

# Alternative Agriculture Insurance Products



College of Agricultural,  
Consumer &  
Environmental Sciences

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

**farmdoc**  
Illinois Extension

**Brittney Goodrich**

# Topics

- **Pasture, Rangeland and Forage Insurance (PRF)**
  - Livestock and forage producers
  - Similar product for beekeepers: Apiculture Insurance
- **Livestock Risk Protection (LRP)**
  - Feeder cattle, fed cattle and swine producers
- **Whole Farm Revenue Protection (WFRP)**
  - Diversified producers



Risk Management Agency  
U.S. DEPARTMENT OF AGRICULTURE

# Rainfall Index Insurance for Pasture, Rangeland and Forage

- Crop insurance program offered by USDA Risk Management Agency
- Provides producers with insurance against drought-like conditions which would affect forage production
  - Payments offset increased costs of production or decreased revenues
- Covers perennial pasture, rangeland, or forage used to feed livestock





## Catastrophic coverage

- Livestock Forage Disaster Assistance (LFP)
- Non-insured Crop Disaster Assistance (NAP)

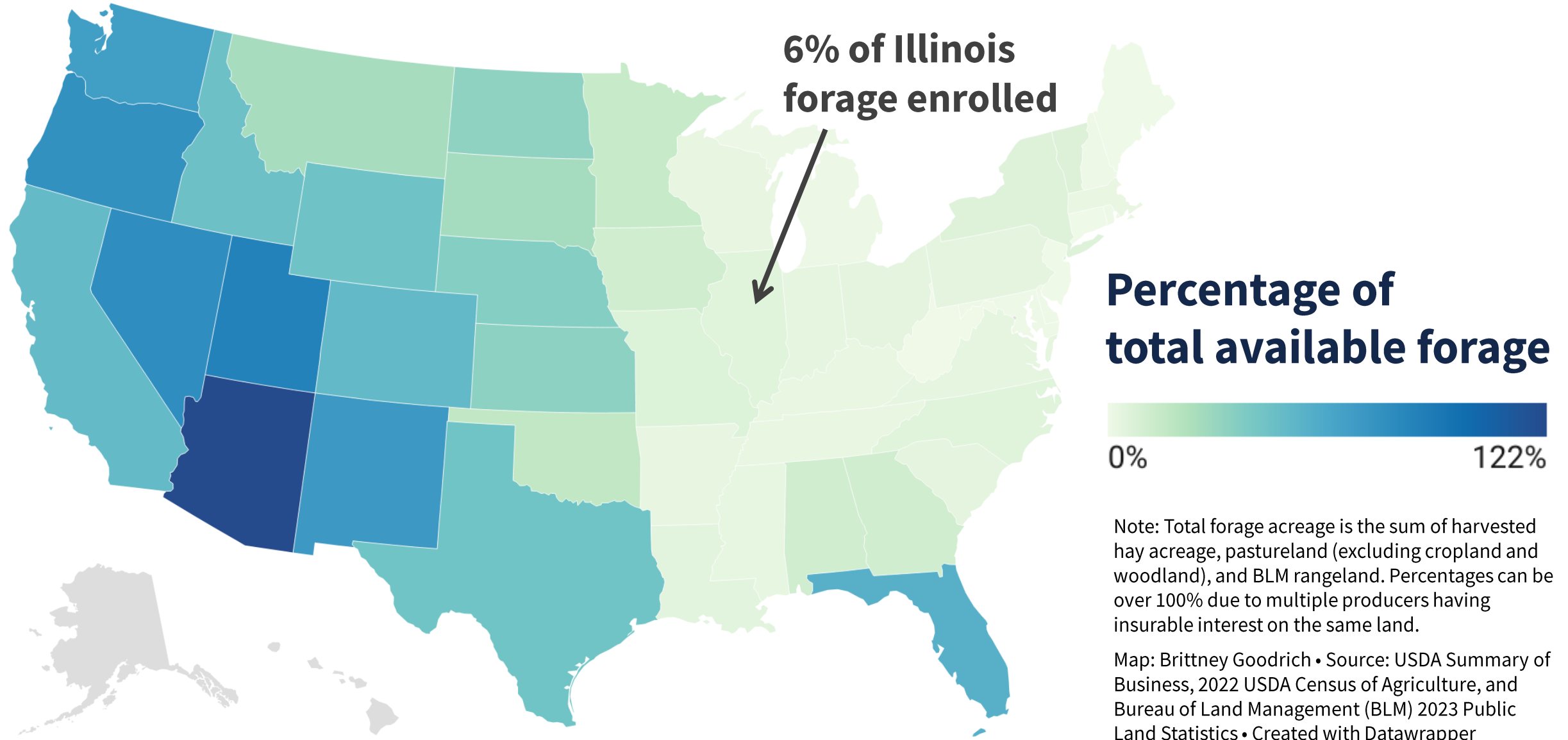


## Buy-up coverage

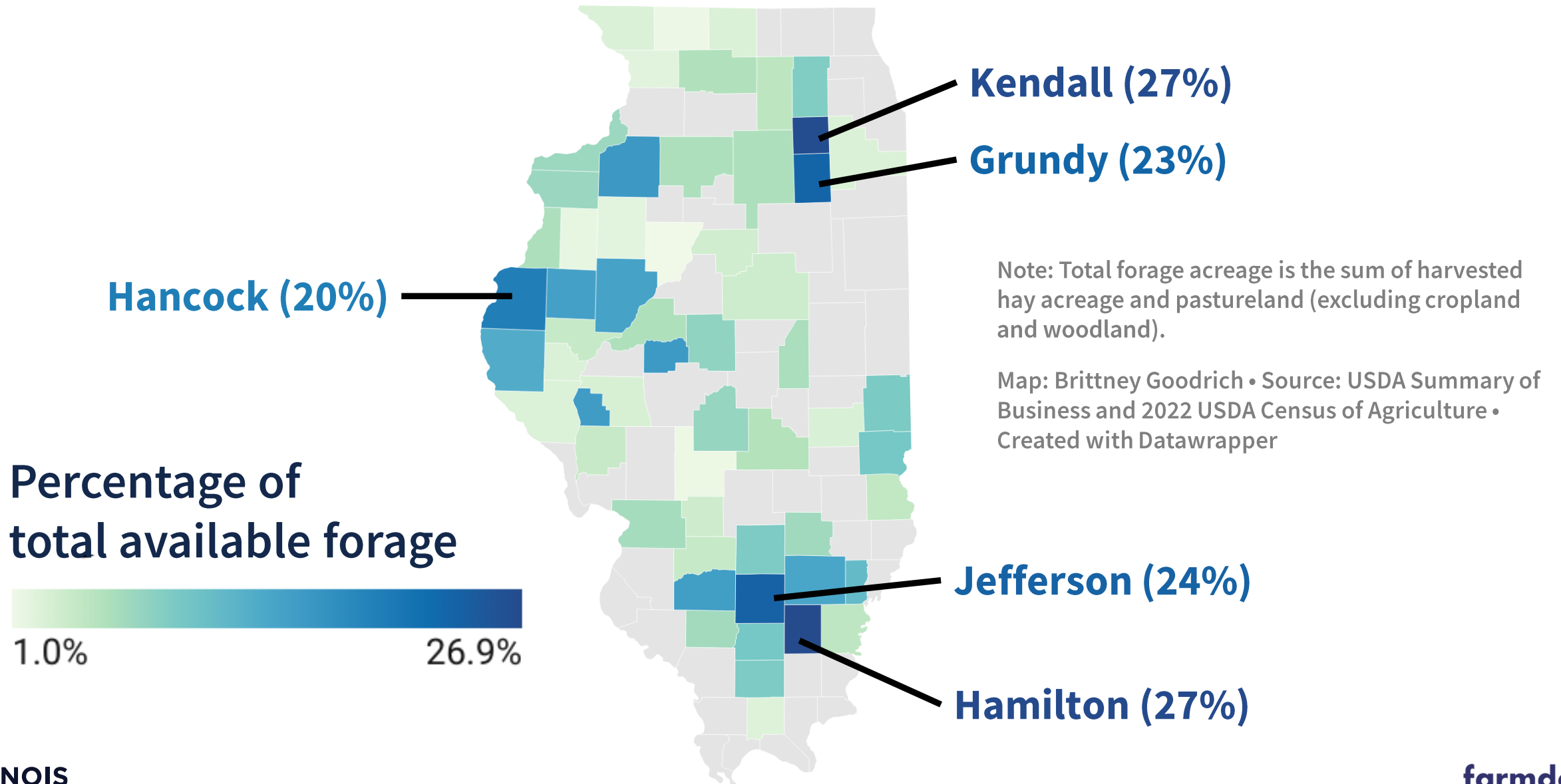
- Pasture, Rangeland and Forage Insurance (PRF)



