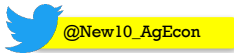


# “Crop Insurance” for Milk? Dairy-Revenue Protection

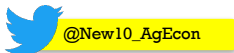
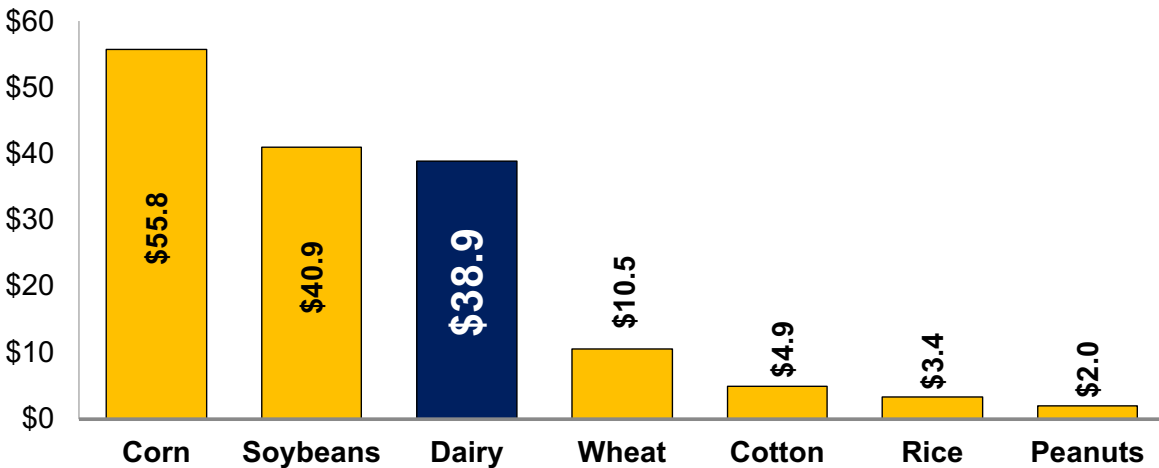
Dr. John Newton  
[jnewton@fb.org](mailto:jnewton@fb.org)  
American Farm Bureau Federation



