



RAINFALL INDEX



July • 2024

Farmer Veteran Coalition
Webinar

Agreement #RMA23CPT0013446

Objectives

The RI policy provides coverage for less than average precipitation within a specified area (grid) during a specified period of time (index interval).

This module will:

- Discuss the various components & characteristics of the Federal Rainfall Index (RI) Program
- Provide examples showing how the policy works



Measuring Precipitation

Precipitation amounts used for the policy are:

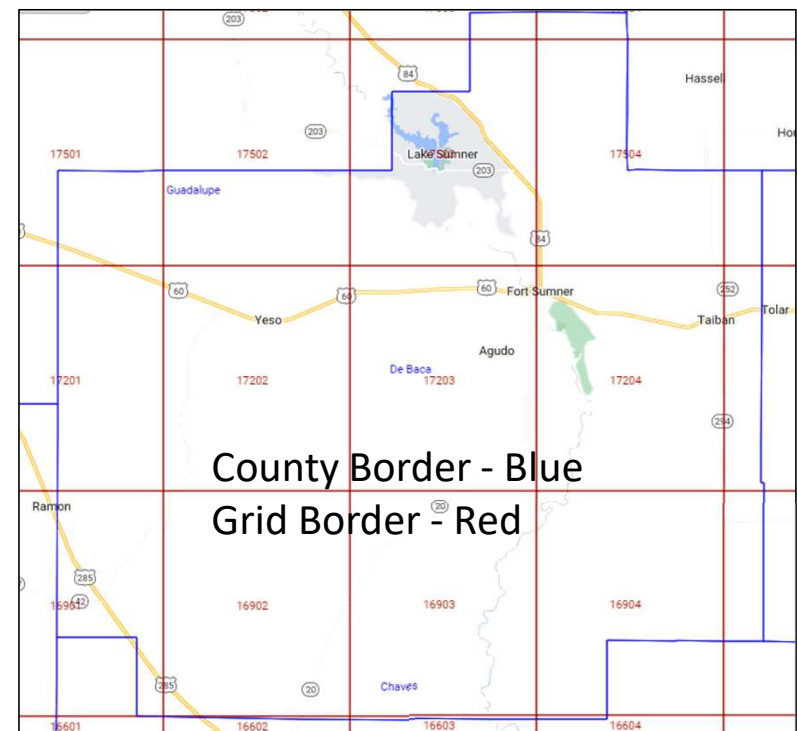
- the mean accumulated precipitation for a specified area (grid) and timeframe (index interval);
- based on National Oceanic and Atmospheric Administration (NOAA) Climate Prediction Center (CPC) data from 1948 to 2 year prior to the current crop year;
- from a minimum of 4 reporting stations closest to the center of the grid (may be located outside the grid); and
- not based on precipitation data maintained by producers or other sources.

Precipitation amounts may not reflect what happened on your farm.

Grids

The policy measures the amount of precipitation recorded for the grid where the insured acres are located.

- Numbered areas created by NOAA CPC
- Grid covers an area equal to .25 degrees in latitude by .25 degrees in longitude
- Grid boundaries do not follow state, county, or other boundaries
- Must select the grid where the insured acreage is physically located.



RI Basics

- Commodities:
 - Annual Forage (AF) includes annually planted forage or grazing crops
 - Apiculture includes honey, pollen collection, wax, and breeding stock
 - Pasture, Rangeland & Forage (PRF) includes grazing and haying operations
- Availability
 - Apiculture & PRF
 - 48 contiguous states, except for grids that cross international borders
 - PRF will be available in Hawaii for the 2025 CY
 - Annual Forage in CO, KS, NE, NM, ND, OK, SD, TX only

Annual Forage

Acres reporting for 2024 is incomplete.

