

# DAIRY REVENUE PROTECTION UPDATE

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*January 24, 2024*



# Risk Management- Dairy Revenue Protection Adoption



### New York DRP Effective Pounds Covered Pct of Milk Production As Of 01/19/2024

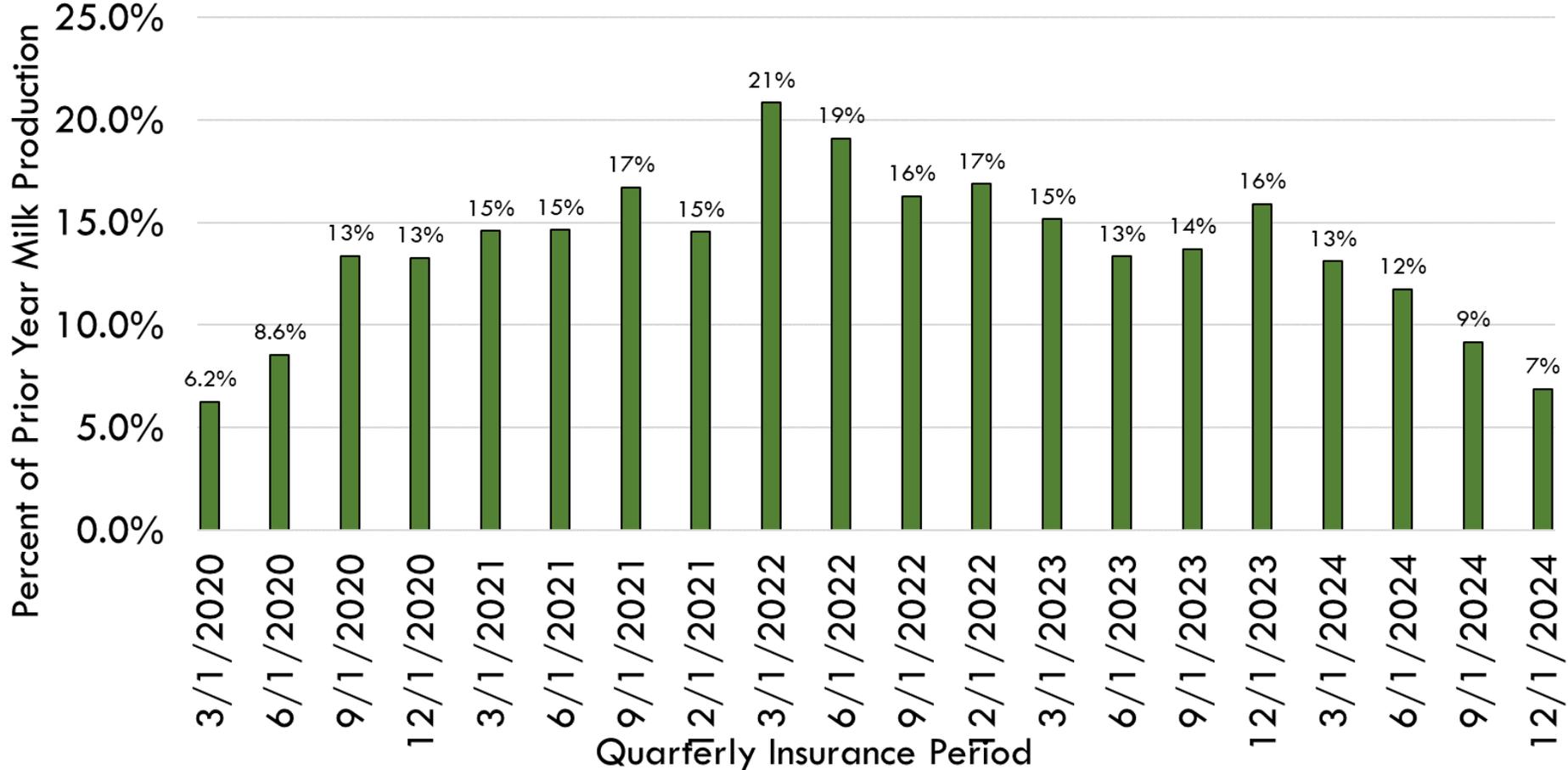
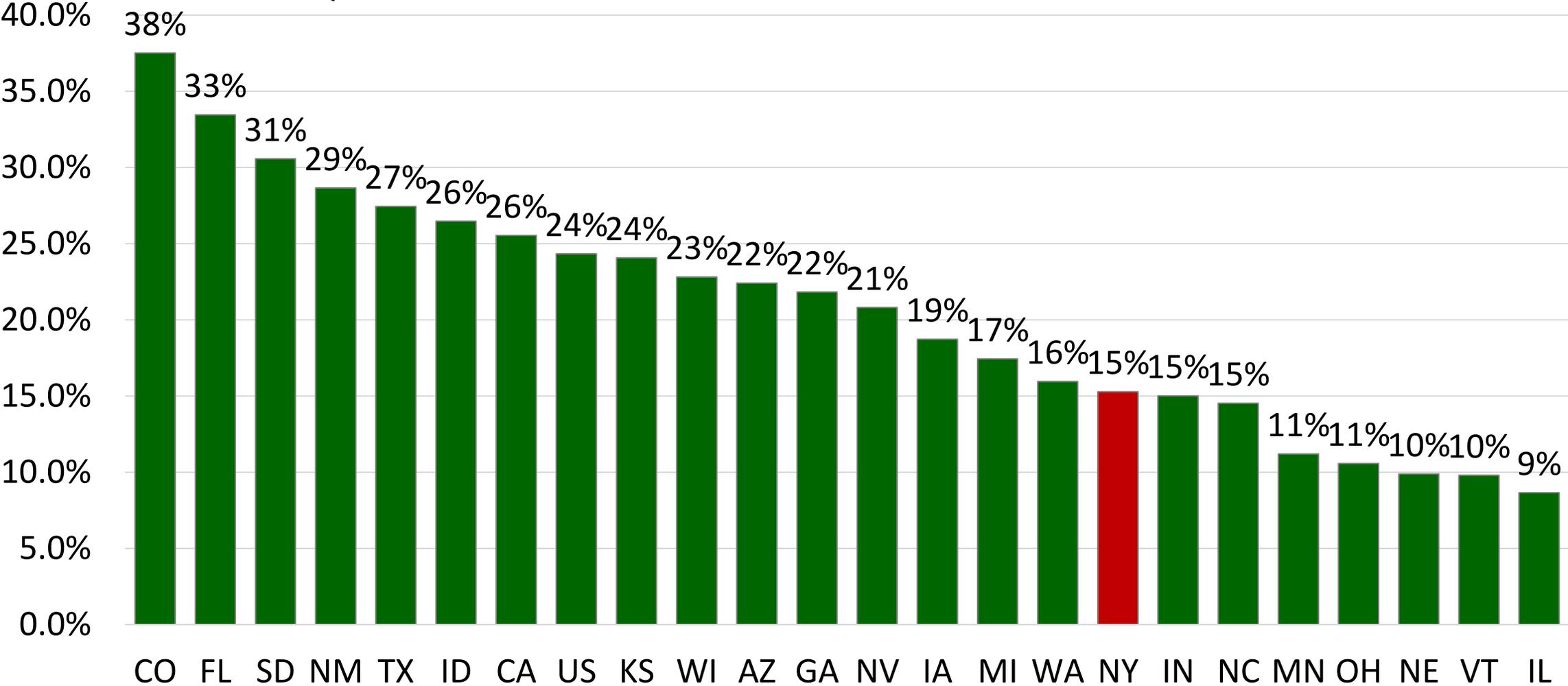