## Congress Projected Annual Average Crop Market Value

Dairy is the 3<sup>rd</sup> Biggest Crop

Billion Dollars

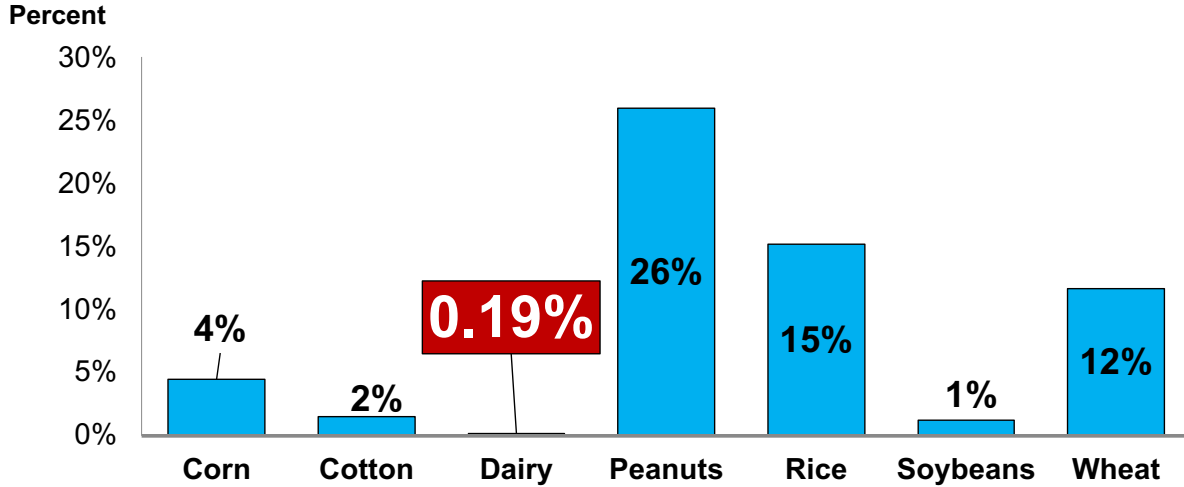


Source: Congressional Budget Office



## Commodity Payments as Share of Crop Market Value

Dairy Safety Net Does Not Reflect Value of Industry



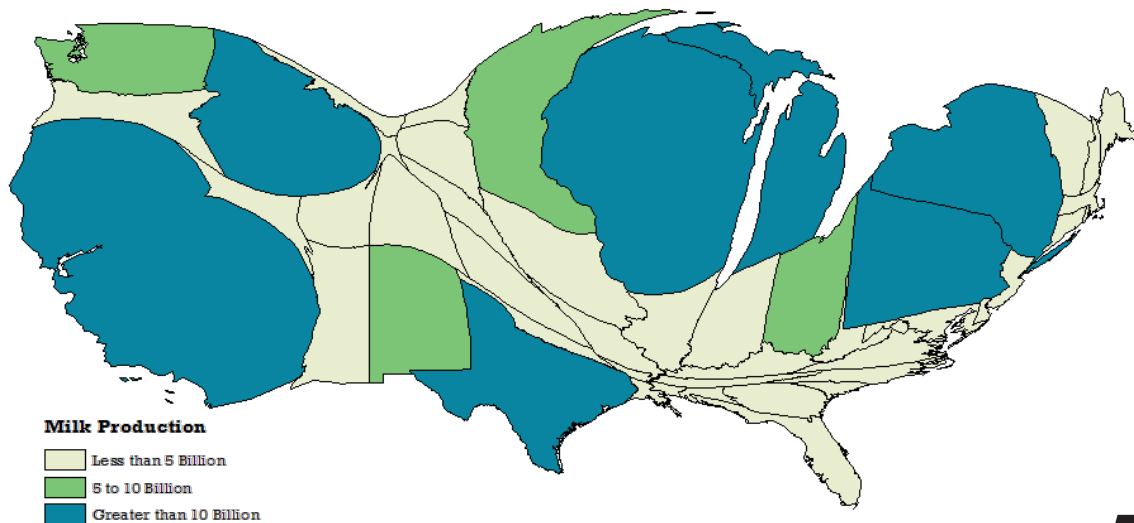
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Source: Congressional Budget Office



## Milk Production Areas Highlight Dairy Policy Challenge

What's the Most Common Denominator, Price of Feed or Milk Pricing Framework?



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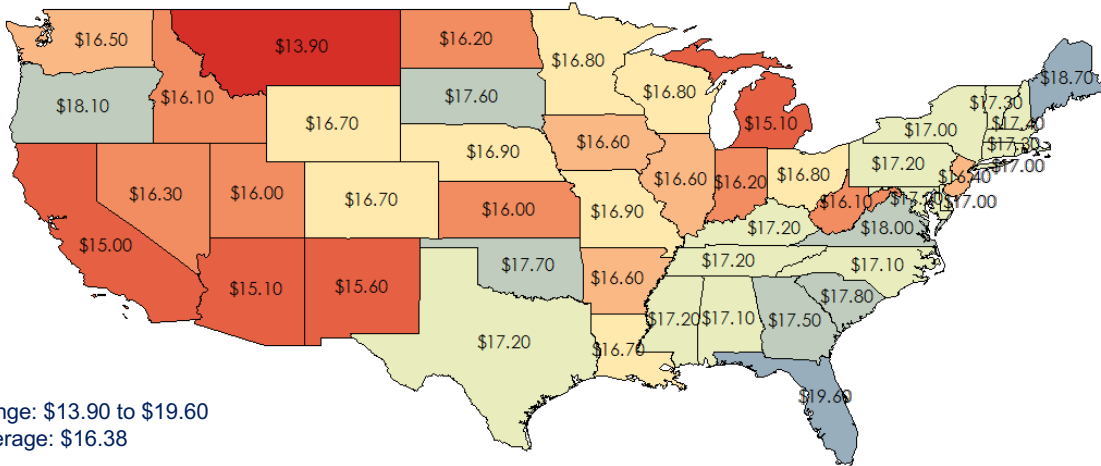
Source: USDA NASS



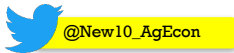
## Does One Size Fit All for Dairy Risk Management?

Utilization %, Differentials, and Component Levels Create Farm-Level Basis Risk

2016 State-Level All-Milk Price



Range: \$13.90 to \$19.60  
Average: \$16.38



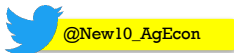
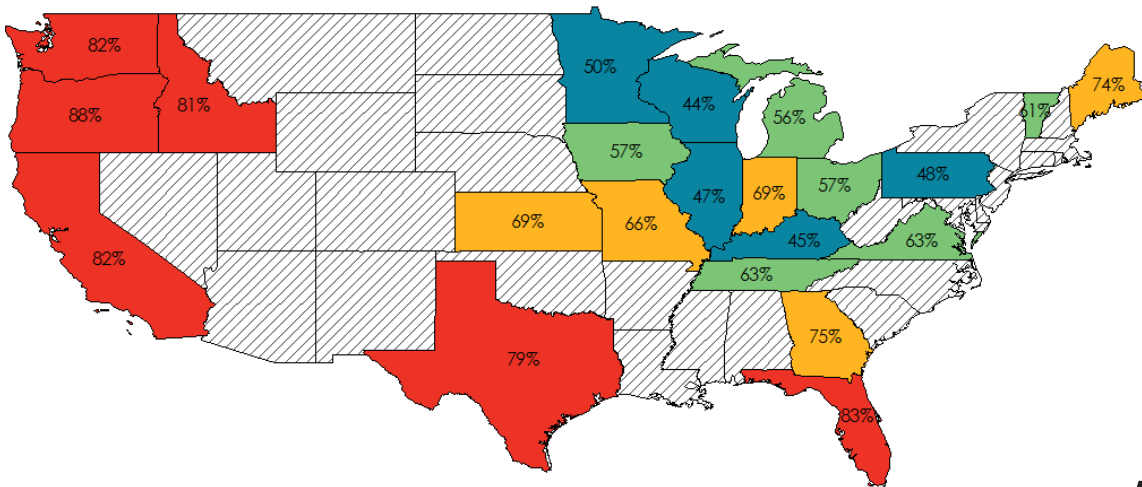
Source: USDA NASS