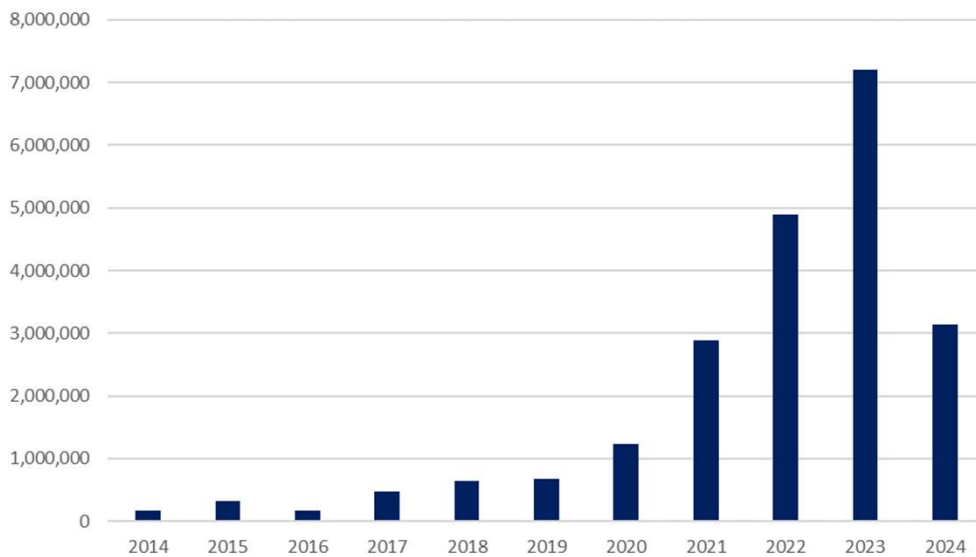


2023 Crop Year:

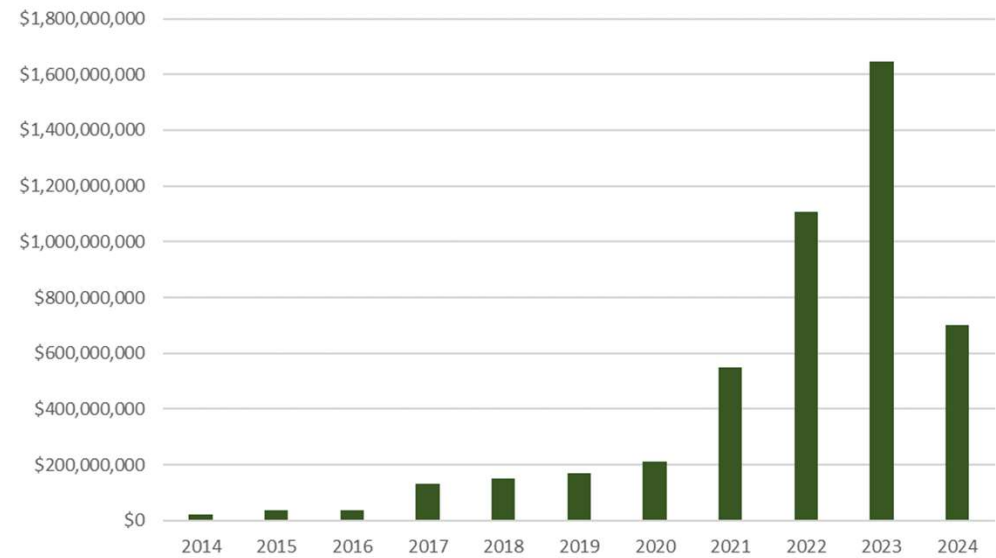
7.2 million acres insured

\$1.6 billion in liability

Insured Acres



Liability



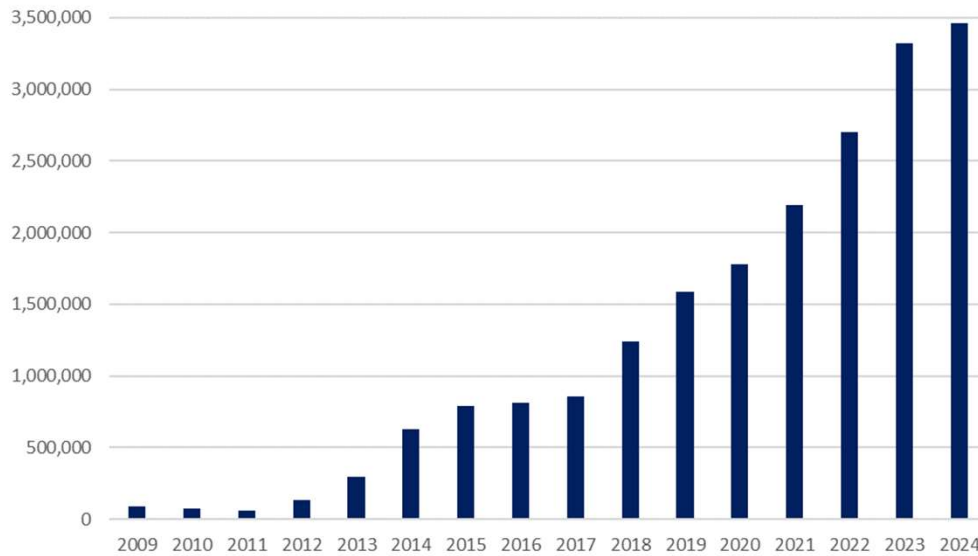
Data Source: RMA Summary of Business 6/6/2024

Apiculture

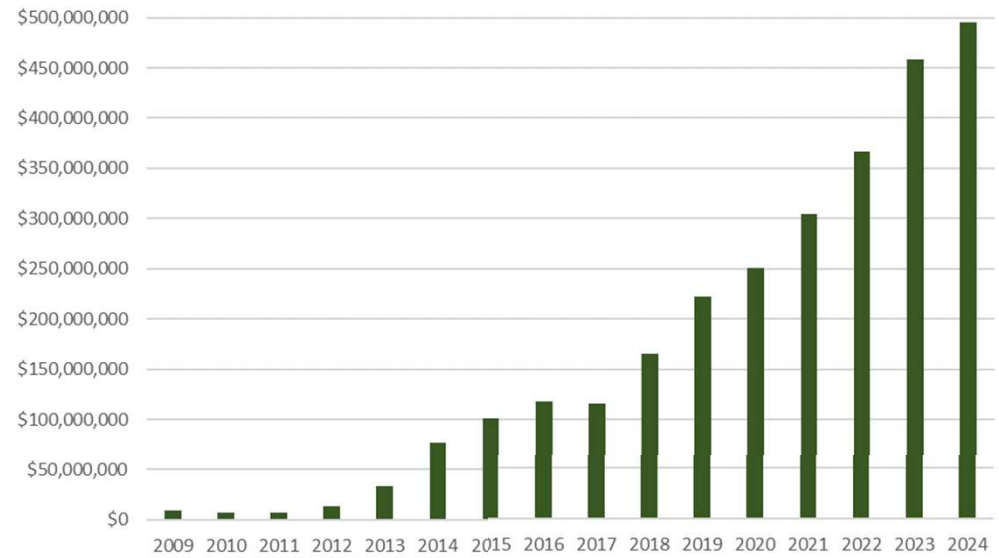


2024 Crop Year:
3.5 million acres insured
\$496 million in liability

Insured Acres



Liability



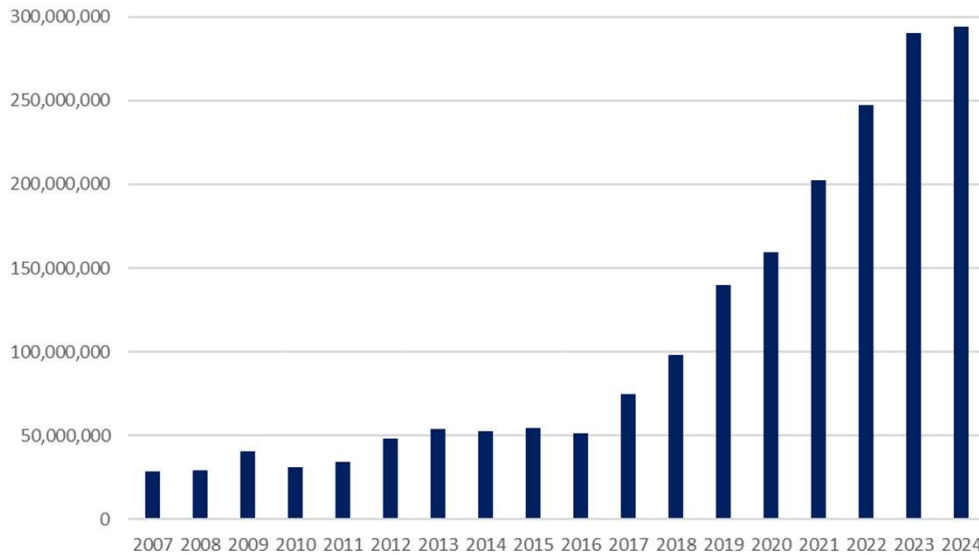
Data Source: RMA Summary of Business 6/6/2024