# 2024 PRF Enrollment

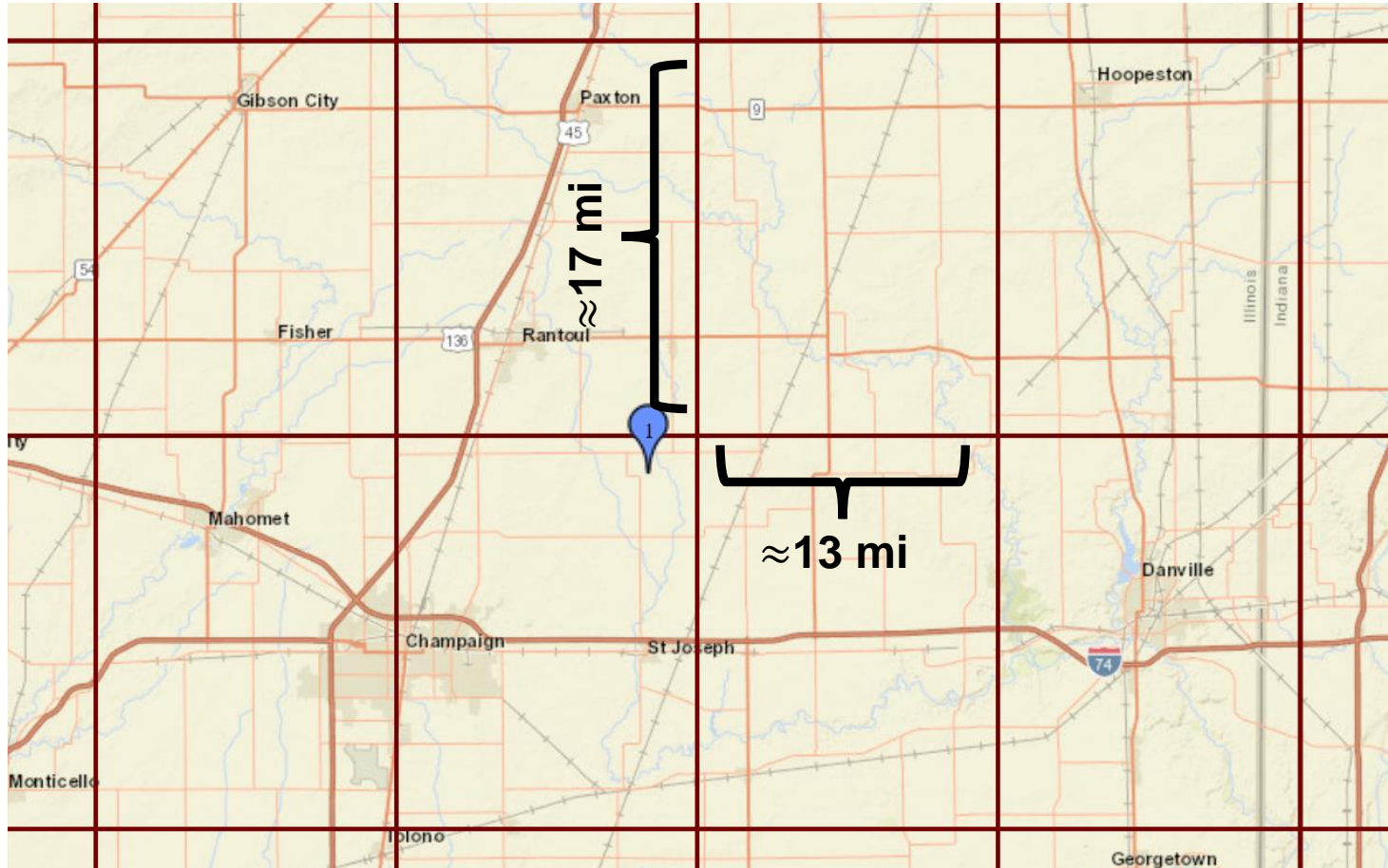


# 2024 Illinois PRF Enrollment





# PRF is Area-Based Insurance



## Not based directly on forage yield

- Uses National Oceanic and Atmospheric Administration (NOAA) grid system to measure rainfall index and payment
- Rainfall index: Weighted average of 4 closest weather stations to grid

# PRF Basics

- Insured value of policy based on production practices and county base values
- Guarantee from 70% to 90% of historical average rainfall
- Policy runs January to December
  - Choose months you want to insure



# PRF Decisions

## Insured Acres: Number of acres to be insured

- Not all acres must be insured
- No minimum





# PRF Decisions

## Intended Use: Hay or Grazing

- If Intended Use is Hay:

- Irrigation Practice: Irrigated or Non-irrigated
- Organic certified, transitional, or neither



- Intended use decision determines County Base Value

- Hay acreage typically valued higher than pasture
  - Translates to higher premiums for hay



# County Base Values (CBV)

Determined value of the crop in the county  
by Federal Crop Insurance Corporation

## Grazing and Non-Irrigated Hay CBV $\approx$

- Meant to cover price of alternative feeding

## Irrigated Hay CBV $\approx$

- Meant to cover additional irrigation costs

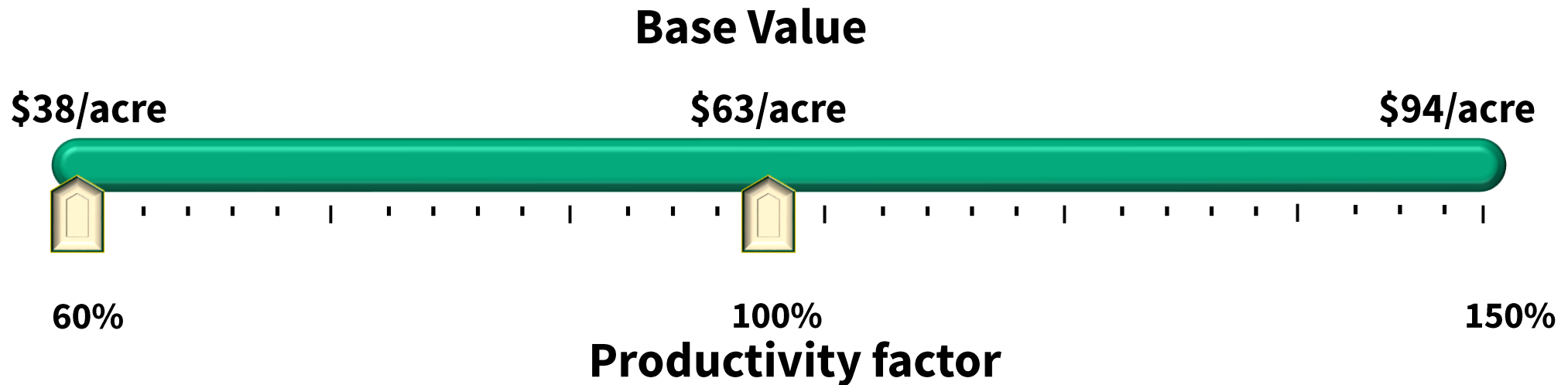


# PRF Decisions: Productivity Factor

Is your acreage more or less productive than other hay/pasture acreage in your area on average?

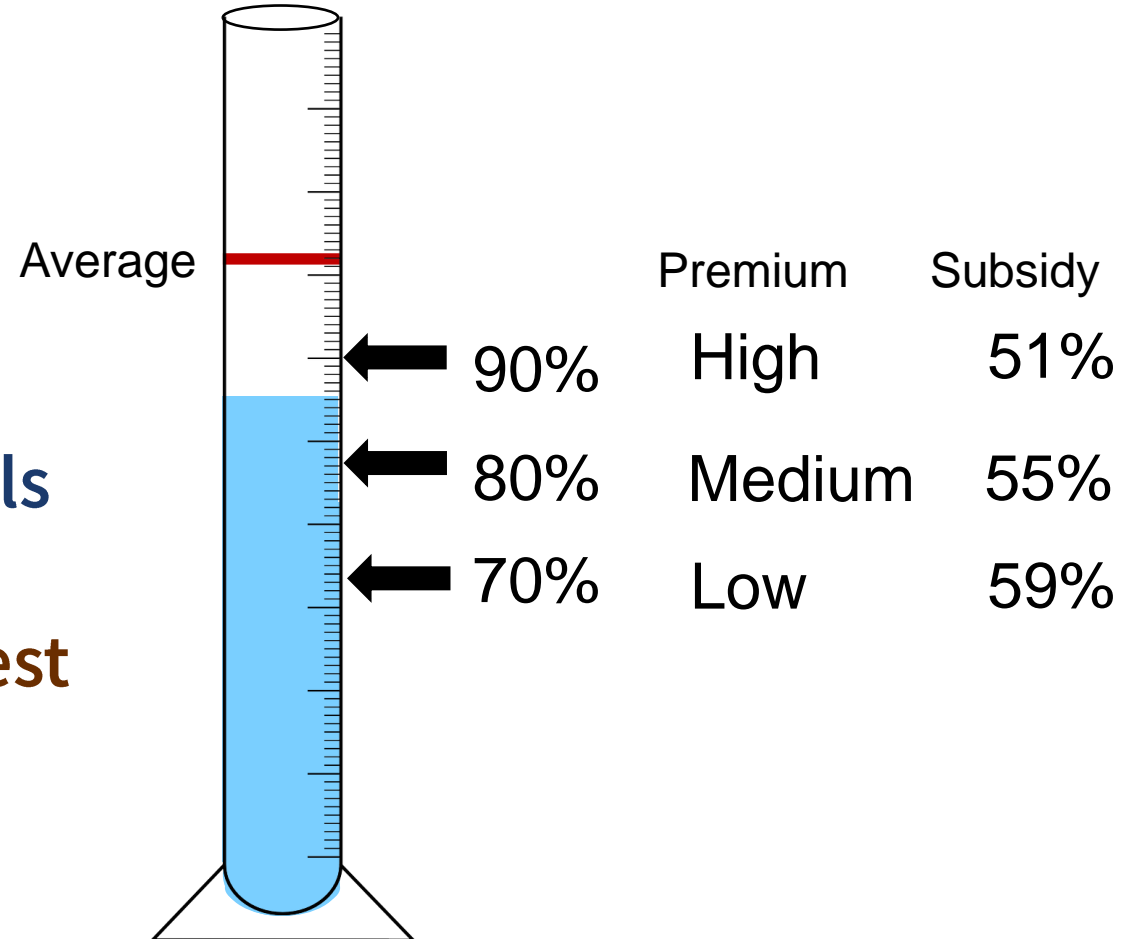
- 60-150% used to adjust county base value
- Higher %= Higher premium
  - Higher payout if low rainfall