## Is Feed Risk Exposure the Same?

Midwest Homegrown and Close Proximity to Feed, South and West Feed Purchasers

Percentage of Feed Purchased, 2016

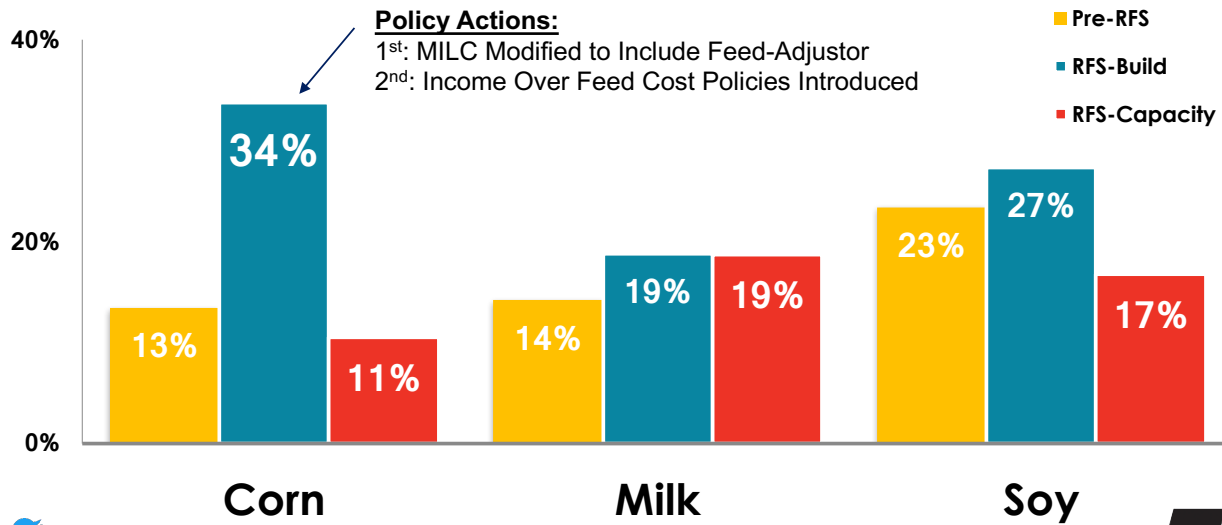


Source: USDA ERS



## The Risk Environment in Dairy Returned to Normal

Coefficient of Variation by Era and by Commodity Complex



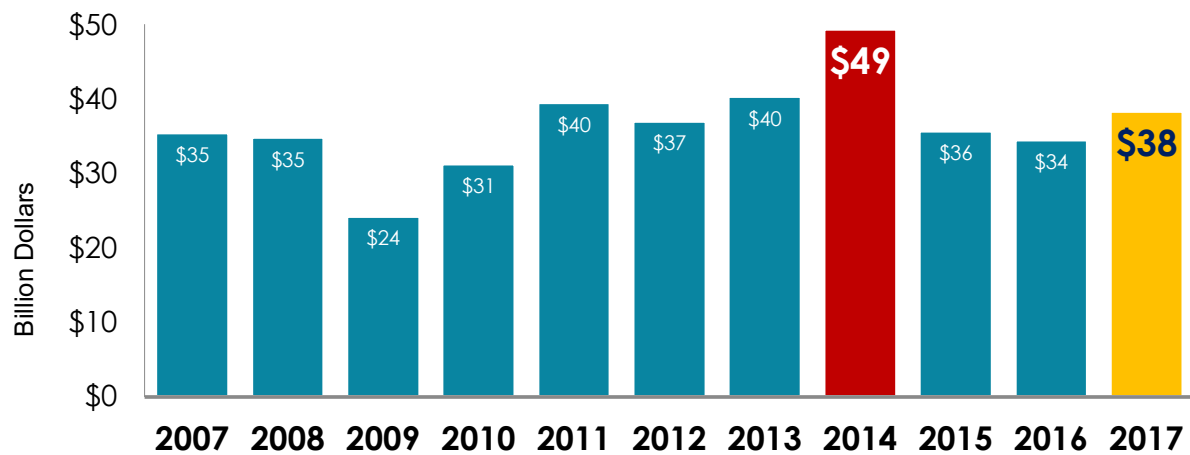
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Source: USDA NASS and AFBF Calculations



## Milk Revenue Down \$10 Billion from 2014

Yet MPP Margin Has Recovered Back to 2014 Levels of \$10-\$11 per hundredweight



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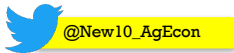
Source: USDA NASS/WASDE