Pasture, Rangeland, & Forage

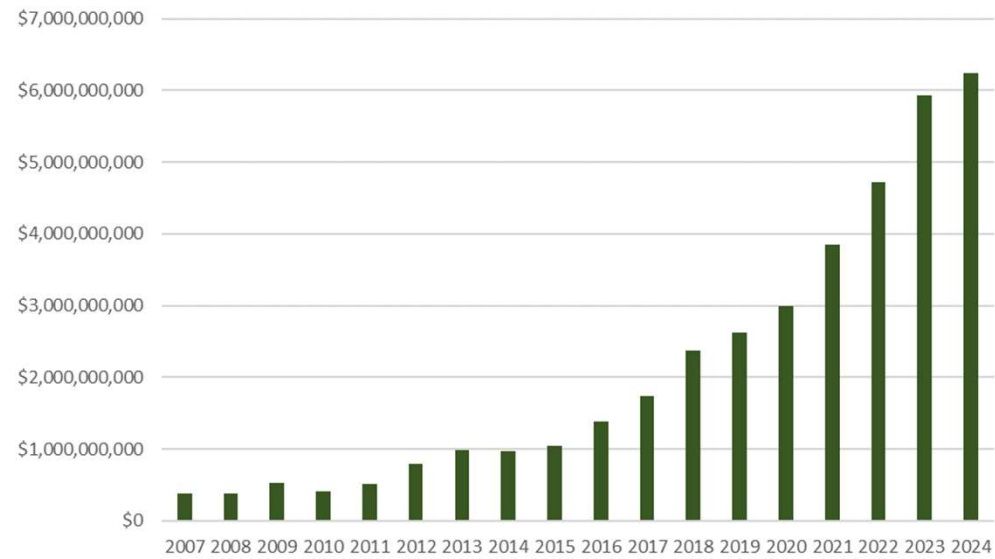


2024 Crop Year:
294 million acres insured
\$6.2 billion in liability

Insured Acres



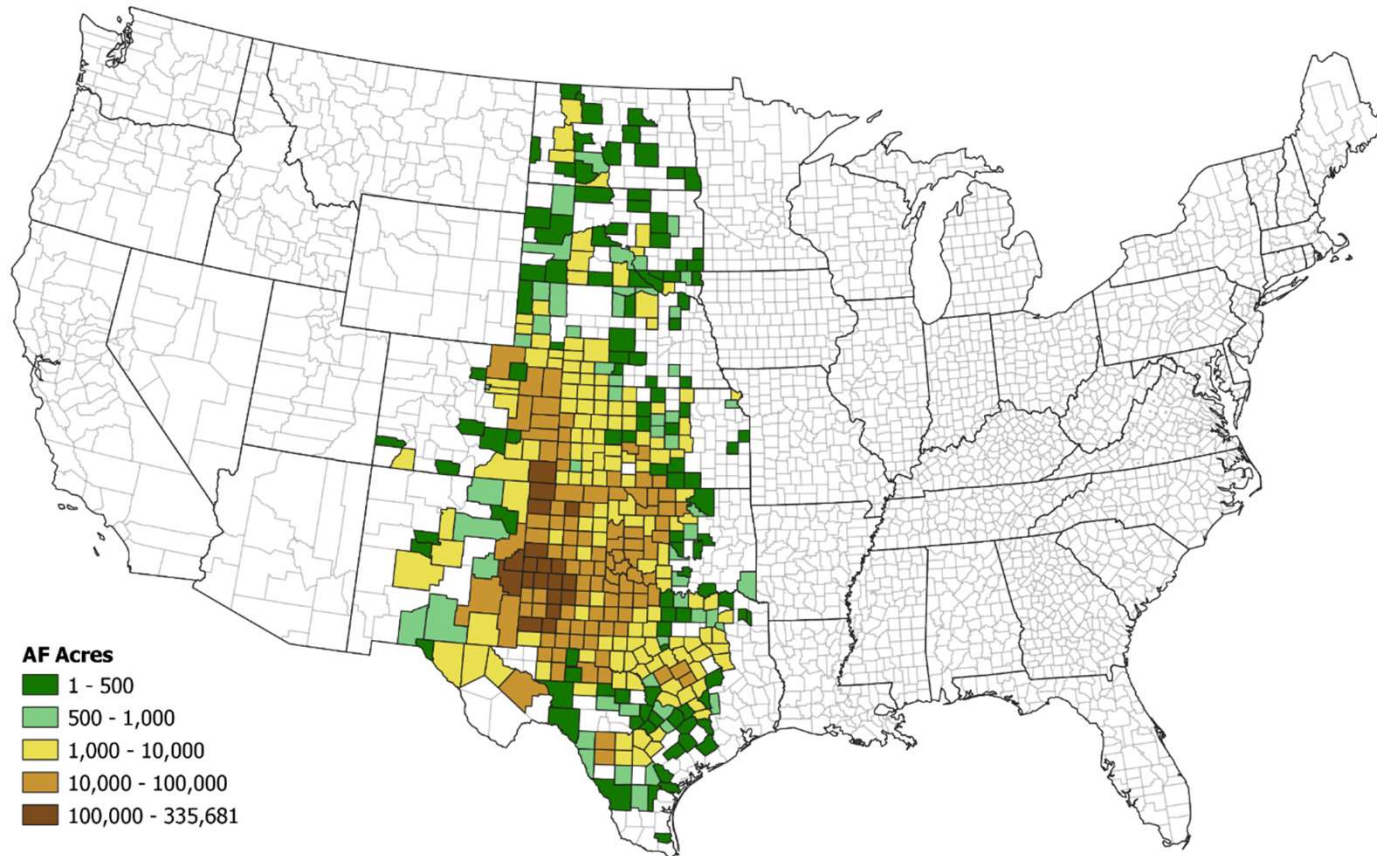
