

RISK MANAGEMENT – LESSONS FROM THE US FARM BILL

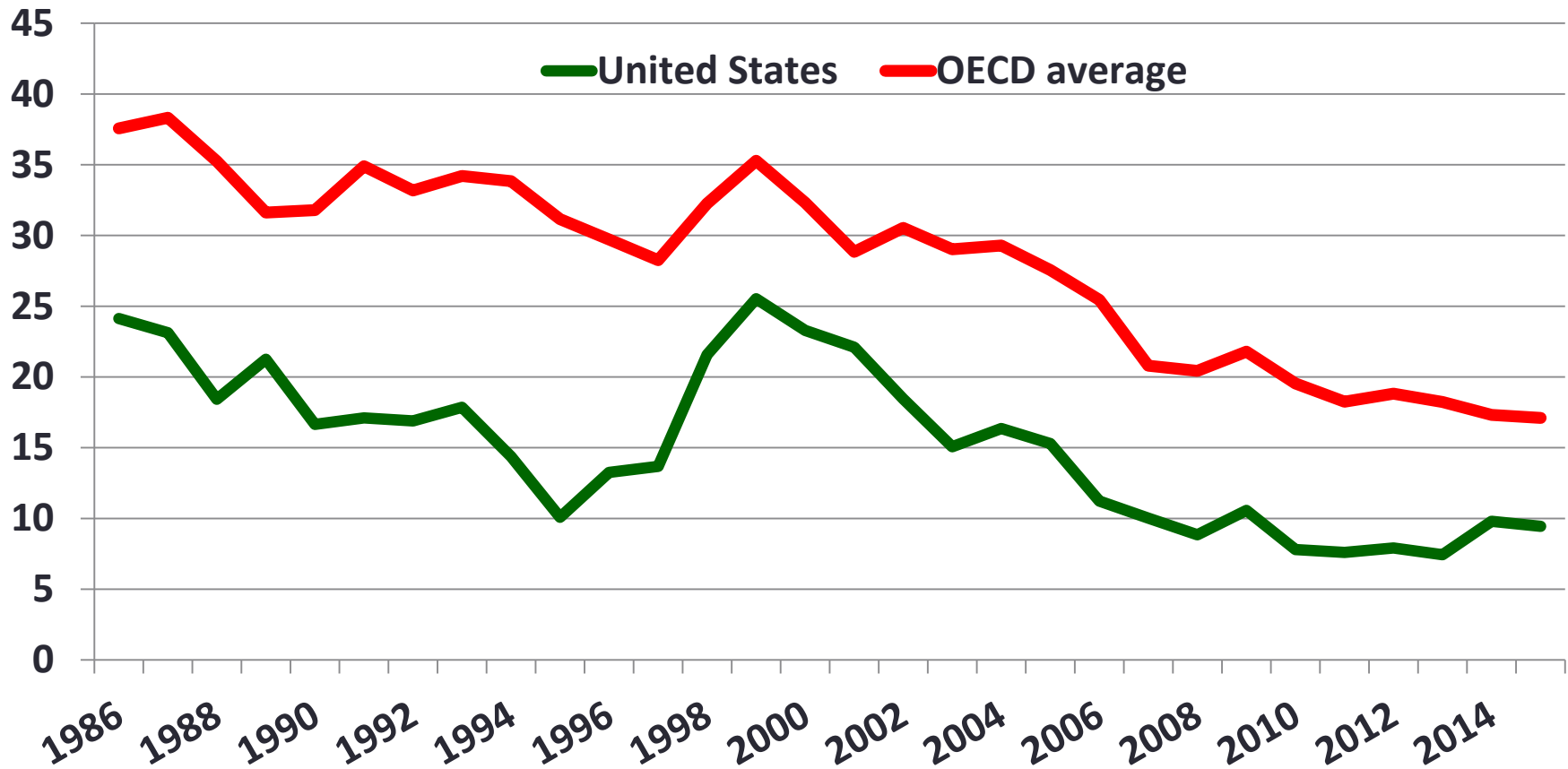


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EU Ag Outlook Conference
Brussels, Dec 2016

