenue Protection	03 Revenue Protection with Harvest Price Exclusion
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<u>Calculations</u>	<u>Field Name</u>	<u>Record Number</u>	<u>Field Number</u>	<u>Field Format</u>	<u>Field Rounding</u>	<u>Rules</u>
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Section 10: Beginning Farmer and Rancher (BFR) and Veteran Farmer Rancher (VFR), and Subsidy Calculations

Base Subsidy Amount = Total Premium Amount * Subsidy Percent	Base Subsidy Amount	Internal		9999999999	Round to whole number.	Capped 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.
Subsidy Amount = Base Subsidy Amount + BFR/VFR Subsidy Amount	Subsidy Amount	P11	93	9999999999	Round to whole number.	Subsidy Amount cannot exceed Total Premium Amount. Subsidy Amount will be
Producer Premium Amount = Total Premium Amount - Subsidy Amount	Producer Premium Amount	P11	94	9999999999	Round to whole number.	