**Example: County Base Value at \$63 per acre**



# PRF Decisions: Coverage Level

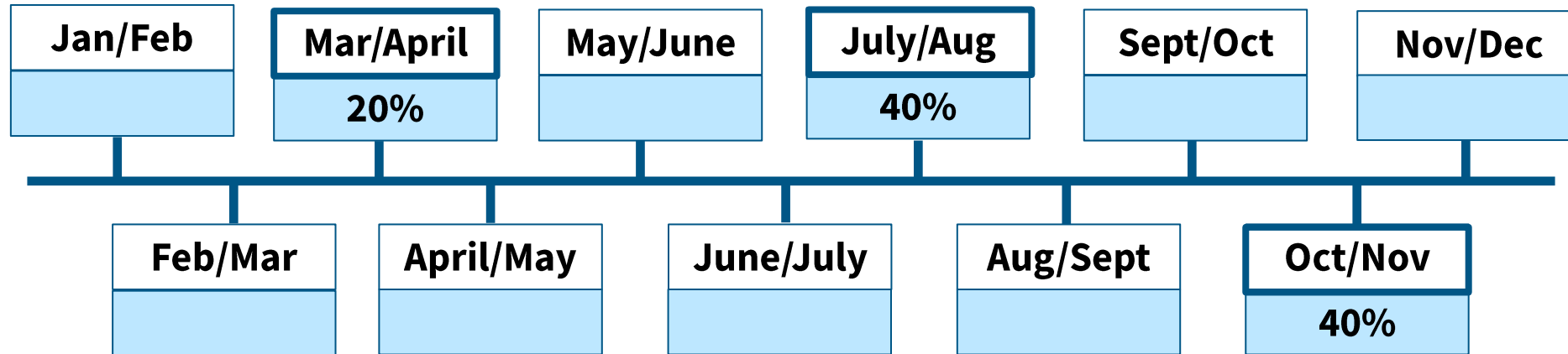
- At what percentage of average rainfall do you want the payments to kick in?
  - 70, 75, 80, 85, or 90%
- Higher %= Higher cost of insurance
  - Higher likelihood of payout
- Subsidy levels vary with coverage levels (51-59%)
  - Lower coverage levels receive highest subsidy (59%)





# PRF Decisions: Two-month intervals

Placing 20% in a two-month interval means insuring 20% of total policy value against low rainfall during those months



$$20\% + 40\% + 40\% = 100\%$$



# PRF Decisions: Two-Month Intervals

Grid 24168 in Champaign Co.

## PRF designed to be actuarially fair

- **Over time**  
indemnities paid out  $\approx$  premiums paid in
- **Intervals with higher rainfall variability**
  - **Higher likelihood of indemnity payout**
  - **Higher premiums**
- **Two-month interval premiums vary by grid**

Index Interval	Premium Rate Per \$100
Jan-Feb	16.82
Feb-Mar	12.79
Mar-Apr	10.77
Apr-May	11.15
May-Jun	13.32
Jun-Jul	13.73
Jul-Aug	12.57
Aug-Sep	14.16
Sep-Oct	14.14
Oct-Nov	12.12
Nov-Dec	16.22