## Farm Bureau Policy: Dairy Safety Nets Need to Be Enhanced

MPP Performance During 2015 and 2016

2015 and 2016 Coverage Years

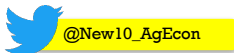
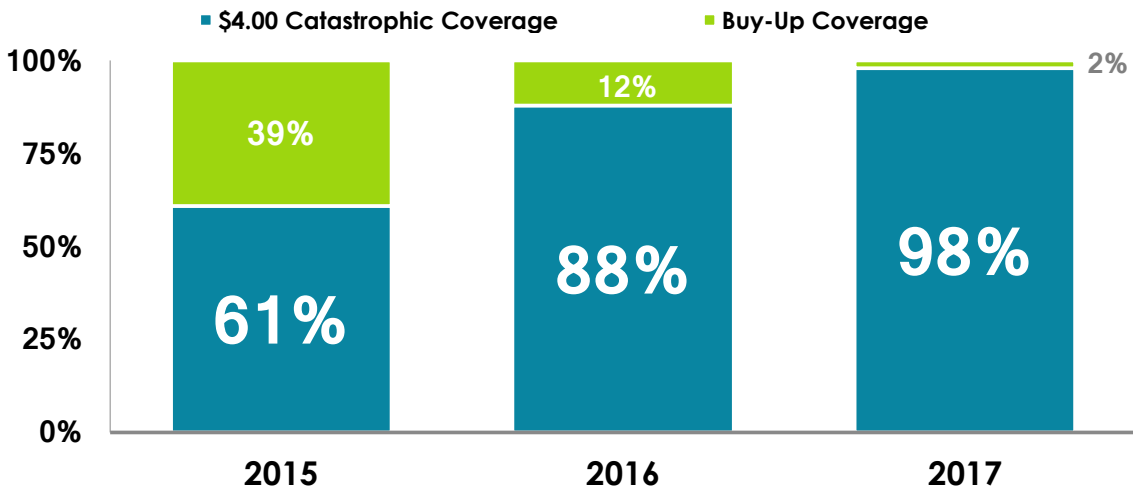


Source: USDA FSA



## Active Participation in MPP Has Declined

Percent of Milk Enrolled in MPP by Coverage Election



Source: USDA FSA



## Farm Bill Prevents MPP & LGM-Dairy

(d) RELATION TO LIVESTOCK GROSS MARGIN FOR DAIRY PROGRAM.—A dairy operation may participate in the margin protection program or the livestock gross margin for dairy program under the Federal Crop Insurance Act (7 U.S.C. 1501 et seq.), but not both.



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Source: USDA FSA



## Field Crops Have Revenue Risk Management Tools

Also Have Title I Programs ARC (Revenue) and PLC (Price)

### Harvest Price Option

$$R = \max(p_s, p_h) \times y$$

Revenue

Higher-of Spring or  
Harvest Price

Yield

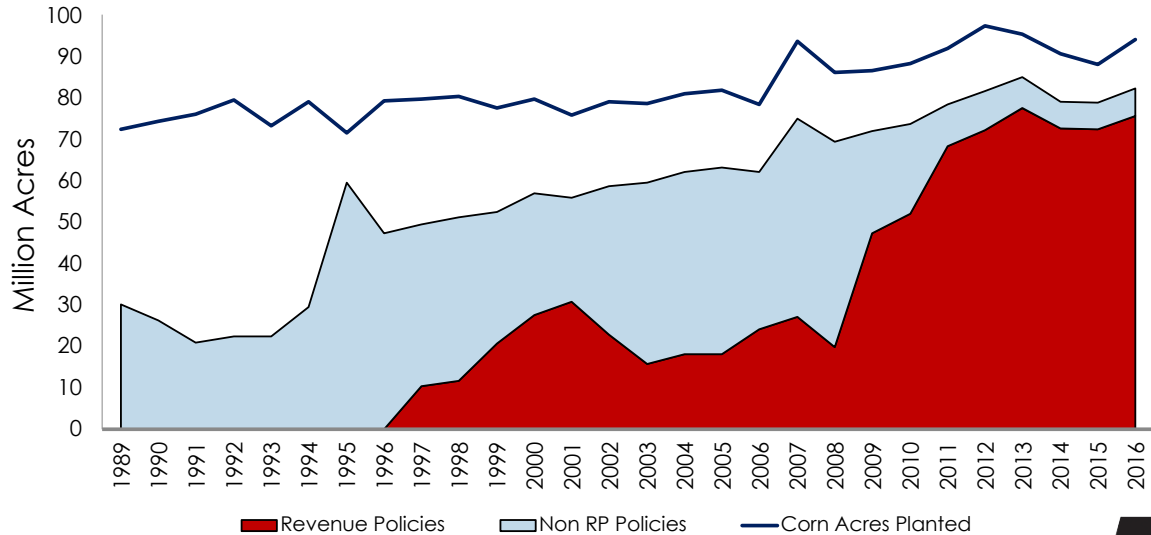


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## Revenue-Based Policies Are Most Widely Used