Liability



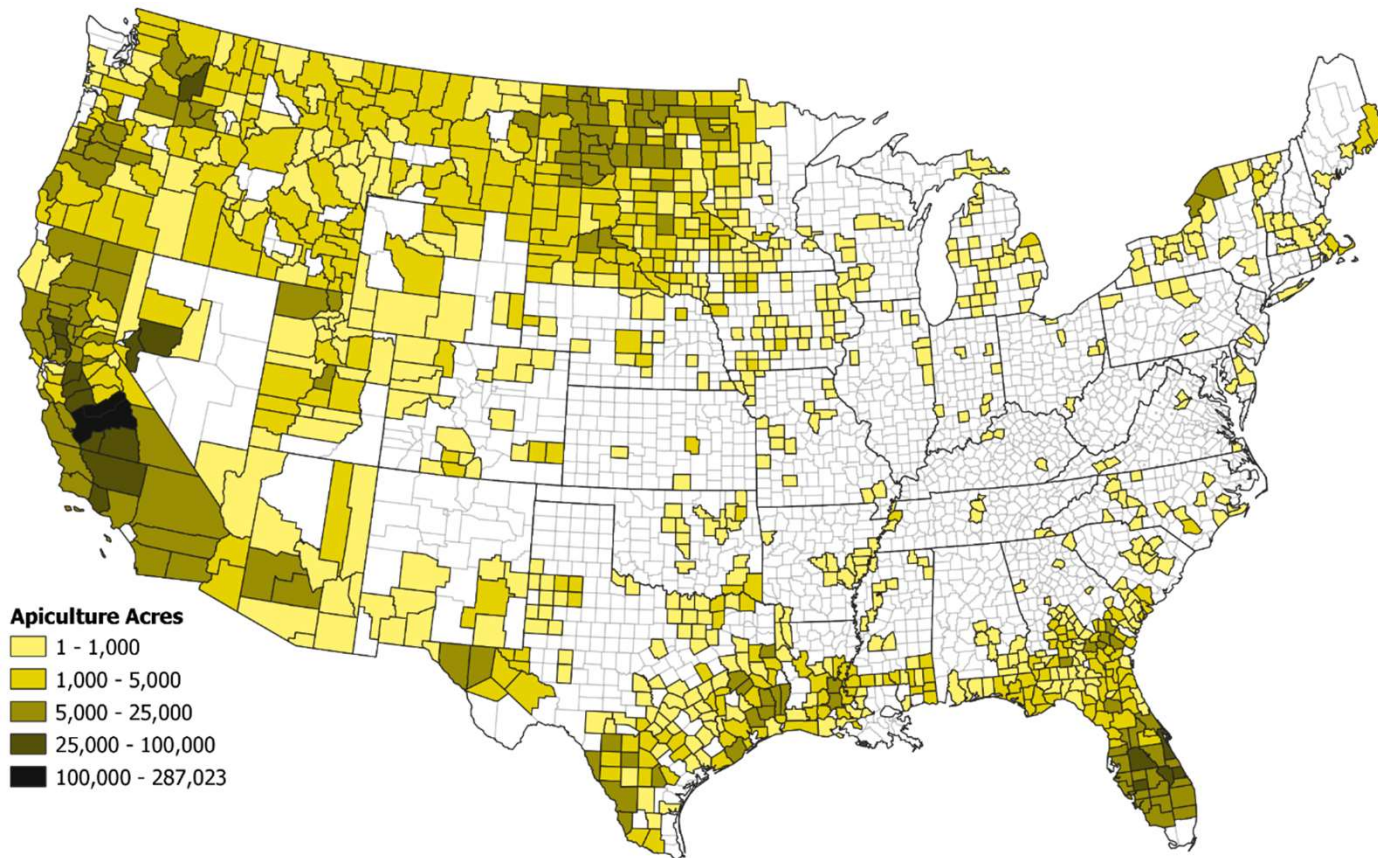
Data Source: RMA Summary of Business 6/6/2024

Annual Forage 2023 Insured Acres

Acreage reporting for 2024 is incomplete.