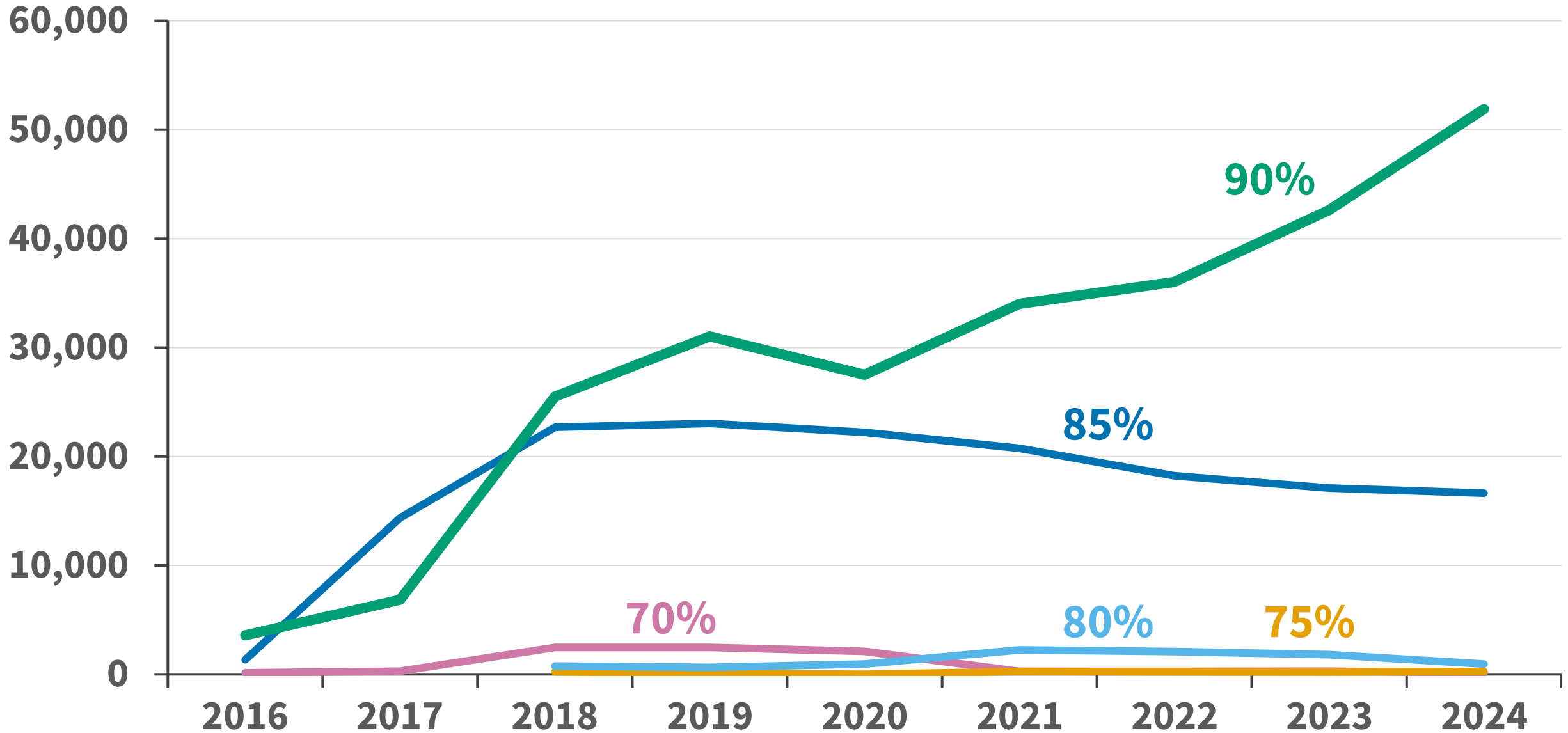
# PRF Use in Illinois

Data Source: USDA RMA Summary of Business

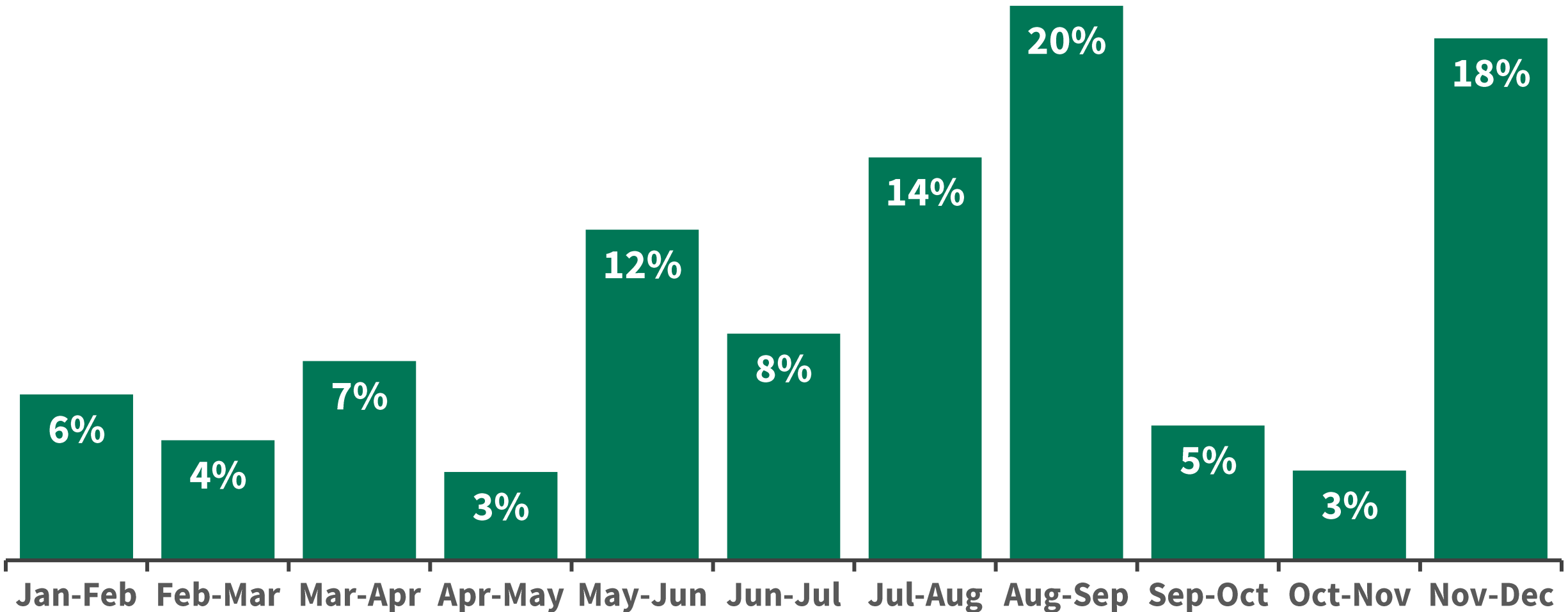




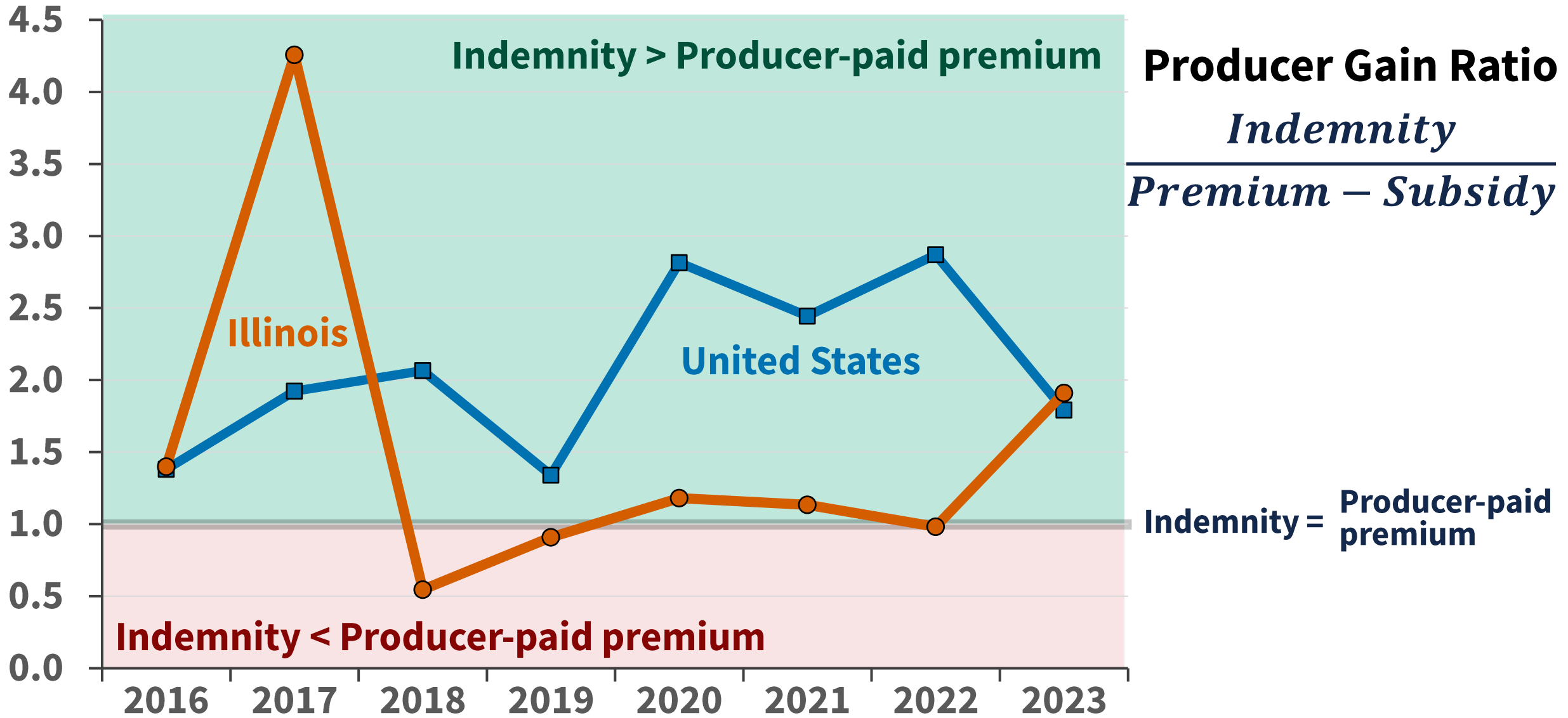
# PRF Acreage Enrolled by Coverage Level



# Proportion of Pasture Acreage by Interval



# 2016-2023 Producer Gain Ratios



**Producer Gain Ratio**  
$$\frac{\text{Indemnity}}{\text{Premium} - \text{Subsidy}}$$

Indemnity = Producer-paid premium



# PRF Concluding thoughts

- PRF should be considered by Midwest livestock and forage producers  
2016-2023 IL participants averaged **\$1.29** in indemnity payments for each **\$1.00** of producer-paid premium
- Flexible policies allow for customization to many different forage systems

## Important PRF-RI Insurance Decisions: Which Months to Insure?

[Brittney Goodrich](#)

Department of Agricultural and Consumer Economics

University of Illinois

November 8, 2024

*farmdoc daily* (14):204

Pasture, Rangeland and Forage Rainfall Index Insurance (PRF-RI) is an underutilized insurance product by livestock and forage producers in the Midwest (see *farmdoc daily* article from [October 9, 2024](#)). One aspect of PRF-RI that sets it apart from traditional crop insurance is that producers choose the months they want to insure against low rainfall. This allows for flexibility in insuring different types of forage production systems that may benefit from rainfall at different times during the year. Enrolling in different months throughout the year affects the total premium paid by the producer, the amount and frequency of indemnities collected, and ultimately how much forage production risk is managed through PRF-RI.

### Background: Determinants of PRF-RI Premiums

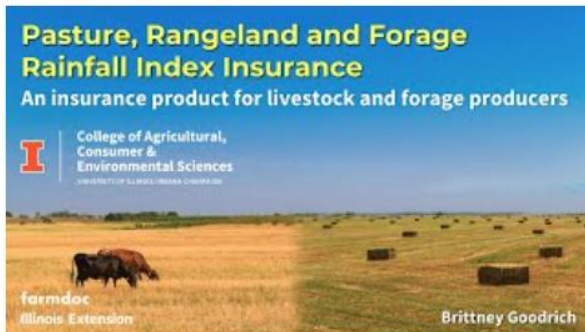
PRF-RI insurance premium is collected. Premiums typically vary depending on which each impact the

PRF-RI is subsidized, so average producer-paid coverage level selected receive 55%, and 90% p

Figure 1 displays the av

1. Hay (Non-irrigate
2. Grazing

**Figure 1.** Illin



## Pasture, Rangeland and Forage Rainfall Index Insurance: An Insurance Product for Illinois Livestock and Forage Producers

[Brittney Goodrich](#)

Department of Agricultural and Consumer Economics

University of Illinois

October 9, 2024

*farmdoc daily* (14):184

The Pasture, Rangeland and Forage Rainfall Index (PRF-RI) is a crop insurance product underutilized by Illinois livestock and forage producers. Only 6% of the eligible acres in Illinois were insured in 2024, much lower than use west of the Mississippi. Like other Federal crop insurance programs, PRF-RI is heavily subsidized. Over time, PRF-RI has returned \$1.29 in payments for each \$1.00 in producer-paid premium. Illinois and Midwest livestock and forage producers should consider using PRF-RI as a risk management tool.