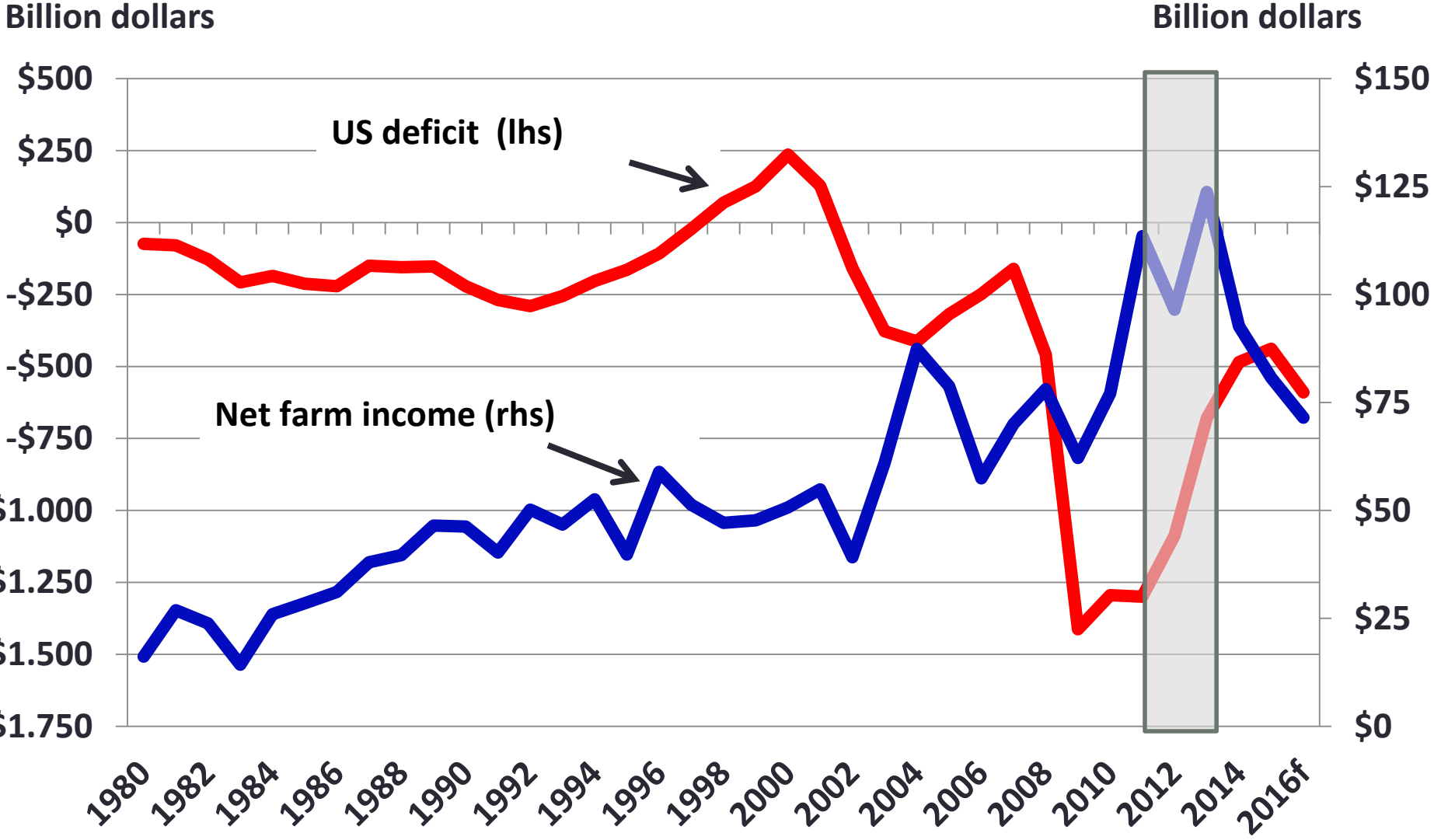
US and OECD Producer Support Estimate

Percent of gross farm receipts (including support)