90% of Corn Acres Covered Under Crop Insurance, 80% Have Revenue Policy



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Source: USDA NASS/RMA



## We Can Improve Dairy Insurance, Dairy-Revenue Protection

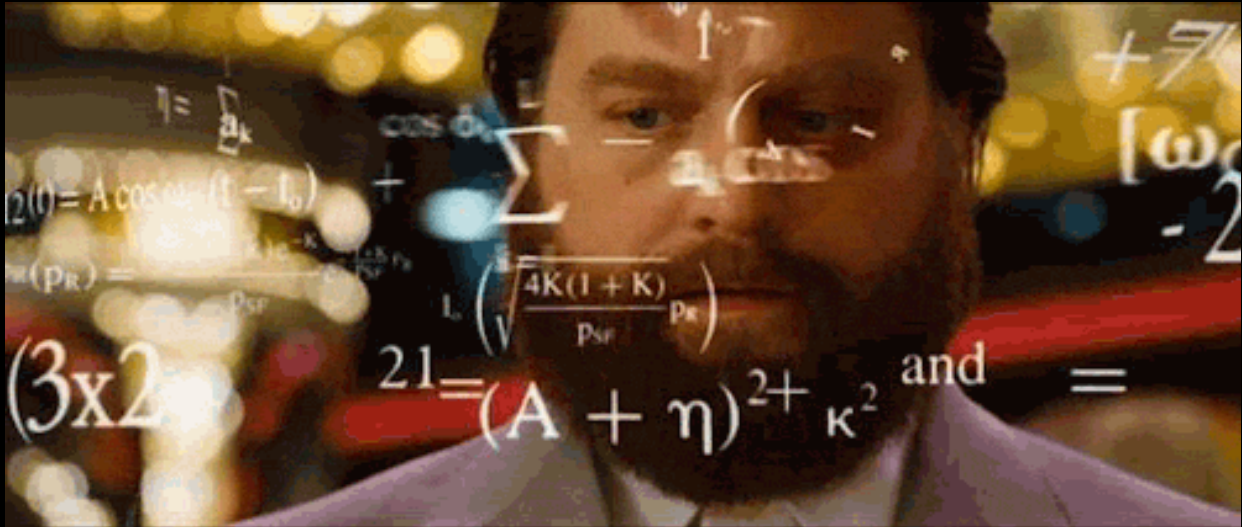
- **Direct Payment, i.e. Title I, programs face criticism in 2018 Farm Bill, 2023 Farm Bill, 2028 Farm Bill**
  - Crop Insurance for Milk = Based on actuarially sound procedures
  - “Skin in the Game” easy to defend
- **Repeal of MILC in 2014 eliminated milk price support**
  - No government tool to manage milk price/revenue risk, all policies include feed
  - Min-Feed LGM Policy is closest government instrument
- **Early 2016 AFBF and AFBIS worked on concept for new insurance product to cover milk price/revenue risk**
  - Farm Bill Working Group and Stakeholder meetings across the country to gather input
  - Mix-Class III/IV milk or milk components
  - Policy is quarterly revenue, Jan-Mar, ..., Oct-Dec
  - Farm-level customization on milk value protected
  - Custom mix of milk prices can significantly target basis risk relative
  - Basket option is a financial derivative and is a weighted average of a group of commodities



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## Dairy-Revenue Protection Rating Methodology...



Math

## Dairy-RP Expected Revenue

Policy Purchased Nov. 2015 for 2Q 2016

### Market Information at Hedging Time

A. Class III Milk Futures Price per cwt	\$16.26
B. Class IV Milk Futures Price per cwt	\$15.94

### Farmer's Choices

D. Class III Milk Utilization Ratio	75%
E. Total Milk Production Protected (cwt)	40,000
F. Coverage Level (10% Deductible)	90%

### Insurance Policy Parameters

G. Expected Milk Price ( $D \cdot A + (1-D) \cdot B$ )	\$16.18
H. Expected Milk Revenue ( $E \cdot G$ )	\$647,200
J. Revenue Guarantee ( $H \cdot F$ )	<b>\$582,480</b>



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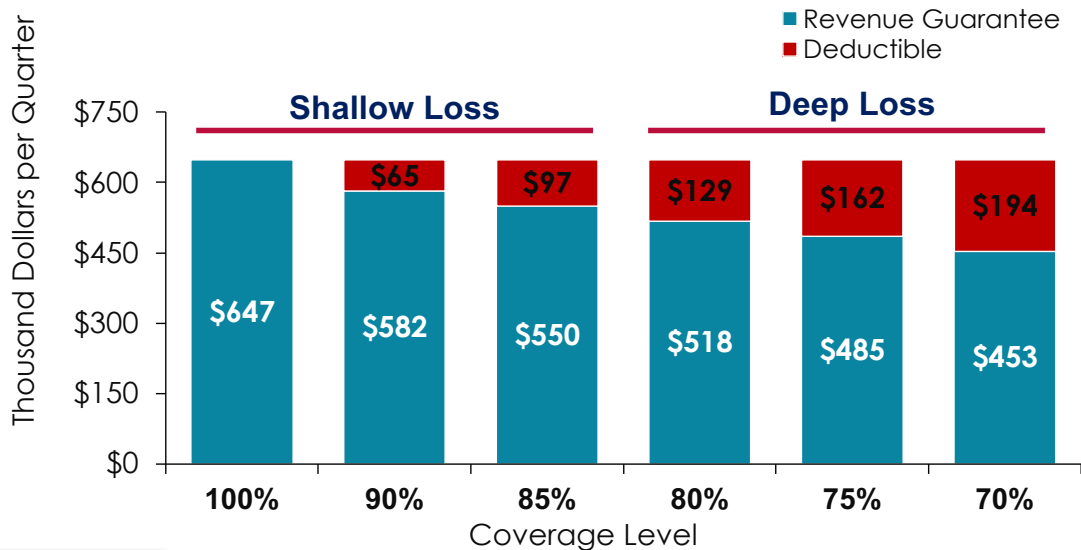
Source: Dairy-RP 522