### PRF-RI Use in Illinois

## Pasture, Rangeland and Forage Rainfall Index Insurance: A Risk Management Tool for Livestock and Forage Producers

### November 21st, 2024

[Watch Video](#)

[Download Slides](#)

Pasture, Rangeland and Forage Rainfall Index Insurance (PRF-RI) is a relatively new insurance product offered by the USDA Risk Management Agency. PRF-RI is meant to insure livestock and forage producers against lower than average rainfall which could decrease forage production. This webinar will explore PRF-RI as a potential risk management tool for livestock and forage producers. Attendees will gain insights into how PRF-RI differs from traditional yield and revenue crop insurance policies and how to evaluate policy decisions, such as...

ording to the 2022  
arvested for hay  
and in Illinois is  
ticipation in states





# USDA RMA Decision Tool

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



United States Department of Agriculture  
Risk Management Agency



## Pasture, Rangeland, Forage Support Tool

Grid Locator

Historical Indexes

Decision Support Tool

Estimated Indemnities

Zoom to area of interest FIRST. After starting, PAN, BUT DO NOT ZOOM! Add pins FIRST, THEN click to begin drawing polygon.

Grid Lines   
Grid Labels

County Lines   
County Labels

Pin Information



# Livestock Risk Protection (LRP)

- Establishes a Floor Selling Price for Livestock
  - Swine
  - Fed Cattle
  - Feeder Cattle
- Pays Producers if a Cash Index Price Falls Below a Set Price
  - Does not guarantee a cash price received
  - Basis risk must still be considered
    - Local cash prices may not track exactly to index prices

# LRP

- **LRP is an insurance policy and is similar to a put option**
  - **Put Option: Purchase the right to sell futures contract at a strike price within a specified time period**
- **Want to insure against a price decline**
  - **Purchase LRP for number of head and ending weight**
  - **Choose coverage price and level (70-100%)**
  - **End date of coverage**



# LRP

- Indemnity paid if actual price at end of contract is less than the coverage price
  - For this, you pay an insurance premium
- USDA subsidies vary based on coverage level**

Coverage Level	Subsidy Rate
95 - 100%	35%
90 - 94.99%	40%
85 - 89.99%	45%
80 - 84.99%	50%
70 - 79.99%	55%



Risk Management Agency  
U.S. DEPARTMENT OF AGRICULTURE

# LRP Policy Options

	Fed Cattle	Feeder Cattle	Swine
<b>Head Limit Per Coverage Endorsement</b>	12,000	12,000	70,000
<b>Expected Weight at Time of Sale</b>	1,000-1,600 lbs	Up to 1,000 lbs	Market Weight (1.4-2.6 cwt lean)
<b>Annual Head Limit (July 1-June 30)</b>	25,000	25,000	750,000
<b>Customizable Options</b>	None	Heifers, Steers, Weight Categories (1-6 cwt, 6-10 cwt), Unborn, Dairy, Brahman	Unborn, No Type Specified
<b>Actual Ending Price Calculation</b>	Weighted Average Prices from USDA Agricultural Marketing Service (AMS)	Weighted Average Chicago Mercantile Exchange (CME) Feeder Cattle Index	Weighted Average Prices from USDA AMS
<b>Endorsement Lengths (Weeks)*</b>	13, 17, 21, 26, 30, 34, 39, 43, 47, or 52		

\*Endorsement length options vary based on other policy selections

LRP Coverage Prices, Rates, and Actual Ending Values - Criteria

Select an *Effective Date*. The effective date is required and is the date you wish insurance to begin. Effective dates reflect the date the coverage prices and rates were calculated. Therefore, if you are purchasing this insurance in the morning, the effective date is the day prior to your purchase.

Effective Date: 12/06/2024 ▾

Report Type:  Web Output  Formatted for Printing

Next >>

Holidays where LRP Sales Data will be Unavailable

- 12/25/2024 Christmas
- 01/01/2025 New Years Day
- 01/20/2025 Martin Luther King Day \*
- 02/17/2025 Presidents Day \*
- 04/18/2025 Good Friday (market holiday)
- 05/26/2025 Memorial Day \*
- 06/19/2025 Juneteenth National Independence Day
- 07/04/2025 Independence Day
- 09/01/2025 Labor Day \*
- 11/27/2025 Thanksgiving

# Coverage Options Vary Daily



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# Coverage Options Vary Daily

December 6, 2024

State	County	Endorsement Length	Commodity	Type	Practice	Crop Year	Exp. End Value	Coverage Price	Coverage Level	Rate	Cost Per CWT	Producer Premium Per CWT	End Date	Actual End Value
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2025	254.822	\$254.820	1.000000	0.030641	7.808	5.08	03/07/2025	
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2025	254.822	\$252.270	0.990000	0.025655	6.472	4.21	03/07/2025	
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2025	254.822	\$249.730	0.980000	0.021675	5.413	3.52	03/07/2025	
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2025	254.822	\$247.180	0.970000	0.017683	4.371	2.84	03/07/2025	
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2025	254.822	\$244.630	0.960000	0.014352	3.511	2.28	03/07/2025	
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2025	254.822	\$242.080	0.950000	0.011889	2.878	1.87	03/07/2025	

# Coverage Options Vary Daily

## December 6, 2024

State	County	Endorsement Length	Commodity	Type	Practice	Crop Year	Exp. End Value	Coverage Price	Coverage Level	Rate	Cost Per CWT	Producer Premium Per CWT	End Date	Actual End Value
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2025	254.822	\$254.820	1.000000	0.030641	7.808	5.08	03/07/2025	\$257

*You choose*

**LRP Indemnity = (Coverage Price – Actual End Value) x Expected End CWT**

**LRP Producer Premium = Producer Premium Per CWT x Expected End CWT**

**EXAMPLE: Dec 6 + 13 weeks = March 7**

**If March 7 Actual End Value: \$257**

**\$257 > Coverage Price of \$254.822**

**Indemnity = \$0**

**Producer Premium = 5.08 x Expected End CWT**

**Net: -5.08 x Expected End CWT**

# Coverage Options Vary Daily

December 6, 2024

State	County	Endorsement Length	Commodity	Type	Practice	Crop Year	Exp. End Value	Coverage Price	Coverage Level	Rate	Cost Per CWT	Producer Premium Per CWT	End Date	Actual End Value
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2025	254.822	\$254.820	1.000000	0.030641	7.808	5.08	03/07/2025	\$244

*You choose*

LRP Indemnity = (Coverage Price – Actual End Value) x Expected End CWT

LRP Producer Premium = Producer Premium Per CWT x Expected End CWT

**EXAMPLE: Dec 6 + 13 weeks = March 7**

If March 7 Actual End Value: \$244

\$244 < Coverage Price of \$254.820

Indemnity = (\$254.820 - \$244) x Expected End CWT

Producer Premium = 5.08 x Expected End CWT

Net: \$5.740 x Expected End CWT



# Can look back at previous years

December 6, 2023

State	County	Endorsement Length	Commodity	Type	Practice	Crop Year	Exp. End Value	Coverage Price	Coverage Level	Rate	Cost Per CWT	Producer Premium Per CWT	End Date	Actual End Value
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2024	211.555	\$209.810	0.991800	0.047905	10.051	6.53	03/06/2024	248.070
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2024	211.555	\$207.810	0.982300	0.043246	8.987	5.84	03/06/2024	248.070
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2024	211.555	\$203.810	0.963400	0.034704	7.073	4.60	03/06/2024	248.070
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2024	211.555	\$199.810	0.944500	0.027411	5.477	3.29	03/06/2024	248.070
17 Illinois	998 All Counties	13	0801 Feeder Cattle	811 Heifers Weight 1	203 Endorsement Ending in March Yr1	2024	211.555	\$197.810	0.935000	0.024129	4.773	2.86	03/06/2024	248.070
17 Illinois	998 All Counties	17	0801 Feeder Cattle	811 Heifers Weight 1	204 Endorsement Ending in April Yr1	2024	213.244	\$207.590	0.973500	0.046813	9.718	6.32	04/03/2024	249.900