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# NY Below US Average Adoption Rate

## Q4 2023 Effective Milk Pct of Milk Production Covered



# Dairy Revenue Protection Net Indemnity

## New York Net Indemnity By Quarterly Insurance Period As Of 01/23/2024

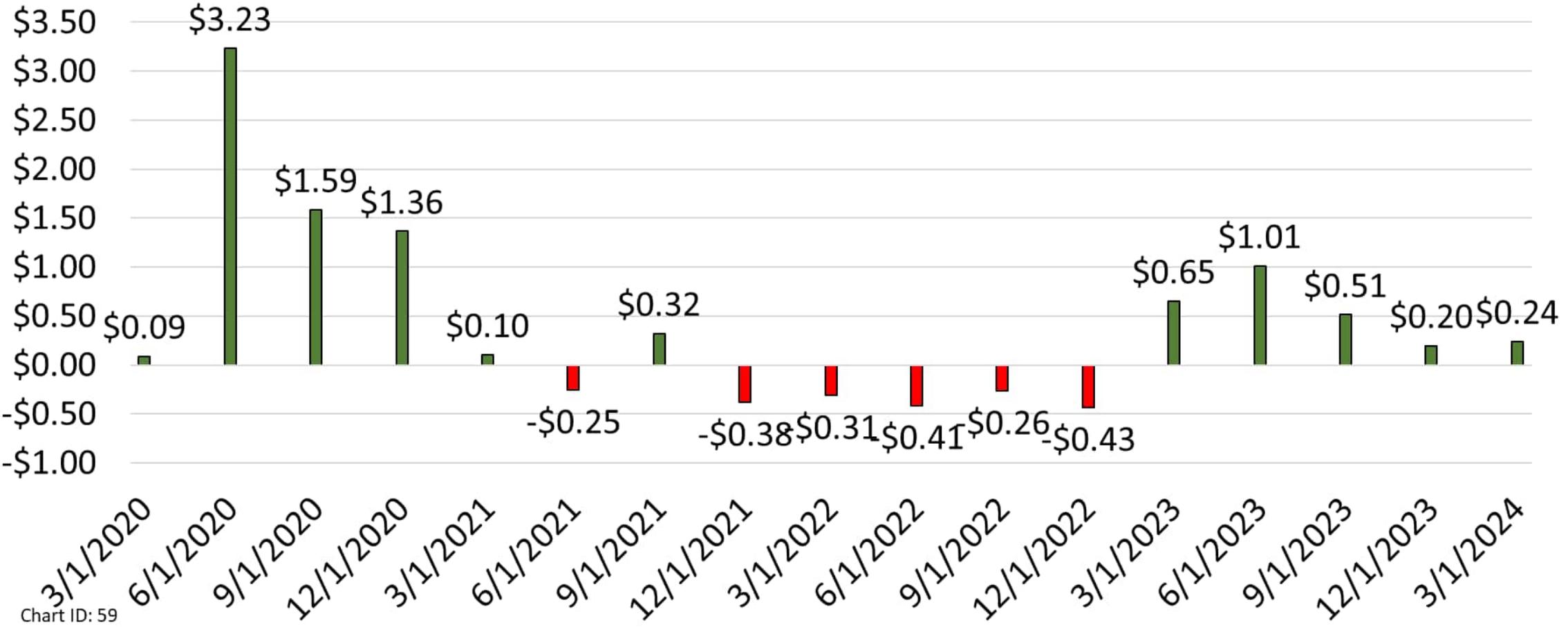


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# NY and VT DRP Net Indemnity