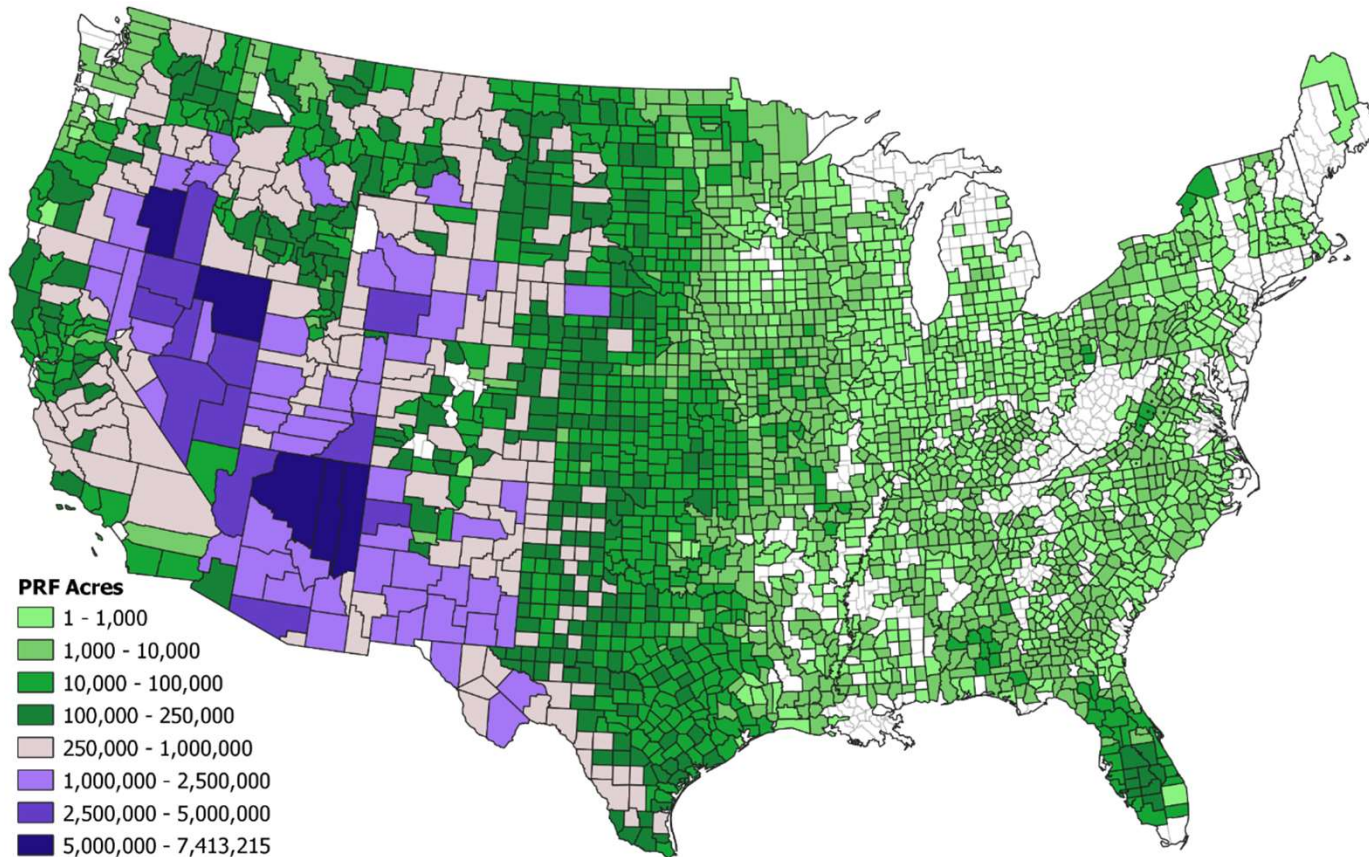


Apiculture Production 2024 Insured Acres



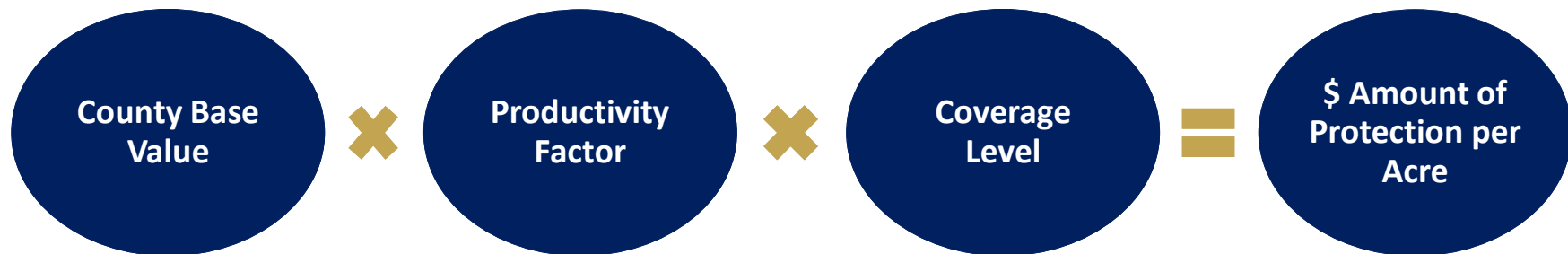
Data Source: RMA Summary of Business 6/6/2024

Pasture, Rangeland, & Forage 2024 Insured Acres



Data Source: RMA Summary of Business 6/6/2024

Dollar Amount of Protection per Acre



- County Base Value – FCIC’s determined value of the crop per acre
- Productivity Factor – Allows you to individualize the County Base Value from 60% to 150% to tailor coverage to the productivity of the insured acreage.
- Coverage Level – 70% to 90% in 5% increments

Total Insured Value



The policy allows you to allocate your total insured value to the periods of time during the growing season where precipitation is most critical.

Distribution of Total Insured Value

Index Interval

- A period of 2 consecutive months (e.g. January/February or February/March)
- Apiculture & PRF have 11 possible index intervals
- AF has 12 possible growing seasons (based on the date the crop was planted), each with 6 possible index intervals
- Not all index intervals are available in all areas



Distribution of Total Insured Value

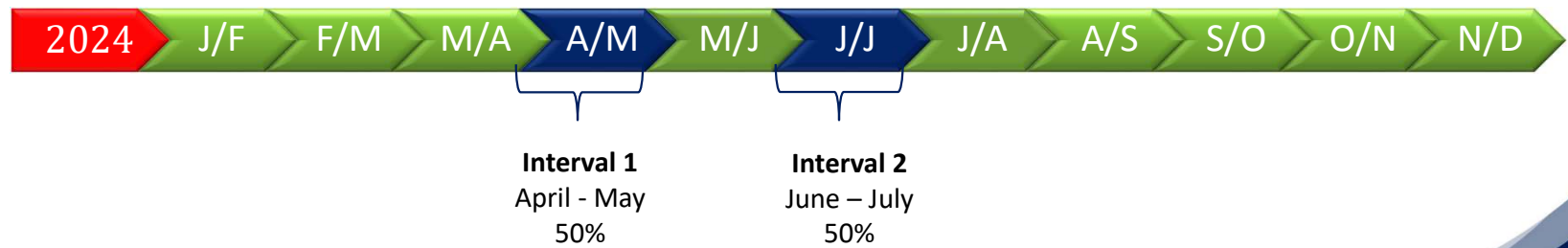
Percent of Value - the percentage of insurance coverage you allocate to each index interval.

- You must allocate coverage in at least two intervals.
- You must allocate a minimum of 10% of your total insured value in a selected interval.
- Maximum percentages allowed in each index interval vary by region and commodity
- The Percent of Value for all index intervals must equal 100%

Apiculture Example

Example 1: Beekeeping Operation

- Major season is April - July
- 10% minimum percent of value allowed/interval
- 50% maximum percent of value allowed/interval



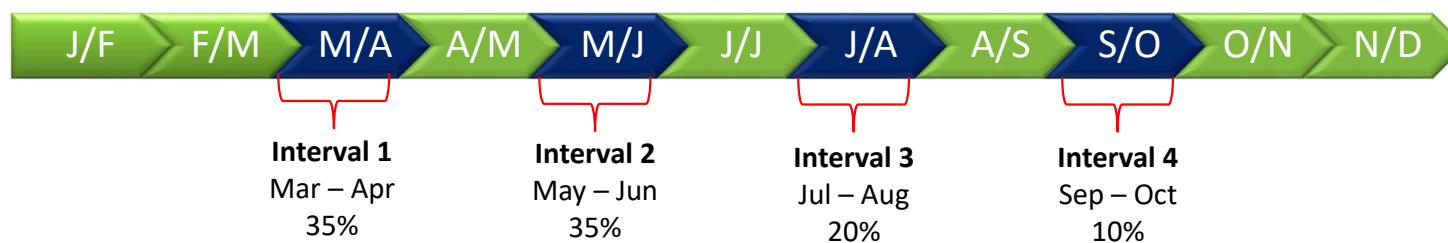
PRF Example

Example 2: Haying Operation in Smith Co. KS

- Major season is March – September
- 10% minimum percent of value allowed/interval
- 50% maximum percent of value allowed/interval