Actual end value \$248.07 > Coverage Price \$197.81  No indemnity paid



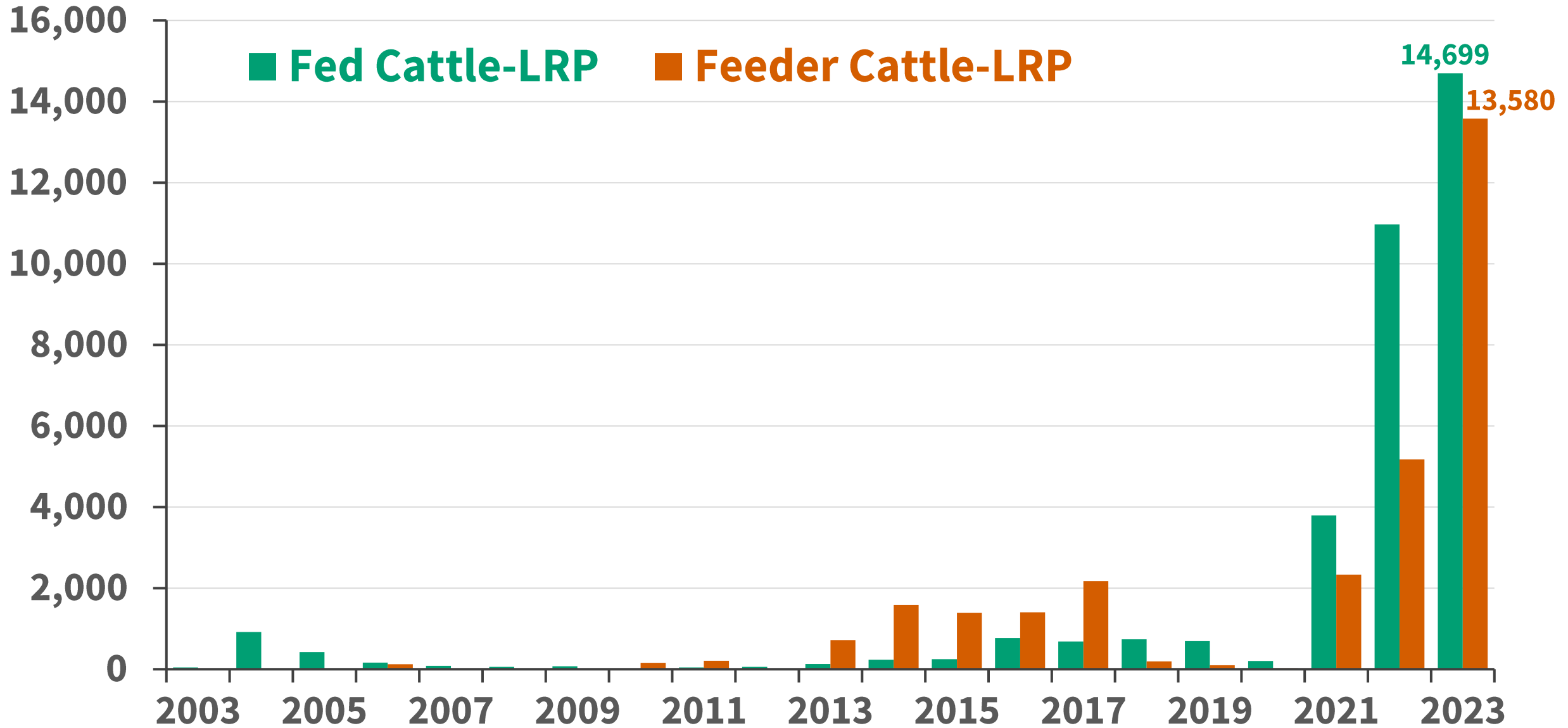


# LRP Use in Illinois

Data Source: USDA RMA Summary of Business



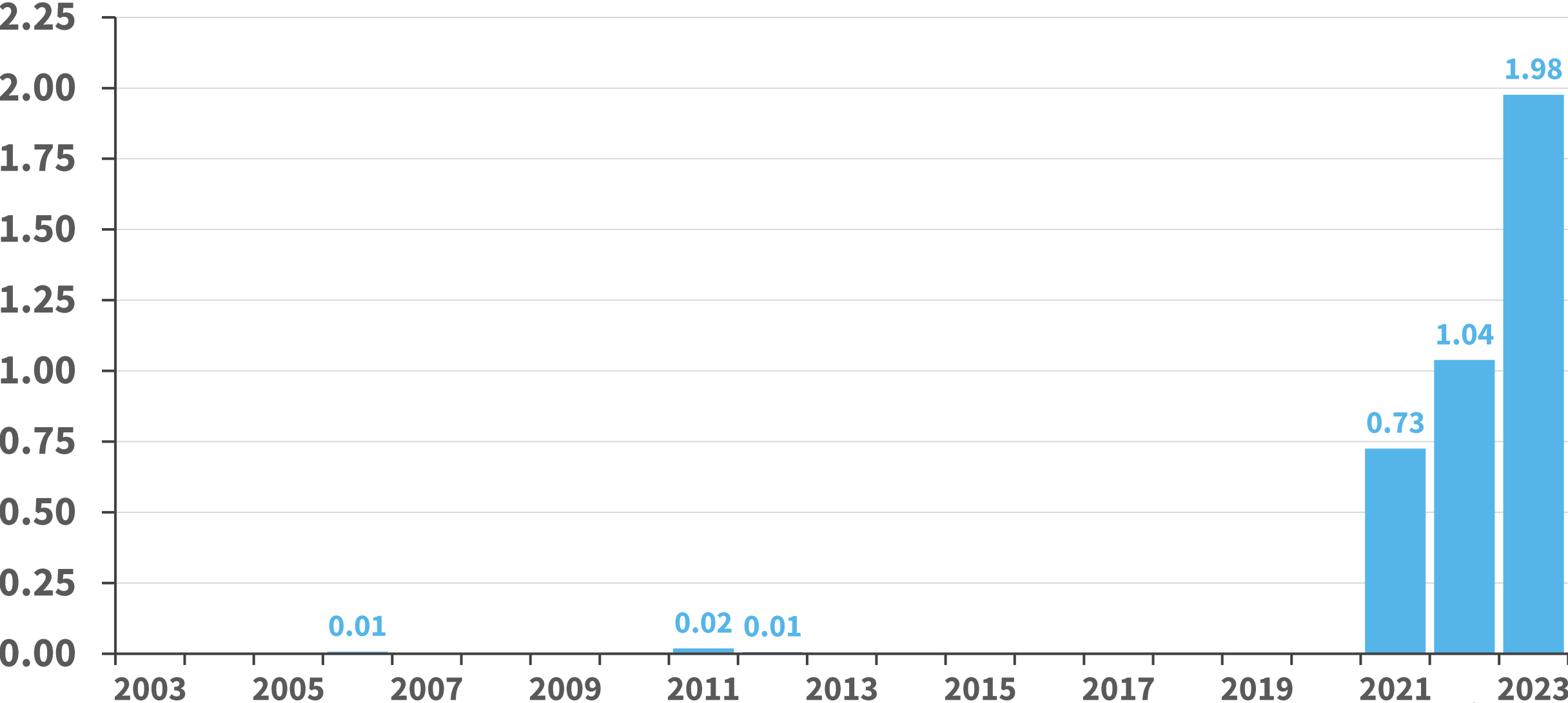
# Head of Illinois Cattle Enrolled in LRP



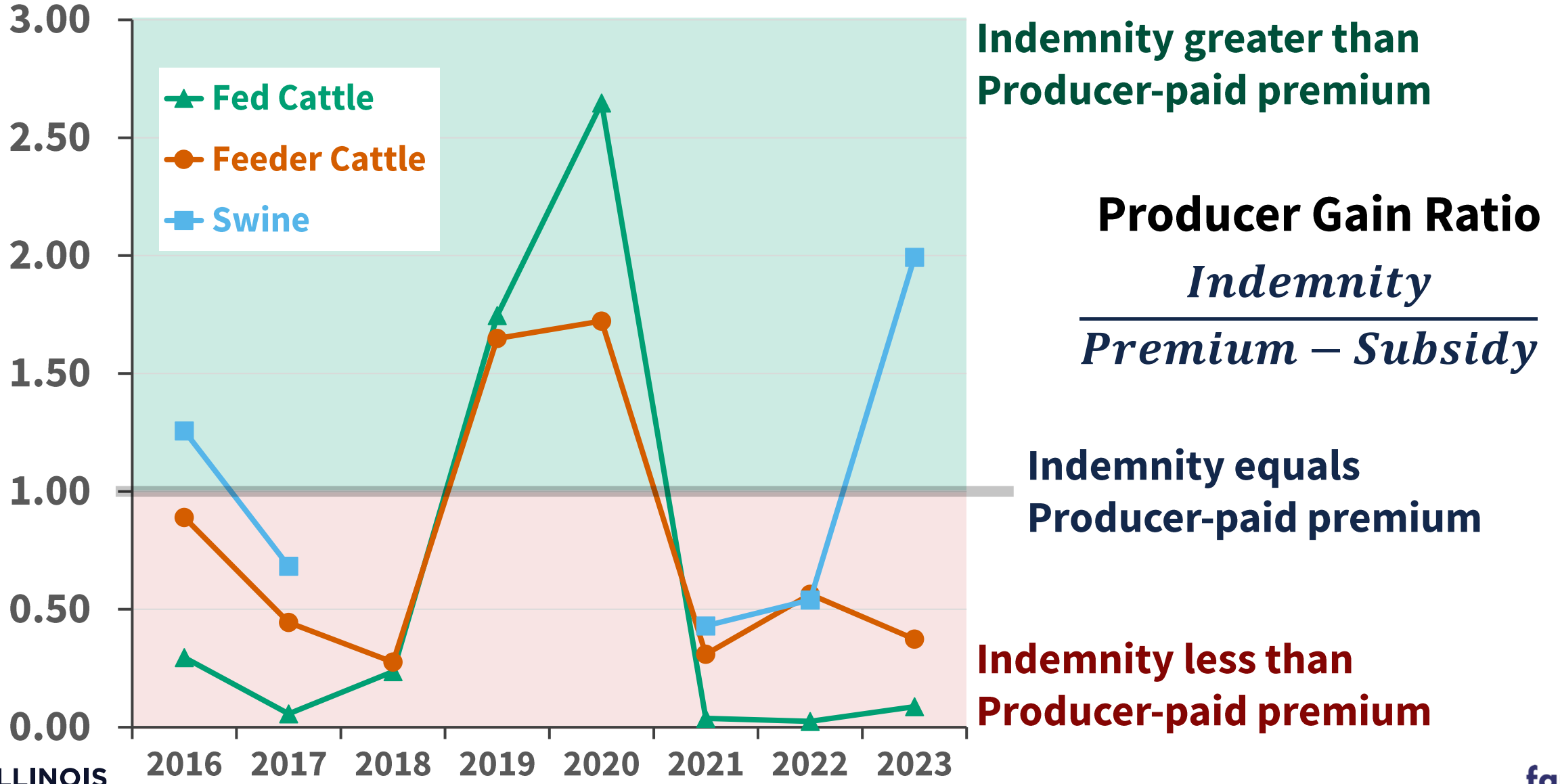


# Illinois Swine Enrolled in LRP

*in million head*



# 2016-2023 IL LRP Producer Gain Ratios



# LRP Concluding thoughts

- LRP can be a useful risk management product for small livestock producers
  - No need to establish brokerage accounts
  - Can insure animals on individual basis
- Increased subsidies in recent years make it more affordable