## Cumulative DRP Producer Net Indemnity \$/cwt. State

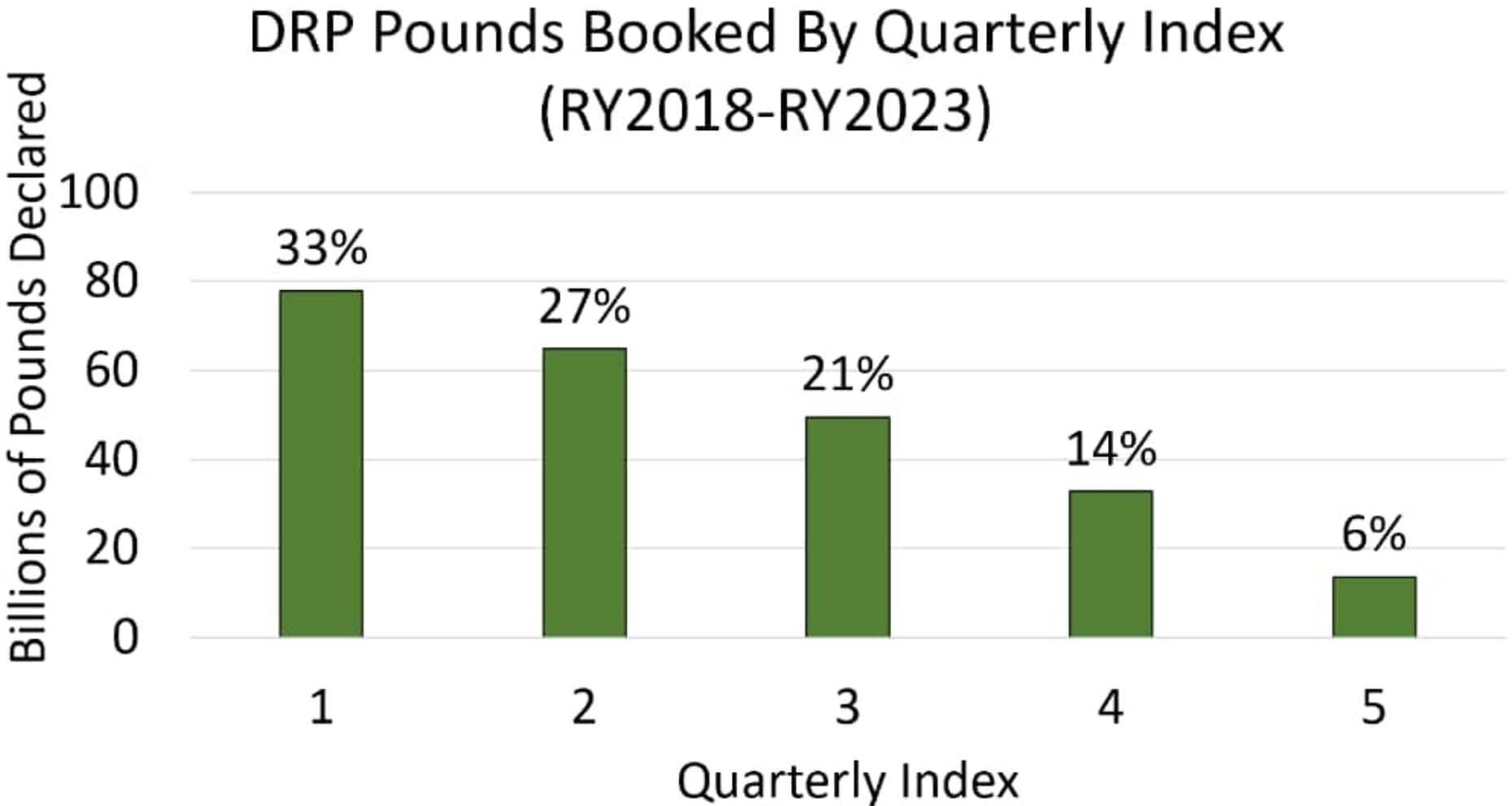
Quarterly Index	NY	VT
All	\$0.26	\$0.12
1	\$0.00	\$0.17
2	\$0.29	-\$0.11
3	\$0.40	\$0.03
4	\$0.49	\$0.39
5	\$0.18	\$0.20

## Return On Premium Dollar

All	67%	33%
1	-1%	71%
2	77%	-30%
3	91%	7%
4	107%	94%
5	33%	39%

Best results since DRP inception (2018) are for endorsements purchased 4 quarters out.