Photo Source: NC State Extension

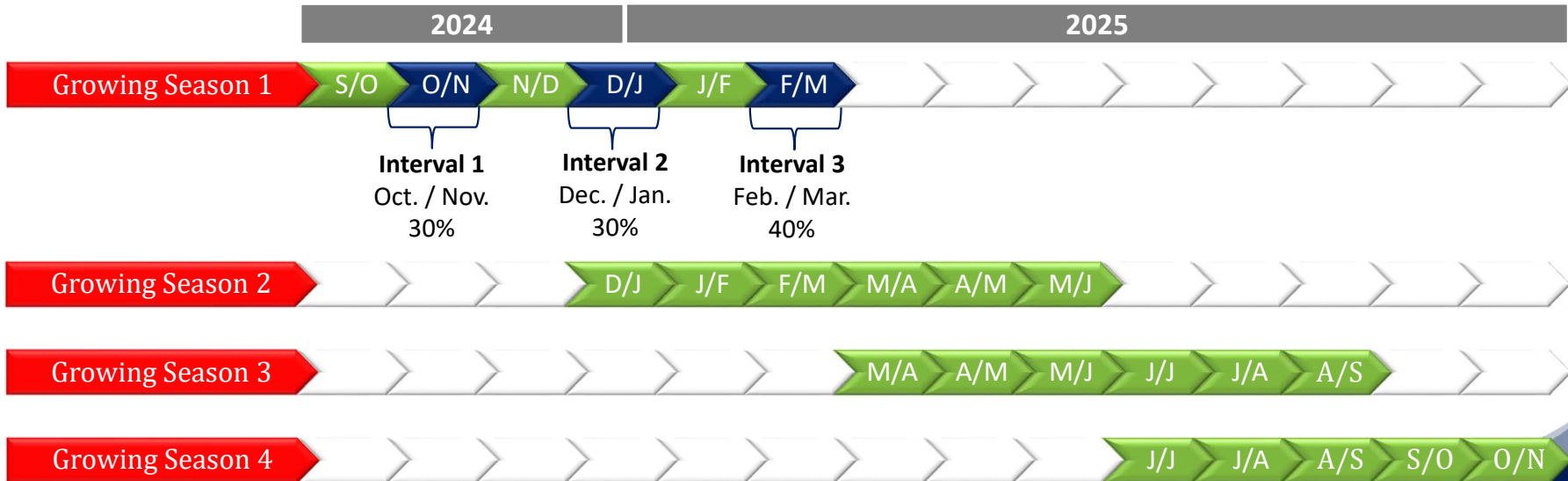


AF Example

- Example 3: Winter Triticale in Smith Co. KS**
- Planted 10/1/24
 - 10% minimum percent of value allowed/interval
 - 40% maximum percent of value allowed/interval



Growing Season	Planted Between
1	7/16/24 – 10/15/24
2	10/16/24 – 1/15/25
3	1/16/25 – 4/15/25
4	4/16/25 – 7/15/25



Loss Trigger

The amount of precipitation reported in the grid during a covered index interval is compared to the historical average precipitation for that same grid and time interval to determine a loss.

Expected Grid Index

Average historical rainfall for the grid during the index interval.

Expressed as 100.

Trigger Grid Index

Expected Grid Index
X
Coverage Level

Final Grid Index

Reported precipitation for the grid during the index interval. Expressed as a percentage.

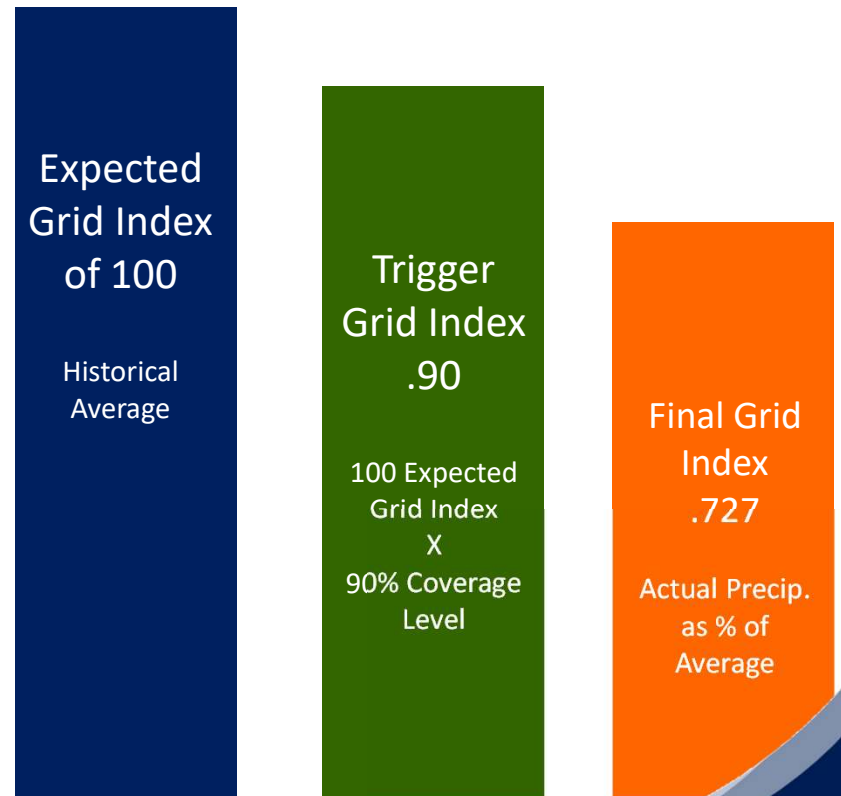
If the Final Grid Index is less than your Trigger Grid Index, an indemnity is due.

RI Basics – Loss Trigger Example

Example from the geographic center of the contiguous U.S. – Lebanon, KS in 2023

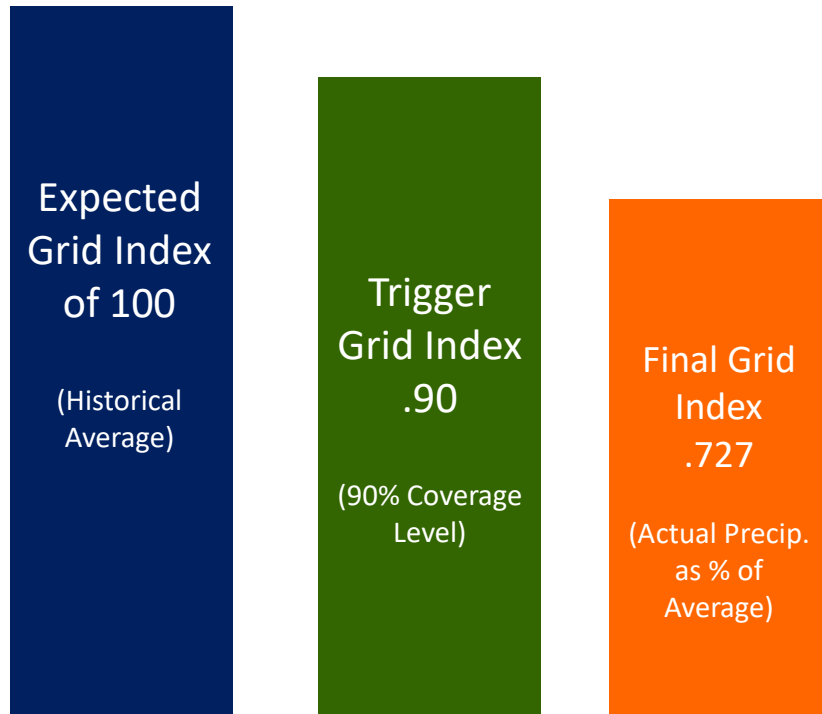
- PRF
- Grazing type
- Smith County
- Grid 23826
- Sep/Oct Index Interval
- 90% Coverage Level

The Final Grid Index of .727 is less than the .90 Trigger Grid Index, so an indemnity is due.