# Whole Farm Revenue Protection

- **Crop insurance policy to cover all commodities on one farm**
  - Stand alone or in addition to standard crop insurance
- **Helps specialty and diversified farms receive coverage**
  - Allows coverage of traditionally uninsured items
  - Includes specialty and organic commodities
  - Allows coverage under one insurance policy
- **Available in all counties**
- **Up to \$17 million insured revenue**

# WFRP Coverage

- Protects a farm against loss of revenue from “unavoidable natural cause of loss”
  - Decline in market prices
  - Weather
- Revenue you expect to earn from:
  - Commodities you produce during the insurance period (sold or not)
    - Includes animals and animal products
  - Commodities purchased for resale (up to 50%)
- Covered revenue is lower of your:
  - Current year expected revenue (from farm plan) or
  - 5-year historic average adjusted for growth

# WFRP Coverage

- Coverage levels 50 – 85%

WFRP Subsidy: Percentage of Total Premium Paid by Government

Coverage Level	50%	55%	60%	65%	70%	75%	80%	85%
Subsidy-Qualifying Commodity Count: 1	80%	80%	80%	80%	80%	77%	68%	53%
Subsidy-Qualifying Commodity Count: 2 or more	80%	80%	80%	80%	80%	80%	71%	56%

- You can buy WFRP alone or with other policies
  - Indemnities from these policies will count as revenue earned under WFRP





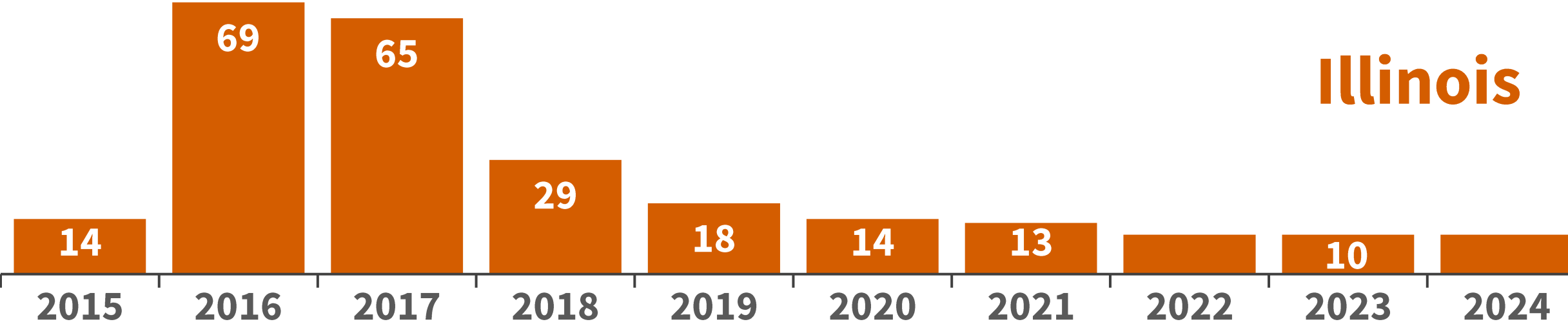
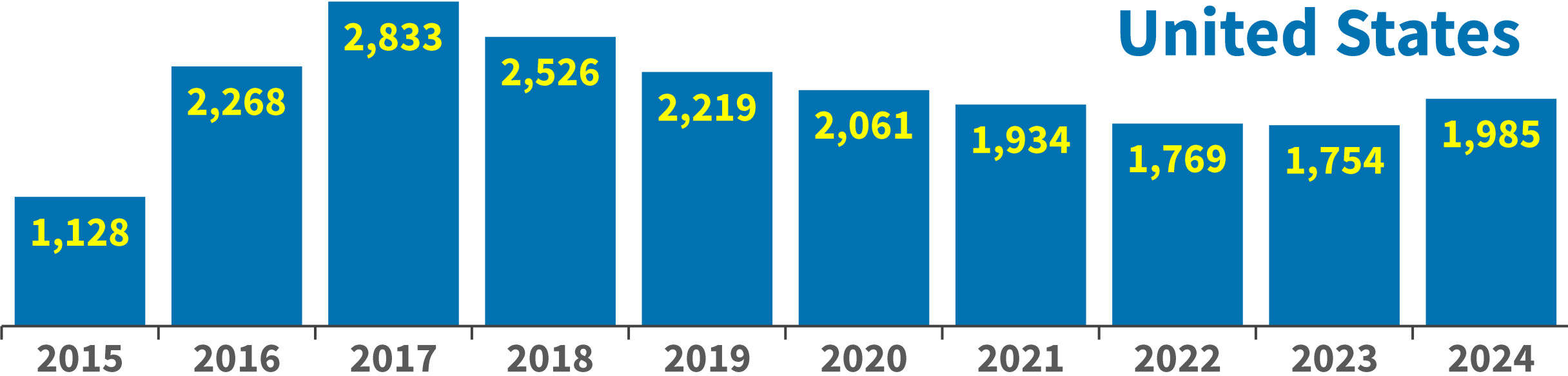
**Whole Farm Revenue Protection**