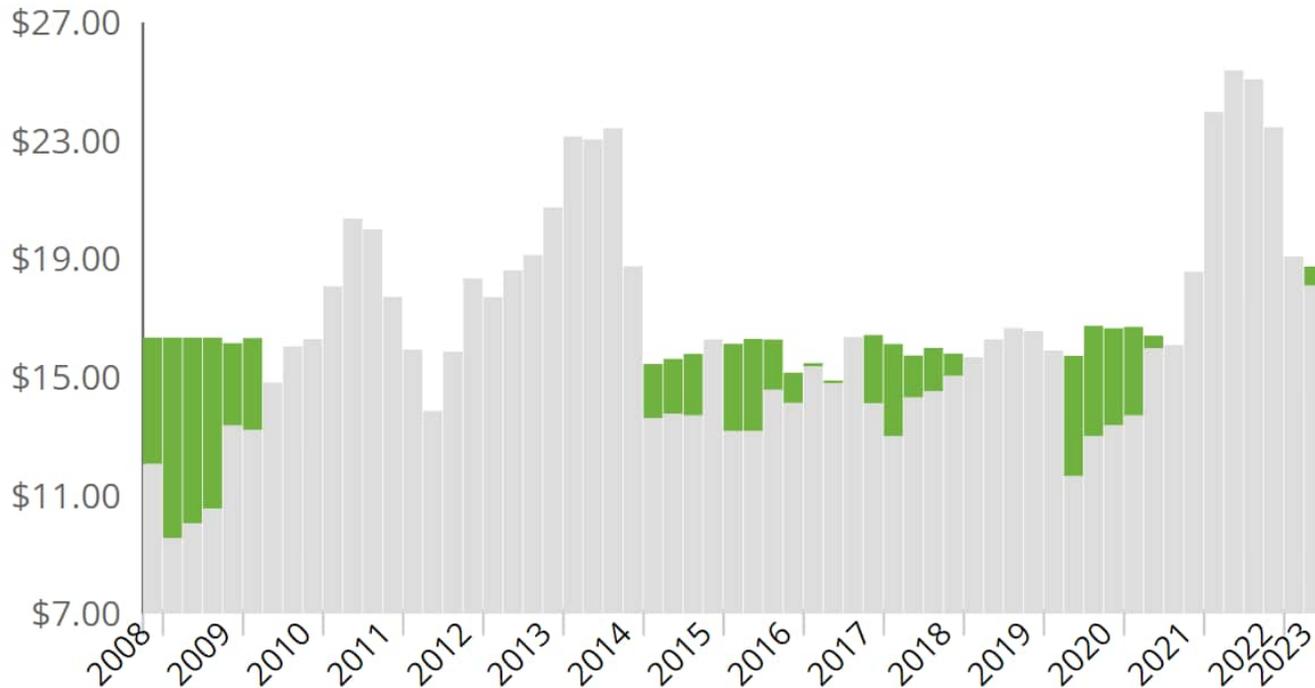
# DRP – Producers tend to buy short-term coverage



# DRP – Returns to Always Covering 5<sup>th</sup> Nearby Quarter

DRP Gross Indemnities (Assuming no Yield Shocks)

Insurance Strategy: 0% Class III, 100% Class IV,  
95% Coverage Level



This is not a coincidence.

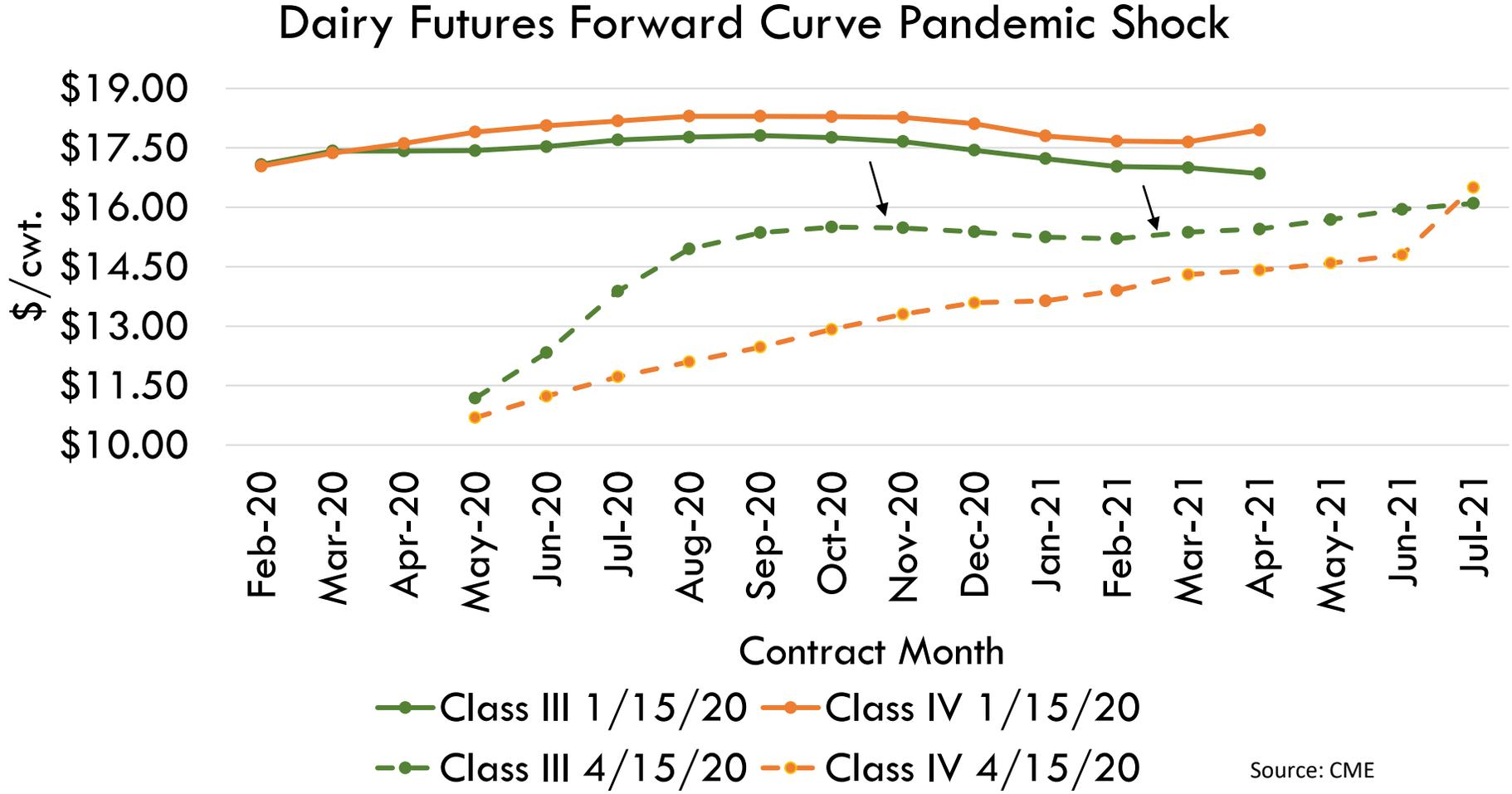
Bozic et al (2012):