## Farmers May Self-Select Shallow Loss or Deep Loss

Quarterly Revenue Guarantee, 4 Mil Lbs.



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Source: Dairy-RP 522



## Dairy-RP Performance

Hedge Placed Nov 2015 for 2Q 2016

### Market Information at Hedging Time

J. Revenue Guarantee (H\*F) **\$582,480**

### Actual Market Information

L. Final Class III Milk Price \$13.20

M. Final Class IV Milk Price \$13.18

N. Final Milk Price ( $L \cdot D + M \cdot (1 - D)$ ) \$13.20

O. Actual Milk Production (cwt)\* 41,426

P. Actual Revenue (N\*O) **\$546,618**

### Dairy-RP Payment

Q. Indemnity (J-P, if positive) \$35,862

R. Policy Cost (K\*E) \$5,956

S. Net Indemnity (Q-R) **\$29,906**



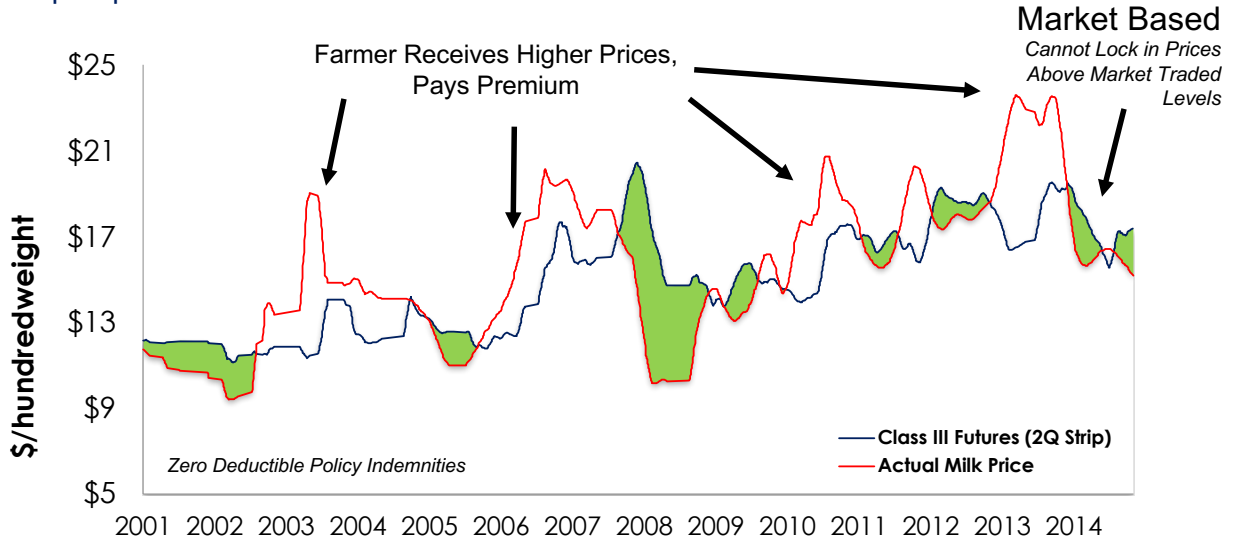
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Source: Dairy-RP 522