Indemnity Calculation

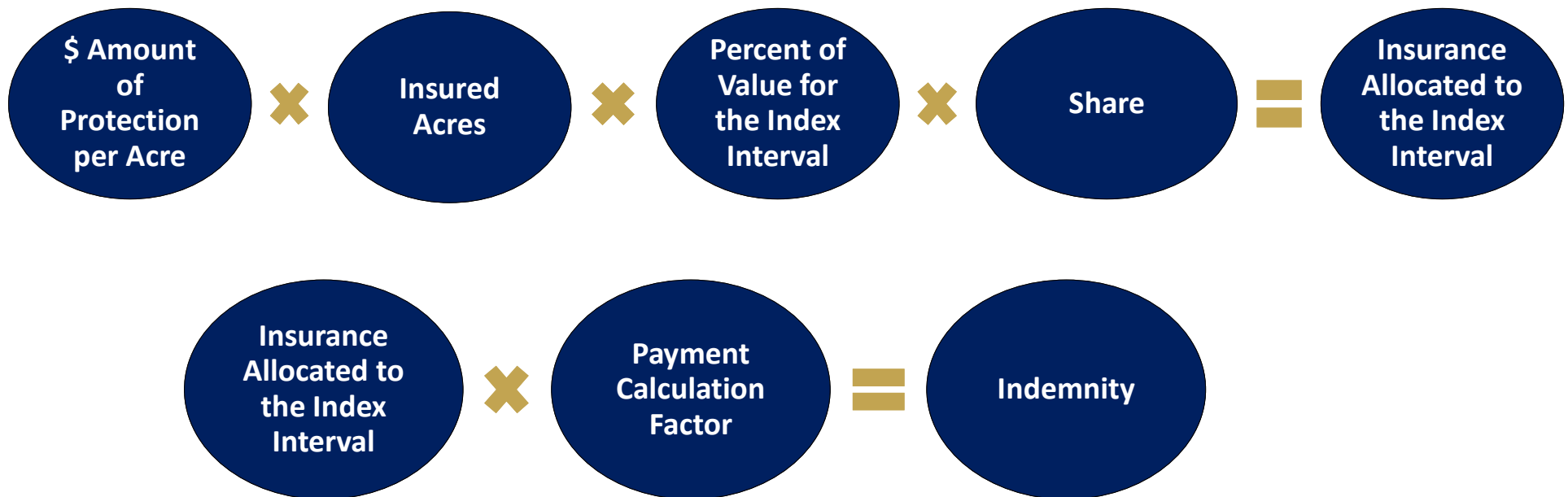
The Payment Calculation Factor determines what percentage of the insurance allocated to the index interval will be paid.



Payment Calculation Factor

$$.90 - .727 / .90 = .192$$

Indemnity Calculation



Apiculture Example



30 Insured Colonies

90% Coverage Level

110% Productivity Factor

100% Share

\$128.47/colony County Base Value

Selected 2 Intervals:

March – April (50% of value)

May – June (50% of value)

Coverage Level	Productivity Factor	County Base Value	\$ Amount of Protection per Colony
(a)	(b)	(c)	(a) X (b) x (c)
90%	110%	\$128.47	\$127.19

Index Interval	\$ Amt. Prot./Colony	Insured Colonies	% of Value	Share	Policy Protection per Unit
	(a)	(b)	(c)	(d)	(a) X (b) x (c) x (d)
Mar – Apr	\$127.19	30	50%	100%	\$1,908
May – Jun	\$127.19	30	50%	100%	\$1,908

Apiculture Example



Interval	Policy Protection per Unit	Trigger Grid Index	Final Grid Index	Indemnity Triggered?
Mar – Apr	\$1,908	90	94.2	No
May – Jun	\$1,908	90	20.2	Yes

Trigger Grid Index
100 Expected Grid Index × 90% Coverage Level

Final Grid Index
Published by RMA following the end of the interval.

Apiculture Example

Interval	Policy Protection per Unit	Trigger Grid Index	Final Grid Index	Indemnity Triggered?	Payment Calculation Factor	Indemnity
	(a)	(b)	(c)	(d)	(e)	(a) x (e)
Mar – Apr	\$1,908	90	94.2	No	-	-
May – Jun	\$1,908	90	20.2	Yes	.776	\$1,481

Payment Calculation Factor

(Trigger Index – Final Grid Index) ÷ Trigger index

$$(90 - 20.2) \div 90 = .776$$

PRF Example



100 Insured Acres

80% Coverage Level

90% Productivity Factor

100% Share

\$41.70/acre County Base Value

3 Intervals: March – April (40% of value)

May – June (20% of value)

October – November (40% of value)

Coverage Level	Productivity Factor	County Base Value	\$ Amount of Protection per Acre
(a)	(b)	(c)	(a) X (b) x (c)
80%	90%	\$41.70	\$30.02

Index Interval	\$ Amt. Prot./Acre	Insured Acres	% of Value	Share	Policy Protection per Unit
	(a)	(b)	(c)	(d)	(a) X (b) x (c) x (d)
Mar – Apr	\$30.02	100	40%	100%	\$1,201
May – Jun	\$30.02	100	20%	100%	\$ 600
Oct - Nov	\$30.02	100	40%	100%	\$1,201

PRF Example

Interval	Policy Protection per Unit	Trigger Grid Index	Final Grid Index	Indemnity Triggered?
Mar – Apr	\$1,201	80	69.3	Yes
May – Jun	\$ 600	80	110.4	No
Oct – Nov	\$1,201	80	74.0	Yes

Trigger Grid Index

100 Expected Grid Index × 80% Coverage Level

Final Grid Index

Published by RMA following the end of the interval.

PRF Example



Interval	Policy Protection per Unit	Trigger Grid Index	Final Grid Index	Indemnity Triggered?	Payment Calculation Factor	Indemnity
	(a)	(b)	(c)	(d)	(e)	(a) x (e)
Mar – Apr	\$1,201	80	69.3	Yes	.134	\$161
May – Jun	\$ 600	80	110.4	No	-	-
Oct – Nov	\$1,201	80	74.0	Yes	.075	\$90

Payment Calculation Factor
(Trigger Index – Final Grid Index) ÷ Trigger index
 Mar – Apr: $(80 - 69.3) \div 80 = .134$
 Oct – Nov: $(80 - 74) \div 80 = .075$

AF Decision Support Tool

Decision Support Tool
Annual Forage

This tool is for illustration purposes only. Your actual information may differ. For additional information, please [click here](#).