# **WFRP Use in U.S. and Illinois**

**Data Source: USDA RMA Summary of Business**

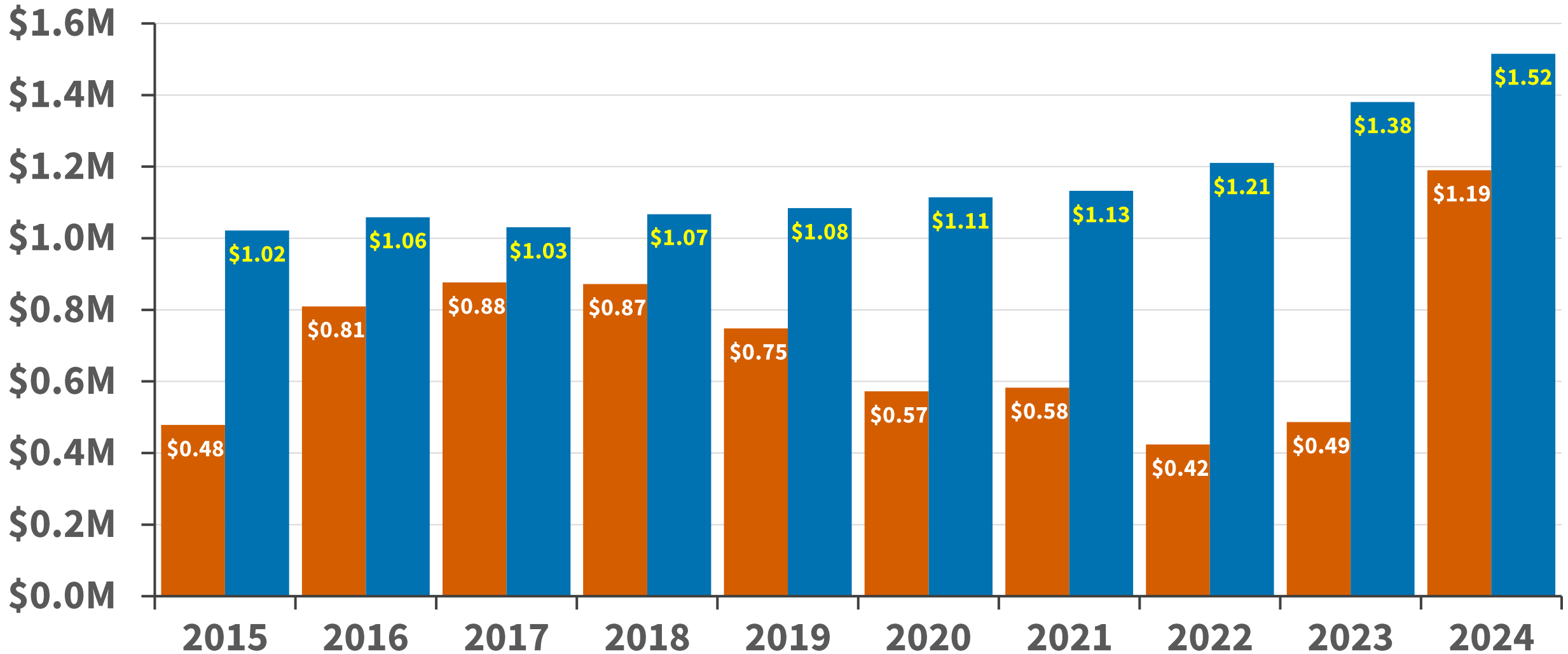


# WFRP Policies Sold

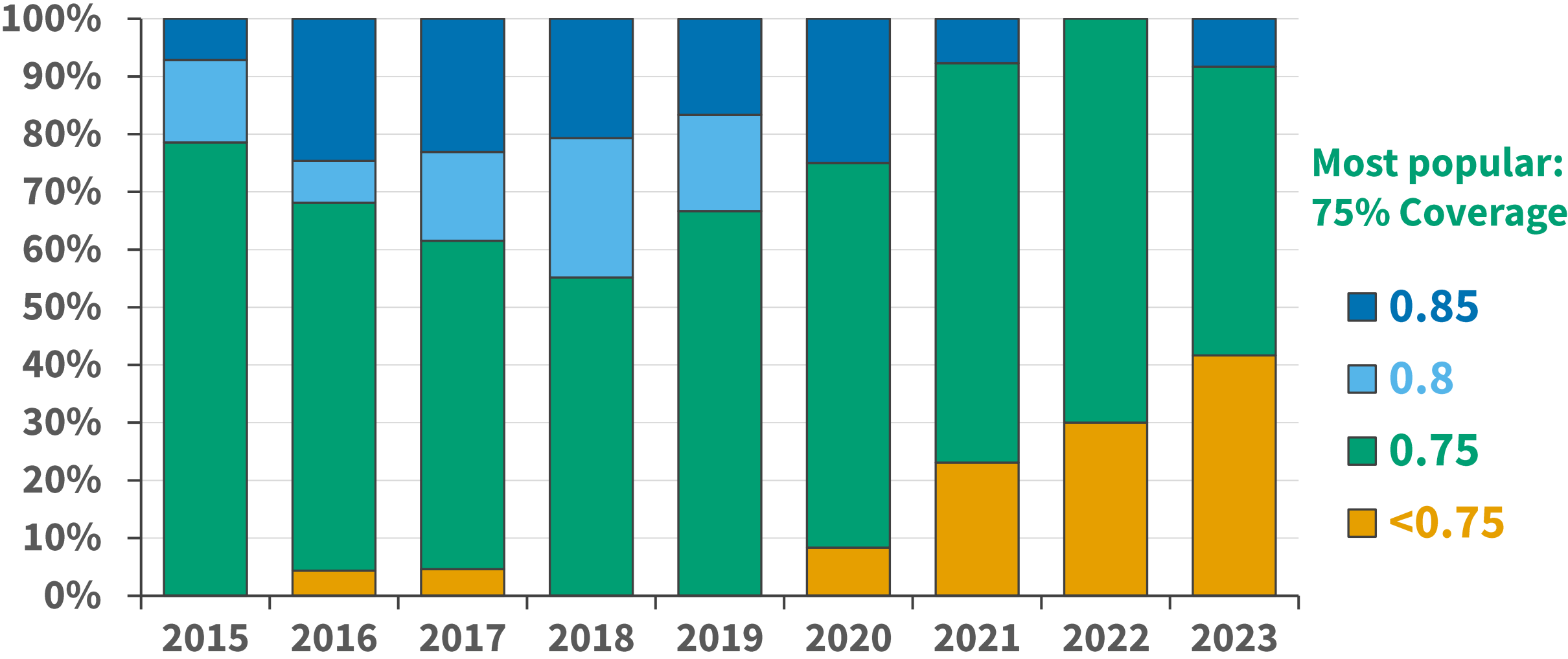


# Average Liability Per WFRP Policy

*in million dollars for **Illinois** and the **United States***



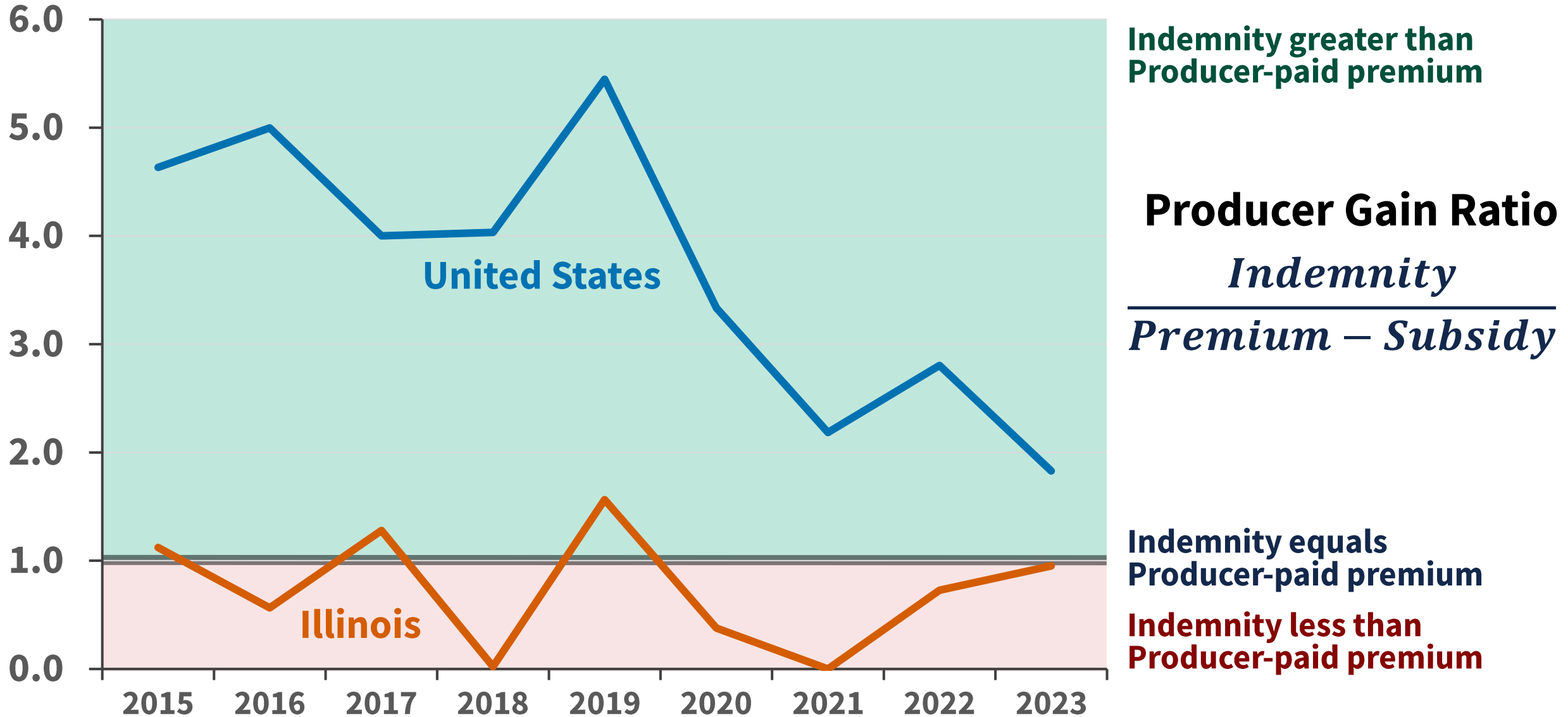
# Illinois Percentage of WFRP Policies *by Coverage Level*



Most popular:  
75% Coverage

- 0.85
- 0.8
- 0.75
- <0.75

# 2015-2023 WFRP Producer Gain Ratios



Indemnity greater than  
Producer-paid premium

**Producer Gain Ratio**

*Indemnity*

*Premium – Subsidy*

Indemnity equals  
Producer-paid premium

Indemnity less than  
Producer-paid premium



# WFRP Concluding Thoughts

- Insurance option for specialty and diverse producers
- Potential disadvantage: Complexity
  - Five years of tax forms
  - Taxes must be filed before claims can be made
- More streamlined version of WFRP: Micro Farm
  - Offered beginning in 2022
  - Smaller farms-up to \$350,000 in revenue
  - Less paperwork than WFRP

# Purchase PRF, LRP and WFRP from USDA RMA Certified Crop Insurance Agent

<https://www.rma.usda.gov/tools-reports/agent-locator>



An official website of the United States government

[Here's how you know](#) ▾



Risk Management Agency  
U.S. DEPARTMENT OF AGRICULTURE



## Agent Locator

### Finding Insurance Agents

RMA provides insurance agent and provider information as a service to our customers in all 50 states.

### Locate an Insurance Agent

- [Find local insurance agents with the RMA Agent Locator.](#)
- [Learn more about using the RMA Agent Locator.](#)

Note: Agents may reside or have an office in one state/county, but sell and service policies in other states/counties. An agent authorized to sell livestock policies is not required to sell crop policies, and vice versa.

# Important Dates

## Pasture, Rangeland & Forage Insurance

**2026**

**Enrollment deadline**  
**December 1, 2025**

**Premium  
payment due**

**September 1, 2026**

## Whole Farm Revenue Protection

**2025**

**Enrollment deadline**  
**Jan. 31, Feb. 28, or Mar. 15**  
**(County-specific)**

**Premium  
payment due**

**August 15, 2025**