## Dairy-RP Indemnifies Unanticipated Price Declines

Keeps Upside Price Potential



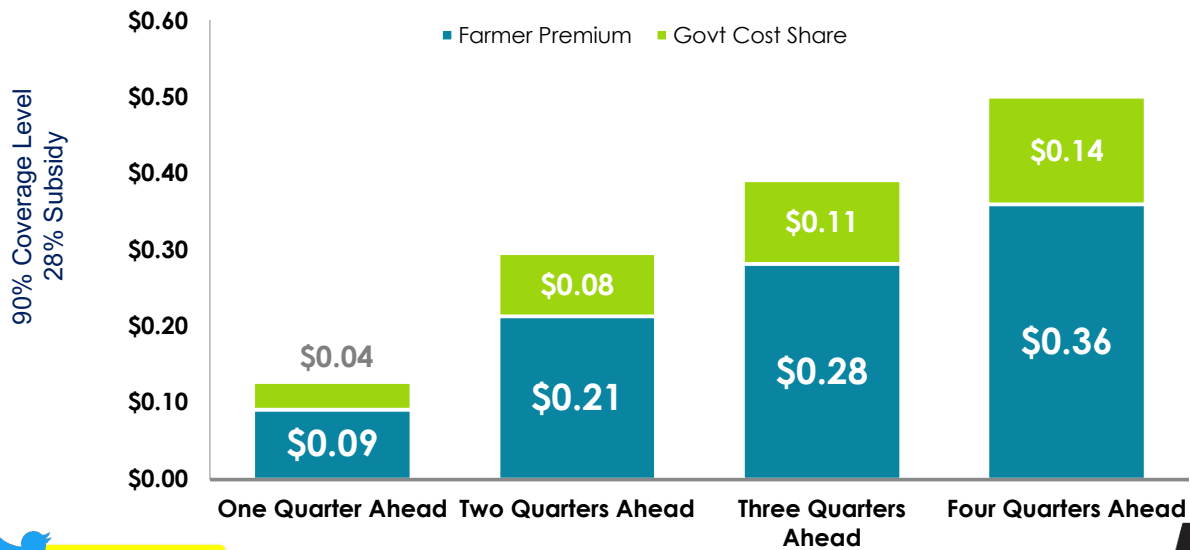
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Source: Dairy-RP 522



## Average Dairy-RP Premium Rates, 2008 to 2016

Assumed Cost-Share (Subsidy) in Line With Existing Crop Insurance Policies



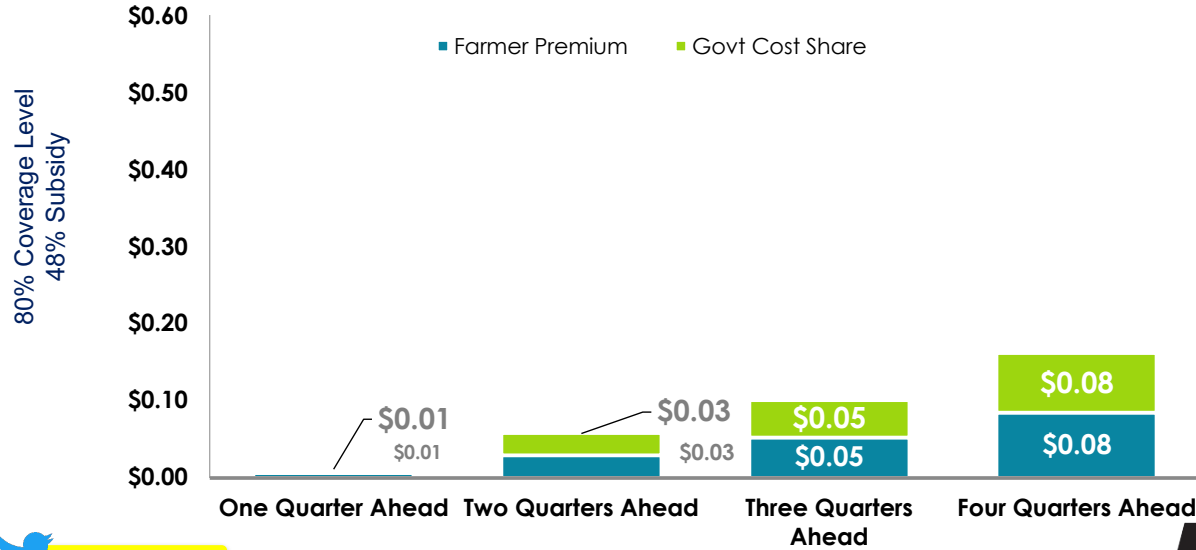
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Source: Dairy-RP 522



## Average Dairy-RP Premium Rates, 2008 to 2016

Assumed Cost-Share (Subsidy) in Line With Existing Crop Insurance Policies



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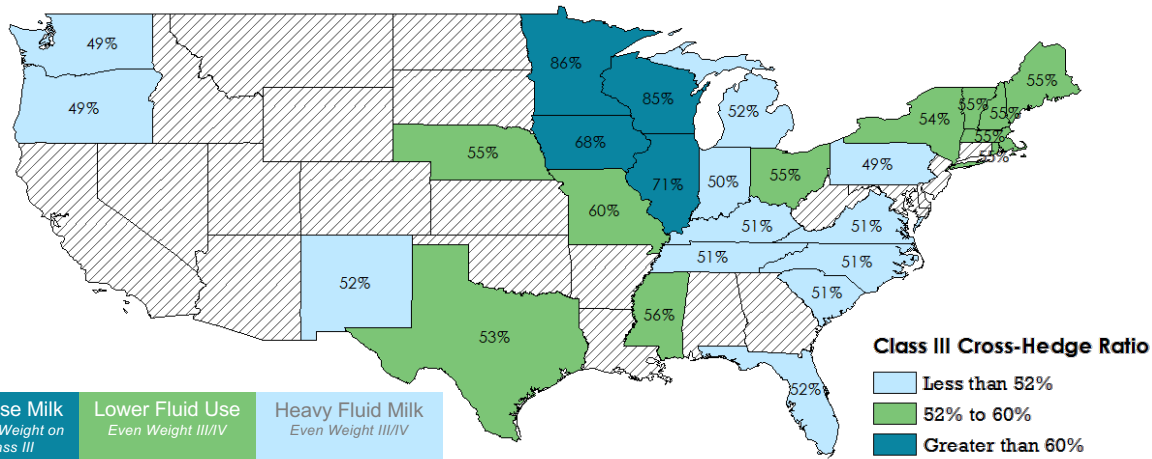
Source: Dairy-RP 522