“Both in times when margins were exceptionally high and in times when they were disastrously low, market participants expected that a reversal back to average margin levels would not come quickly, but rather would take up to 9 months.

...

This suggests that IOFC margins may exhibit slow mean-reverting, rather than predictable cyclical behavior, as is often suggested in the popular press. This finding can be exploited to design a successful catastrophic risk management program by initiating protection at 9 to 12 months before futures contract maturity.”

# Pandemic Price Shock Distant Quarters



# DRP – Requested: Horizon-Specific Subsidies

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Proposed Subsidy Schedule for 95% Coverage Level, illustrated for sales effective date October 5, 2023:

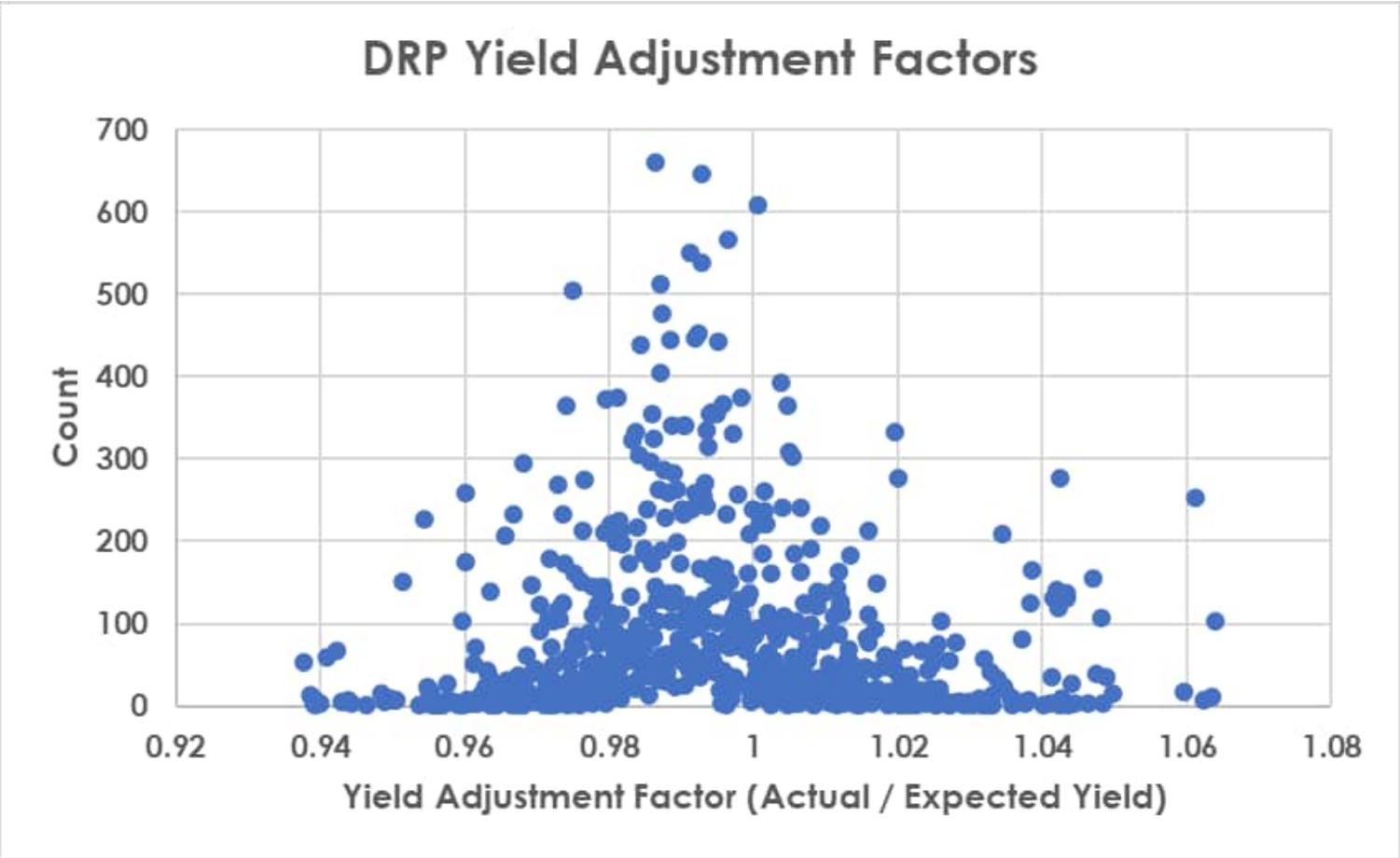
Quarter Index	1st	2nd	3rd	4th	5 <sup>th</sup>
Calendar Quarter	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Q1 2025
Premium Subsidy %	44	44	55	65	65