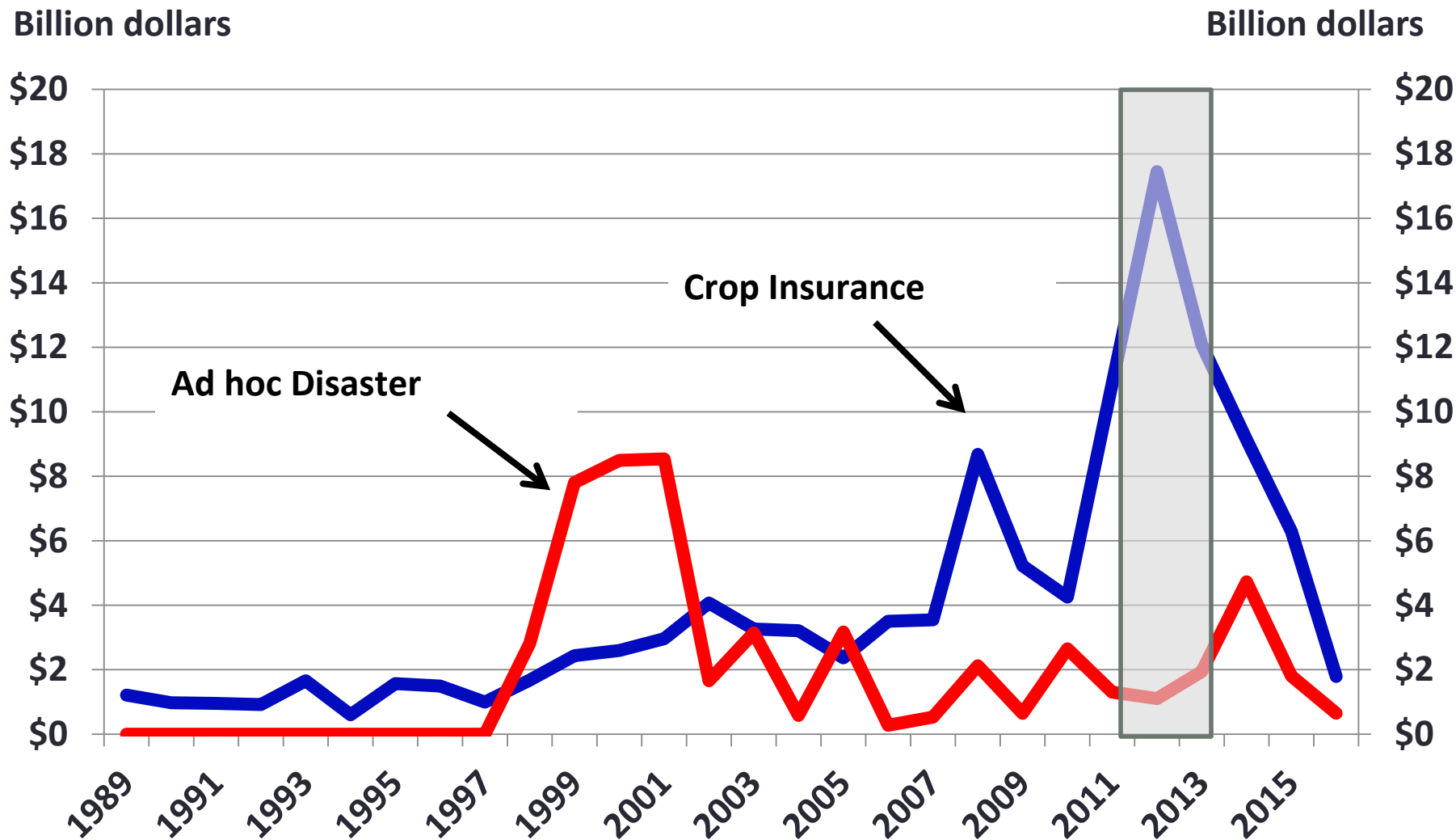
Data: OECD.

Last farm bill & unique economic conditions



Data: USDA, CBO.

And crop insurance was seen to be successful...