## Dairy-RP Can Minimize Milk Price Basis Risk

Farmers Choose a Utilization to Match Mailbox Price Risk, Farm-Level Customization

**U.S. Average Class III Hedge Ratio: 63%**



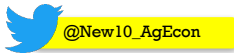
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Source: Understanding Dairy Markets

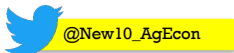
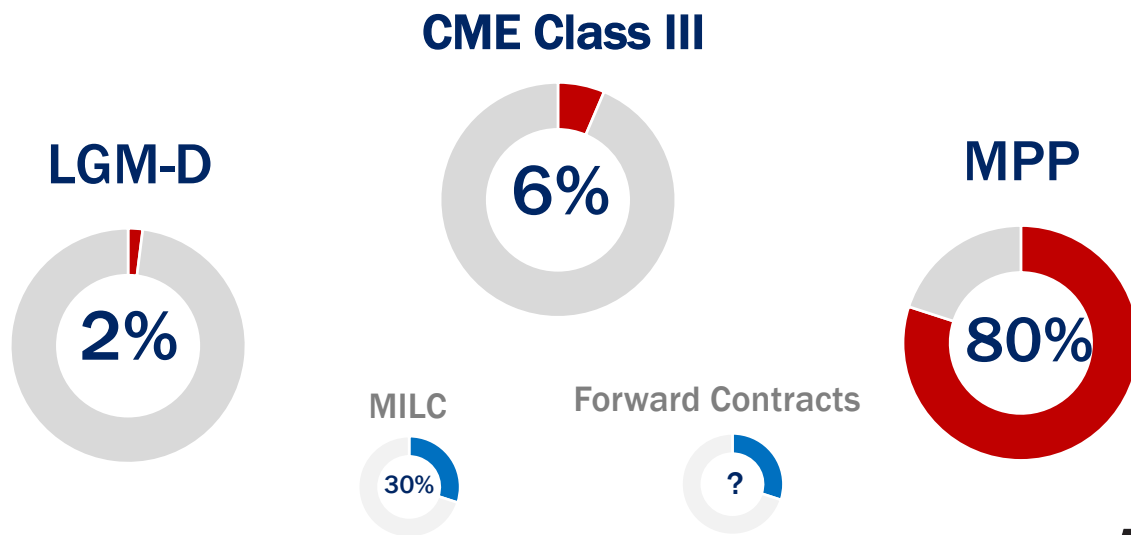


## Comparison to Existing Risk Management Tools

	WFRP	LGM	MPP	Dairy-RP
Commodity Revenue Protection	Yes	No	No	Yes
Margin Protection	No	Yes	Yes	No
Works with other Feed Insurance (e.g., Corn)	Yes	No	N/A	Yes
Regional	N/A	No	No	Yes
Coverage Election	Yes	Yes	Yes	Yes
Customizable (components/classes etc.)	No	Low	No	Yes, High
Via FCIC	Yes	Yes	No	Yes
Price Triggers Market Based	N/A	Yes	No	Yes
Covers Yield/Production Risk	N/A	No	No	Yes
Basis Risk	Low	High	High	Low
Reporting Requirements	High	Low	Low	Low
Disappearing Deductible	No	No	No	Yes
Directly Insure Milk Commodity or Indirectly via insuring Cash Flows from Live Animal	Indirect	Indirect	Indirect	Direct
Market Based Pricing	No	Yes	No	Yes



## Portion of U.S. Milk Supply Hedged by Instrument

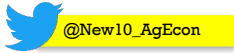


Source: USDA NASS, RMA, FSA, CME



## Submitted Concept Proposal in April

Not a replacement for MPP



## Livestock Insurance \$20 Million Cap

Livestock



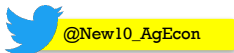
Livestock



Commodity



Commodity



## Congressional Directive, May 1, 2017 Budget

The agreement supports the development of insurance products that recognize and cover livestock products such as milk as 'agricultural commodities' separately and distinctly from coverage developed for 'livestock.' The statute only refers to livestock and lists types of livestock in the definition (7 U.S.C. 1523(b)), but lists no livestock products. There is no indication that Congress intended for livestock products to fall under the limitation of livestock insurance policies and this restriction has unnecessarily hindered the availability of policies for livestock products like milk. The agreement encourages RMA to present this reinterpretation to the Federal Crop Insurance Corporation board at the next scheduled meeting and develop



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Canada Closes Door on U.S.  
Dairy Farmers  
U.S. Farmers To Lose Milk Supply Contracts



Record High Cheese Stocks Weigh on  
Milk Prices, But Should They?



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