Rainfall

Please Select a Location: State: County: Grid: [Grid Locator](#) [Print](#)

Protection Information

Planting Date:

Dual Purpose:

CAT Coverage:

Coverage Level (%):

Productivity Factor (%):

Insurable Interest (%):

Insurable Acres:

Sample Crop Year:

Graph

Type: Index Values Estimated Indemnities

Range: Start End

Intervals: Sep-Oct Oct-Nov Nov-Dec Dec-Jan Jan-Feb Feb-Mar

Table **Graph**

Index Interval	Percent of Value (%)	Policy Protection per Unit	Premium Rate per \$100	Total Premium	Premium Subsidy	Producer Premium	Actual Index Value	Indemnity
Sep-Oct	<input type="text"/>							
Oct-Nov	<input type="text"/>							
Nov-Dec	<input type="text"/>							
Dec-Jan	<input type="text"/>							
Jan-Feb	<input type="text"/>							
Feb-Mar	<input type="text"/>							
Per Acre	N/A	N/A	N/A				N/A	
Policy Total			N/A				N/A	

County Base Value
Dollar Amount of Protection
Total Insured Acres: 0
Total Policy Protection
Subsidy Level: 0%
Maximum Percent of Value per Index Interval

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<http://af.agforceusa.com/ri>



Apiculture Decision Support Tool

Decision Support Tool

Apiculture

This tool is for illustration purposes only. Your actual information may differ. For additional information, please [click here](#).

+ Rainfall

+ Vegetation

Please Select a Location: State: Texas County: Brazos Grid: 12435
 Grid Locator
 Print

Protection Information ?

Coverage Level (%): 75

Productivity Factor (%): 115

Insurable Interest (%): 100

Insured Colonies: 100

Sample Year: 2022

Table
Graph

Index Interval	Percent of Value (%)	Policy Protection per Unit	Premium Rate per \$100	Total Premium	Premium Subsidy	Producer Premium	Actual Index Value	Indemnity
Jan-Feb		\$0	12.38	\$0	\$0	\$0	73.0	\$0
Feb-Mar		\$0	10.74	\$0	\$0	\$0	124.9	\$0
Mar-Apr	N/A	\$0	12.92	\$0	\$0	\$0	82.9	\$0
Apr-May	40	\$4,432	12.91	\$572	\$338	\$234	55.1	\$1,176
May-Jun	N/A	\$0	13.54	\$0	\$0	\$0	41.0	\$0
Jun-Jul	20	\$2,216	15.01	\$333	\$196	\$137	19.9	\$1,628
Jul-Aug	N/A	\$0	15.20	\$0	\$0	\$0	68.5	\$0
Aug-Sep	40	\$4,432	14.90	\$660	\$390	\$270	75.4	\$0
Sep-Oct	N/A	\$0	16.27	\$0	\$0	\$0	56.3	\$0
Oct-Nov		\$0	16.74	\$0	\$0	\$0	92.1	\$0
Nov-Dec		\$0	14.29	\$0	\$0	\$0	134.9	\$0
Per Col	N/A	N/A	N/A	\$15.65	\$9.24	\$6.41	N/A	\$28.04
Policy Total	100	\$11,080	N/A	\$1,565	\$924	\$641	N/A	\$2,804

County Base Value	\$128.47	Calculate
Dollar Amount of Protection	\$110.81	
Total Insured Colonies	100	
Total Policy Protection	\$11,080	
Subsidy Level	59%	
Maximum Percent of Value per Index Interval	50.0%	

Graph ?

Type:

Index Values Estimated Indemnities

Range:

Start 2018 End 2022

Intervals:

Jan-Feb Feb-Mar Mar-Apr
 Apr-May May-Jun Jun-Jul
 Jul-Aug Aug-Sep Sep-Oct
 Oct-Nov Nov-Dec



<http://api.agforceusa.com/ri>

PRF Decision Support Tool



USDA United States Department of Agriculture
Risk Management Agency

Pasture, Rangeland, Forage Support Tool

Grid Locator | Historical Indexes | **Decision Support Tool** | Estimated Indemnities

Location Information

State: California | County: Siskiyou | Grid ID: 25230 | Search By Grid ID: Enter Grid ID | Search

Protection Information

Intended Use: Grazing
Irrigation Practice: Please Select -
Organic Practice: Please Select -
Coverage Level: 70%
Productivity Factor: 95%
Insurable Interest: 100%
Insured Acres: 500
Sample Year: 2022

Policy Information

County Base Value: \$32.50
Dollar Amount of Protection: \$21.61
Total Insured Acres: 500
Total Policy Protection: \$10,806
Subsidy Level: 50.0%
Maximum Percent of: 50.0%

Protection Table

Index Interval	Percent of Value (%)	Policy Protection Per Unit	Premium Rate Per \$100	Total Premium	Premium Subsidy	Producer Premium	Actual Index Value	Estimated Indemnity
Jan-Feb	N/A	\$0	12.78	\$0	\$0	\$0	12.8	\$0
Feb-Mar	N/A	\$0	13.84	\$0	\$0	\$0	6.7	\$0
Mar-Apr	35	\$3,782	17.30	\$654	\$388	\$268	50.4	\$1,059
Apr-May	N/A	\$0	18.70	\$0	\$0	\$0	85.7	\$0
May-Jun	35	\$3,782	21.92	\$829	\$489	\$340	44.8	\$1,382
Jun-Jul	N/A	\$0	27.80	\$0	\$0	\$0	93.2	\$0
Jul-Aug	Not Valid							
Aug-Sep	N/A	\$0	35.07	\$0	\$0	\$0	135.8	\$0
Sep-Oct	20	\$2,161	29.58	\$639	\$377	\$262	45.5	\$756
Oct-Nov	N/A	\$0	19.69	\$0	\$0	\$0	27.0	\$0
Nov-Dec	10	\$1,081	18.79	\$181	\$107	\$74	94.2	\$0
Per Acre	N/A	N/A	N/A	\$4.61	\$2.72	\$1.89	N/A	\$6.35
Total	500	\$10,806	N/A	\$2,304	\$1,359	\$944	N/A	\$3,177

Export to CSV

Calculate

This tool is using insurance data from 2023.
This tool is for illustration purposes only. Your actual information may differ.

<https://public-rma.fpac.usda.gov/apps/PRF>



Photo Source: NC State Extension

Upcoming Webinars

**Dates and Times are subject to change*



November 14, 2023	• Record Keeping for Managing Revenue Risk	✓
January 16, 2024	• Livestock Programs	✓
February 20, 2024	• Whole Farm Revenue Protection/Micro Farm Program	✓
March 19, 2024	• Actual Production History (APH) Programs	✓
April 9, 2024	• Grapevine & Tree Programs	✓
May 6, 2024	• General Liability & Record Keeping	✓
June 4, 2024	• Food Safety	✓
July 2, 2024	• Apiculture/Pasture, Rangeland, & Forage	✓
July 30, 2024*	• FSA & Other Risk Management Programs	
August 27, 2024*	• Risk Management Panel Discussion and Open Q&A	



Photo Source: Stock.XCHNG, Case IH, & USDA ARS



Clif Parks • President & CEO



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