# DRP – Requested: Horizon-Specific Subsidies

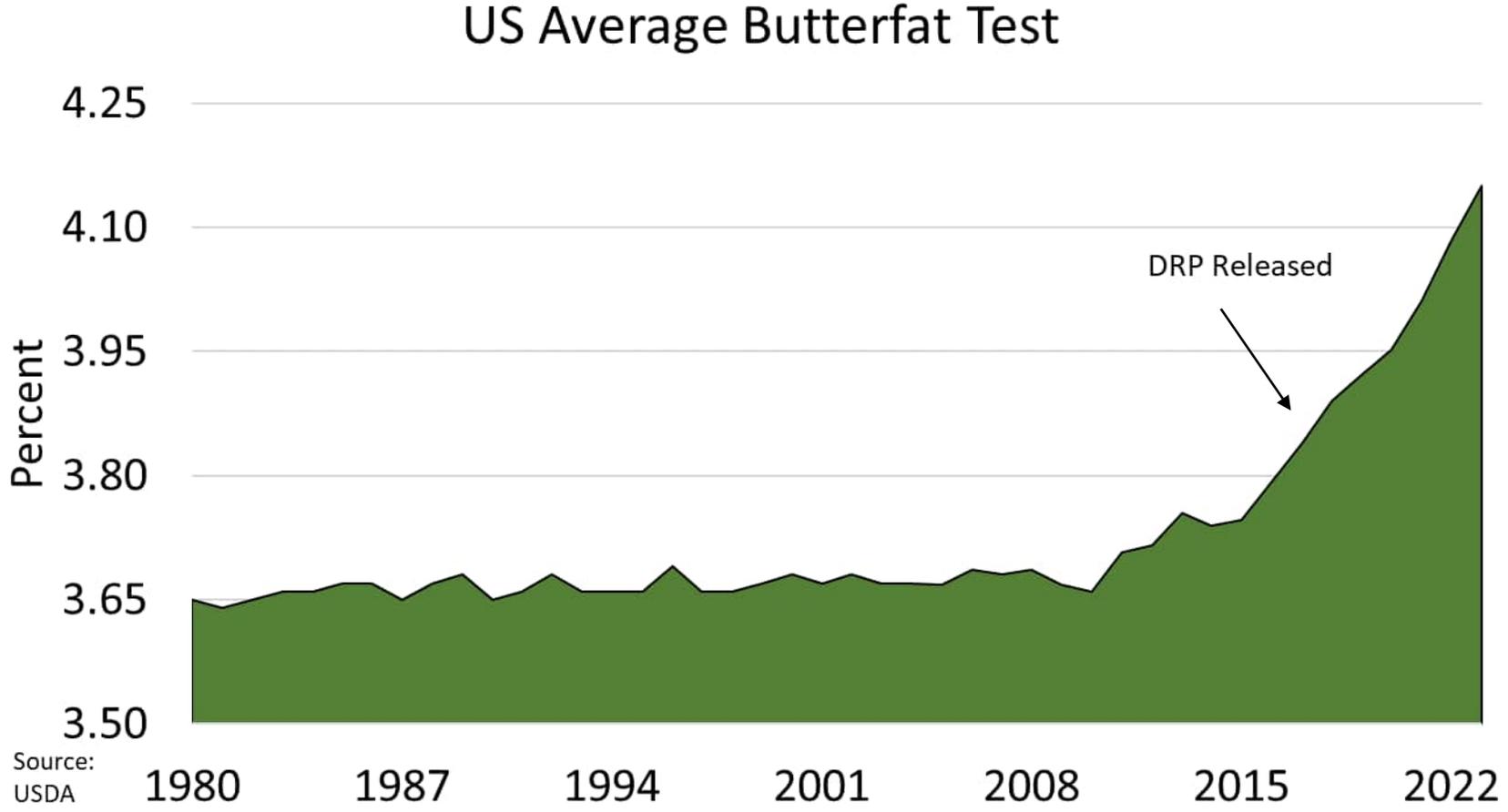
Producer premiums for Wisconsin, 2021-2023, under the proposed subsidy structure would be as follows:

	1 <sup>st</sup> Nearby	2 <sup>nd</sup> Nearby	3 <sup>rd</sup> Nearby	4 <sup>th</sup> Nearby	5 <sup>th</sup> Nearby
<b>Class III Premium</b> (After Subsidy)	\$0.29	\$0.39	\$0.35	\$0.29	\$0.32
As % of Net Farm Profit, 1000-1999 Cows	29%	39%	35%	29%	32%
<b>Class IV</b>	\$0.28	\$0.44	\$0.42	\$0.35	\$0.37
As % of Net Farm Profit, 1000-1999 Cows	28%	44%	42%	35%	37%

# DRP Yield Misses Have Nationally Helped Producers



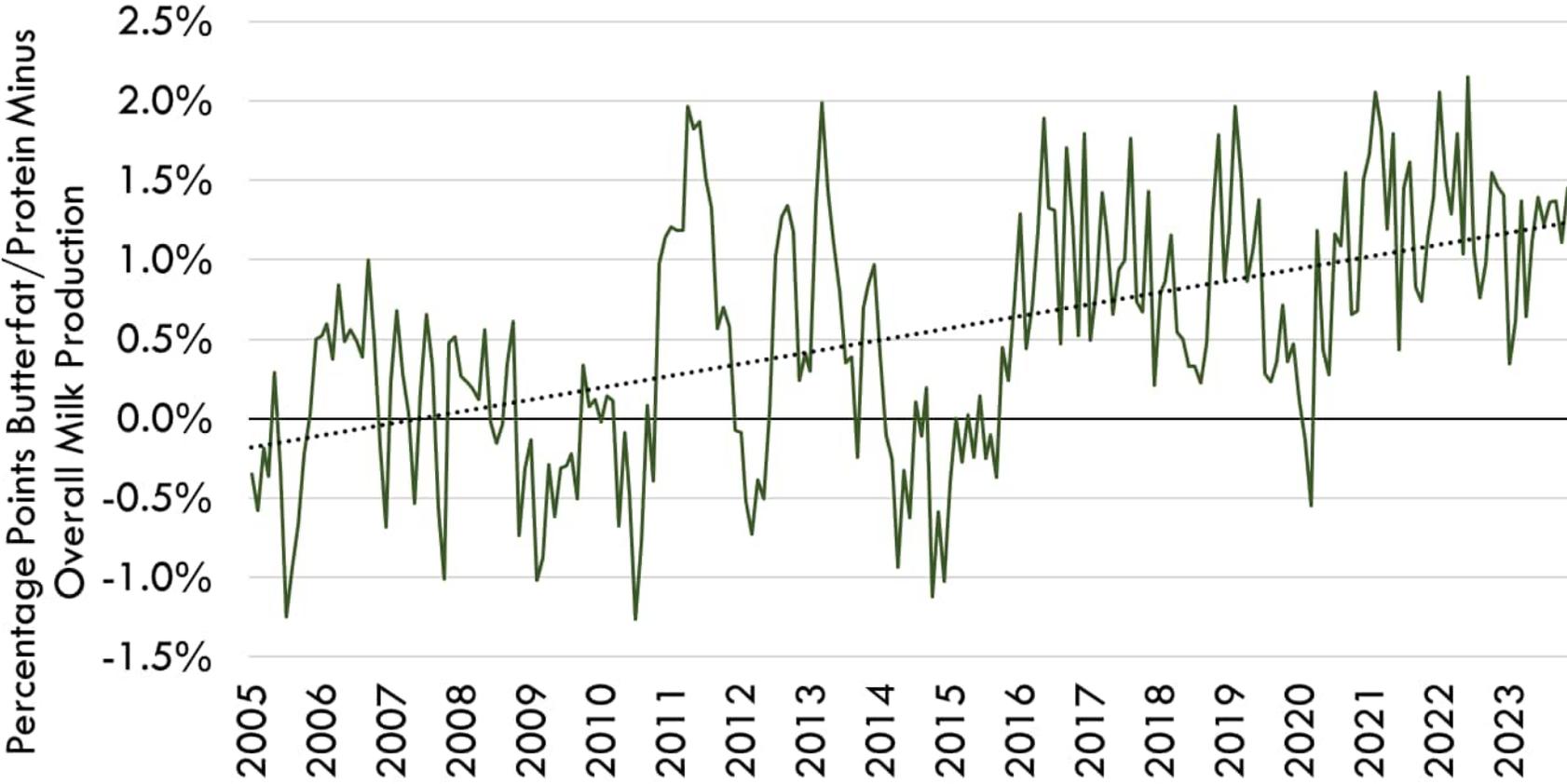
# Butterfat Test Hits Record High



# Component Focus Has Nationally Depressed Per Cow Yield

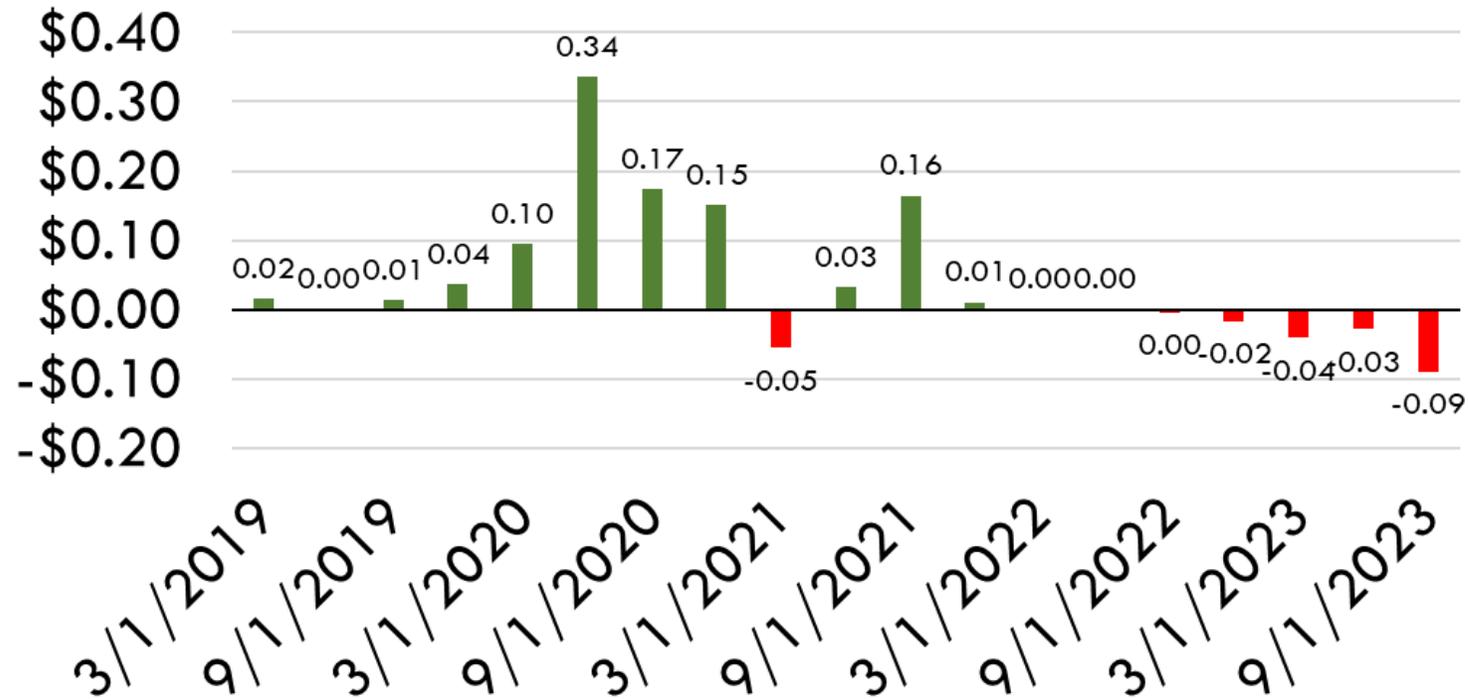


### US Protein and Butterfat YoY Growth Compared To Milk Production



# Yield Impact On Indemnity Book of Business New York

## NY Class Type 831 Book of Business Est Milk Yield Indemnity Change

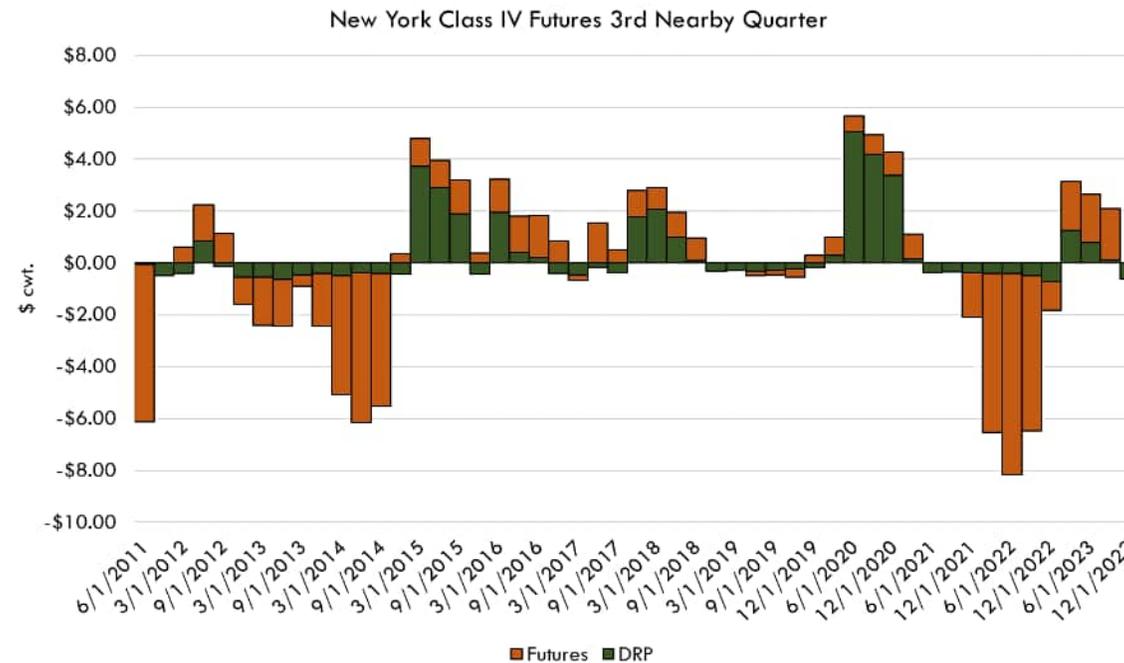


# DRP Returns Versus Using Futures In New York Backtest

Estimated Returns Per \$/Cwt. DRP Based on Averaging All Available Sales Days

## New York (2011 Through 2023)

Nearby Quarter Coverage	Class IV Futures	Class IV DRP	Class III Futures	Class III DRP
1	\$ 0.07	\$0.16	-\$0.18	\$0.09
2	\$ 0.10	\$0.28	-\$0.31	\$0.10
3	\$ (0.01)	\$0.38	-\$0.43	\$0.08
4	\$ 0.20	\$0.49	-\$0.37	\$0.05
5	\$ 0.23	\$0.54	-\$0.36	\$0.01
<b>Average</b>	<b>\$ 0.12</b>	<b>\$0.37</b>	<b>-\$0.33</b>	<b>\$0.07</b>
<b>Benefit Of DRP To Futures</b>		<b>\$0.25</b>		<b>\$0.40</b>



# What about....

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- FMMO reform and DRP sales?
- Farm Bill?
- Dairy Margin Coverage?
- Beef prices?