Data: USDA.

2014 changes to risk management

Title I – Commodity program changes

- Moved direct payments to a counter-cycle basis
 - Revenue program – Agriculture Risk Coverage (ARC)
 - Fixed price program – Price Loss Coverage (PLC)
 - Uses “base acres”
- Dairy price support shifted to an insurance-type of program

Title XI – Crop insurance changes

- Mainly kept framework unchanged

Title I commodity programs

In 2014, a producer with base acres had to choose

- Whether to enroll in ARC or PLC
- Whether to reallocate base acres or update program yield
- No chance to change until the 2019 crop season

Details

- No cost
- Administered by USDA (payment arrives after all the crop is sold and market year average price is established)
- Effectively decoupled
 - Does not require base crop to be grown
 - Only paid on base acres
- Conservation compliance

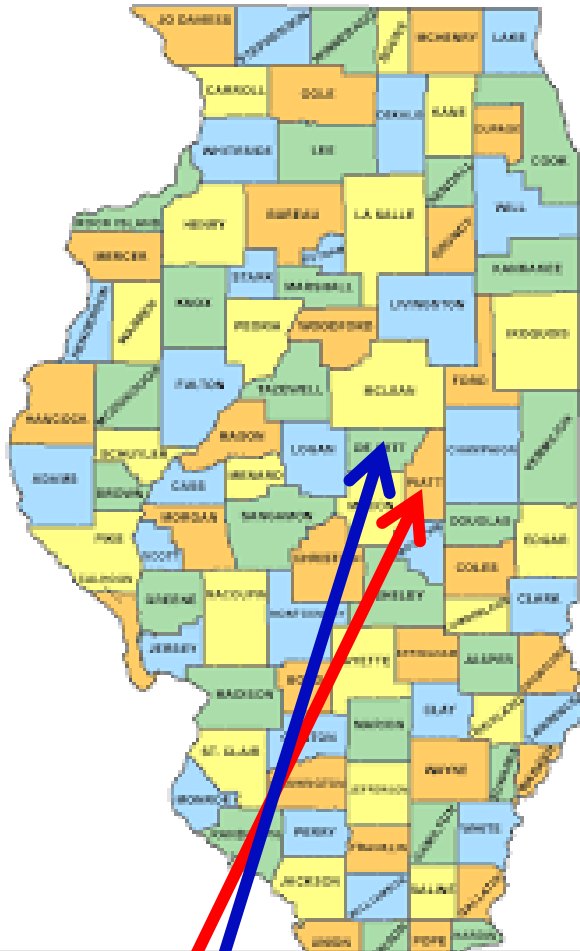
Most corn and soybean base acres enrolled in ARC

Commodity	<u>PLC</u>		<u>ARC</u>	
	Base Acres	Percent	Base Acres	Percent
BARLEY	3,876,590	57%	1,127,214	42%
CANOLA	1,436,766	93%	31,814	7%
CORN	6,388,066	9%	90,057,276	91%
GRAIN SORGHUM	5,965,661	54%	2,998,211	46%
LONG GRAIN RICE	4,007,809	99%	6,912	1%
PEANUTS	2,013,443	99%	6,781	1%
SOYBEANS	1,688,365	4%	52,635,553	96%
WHEAT	27,045,581	34%	35,394,613	66%
U.S. Total	52,422,282	22%	182,258,375	75%

ARC: 2015 for McLean, Ill. w/ 100 base corn acres [Farmer cost = \$0; can grow any crop on those acres]

1. Benchmark corn price (5-year Olympic average = \$5.29/bu)
2. Benchmark corn yield (5-year Olympic average for McLean County = 173 bu / acre)
3. Benchmark revenue = \$915 / acre
4. County guarantee = $\$915 \times 0.86 = \787 / base acre
5. Maximum rate = $\$915 \times 0.10 = \91.50 / base acre

6. 2015 actual price = \$3.61
7. 2015 actual yield = 199 bu / acre in McLean County
8. 2015 actual revenue = \$718 / acre for McLean County
9. ARC payment = $(\$787 - \$718) \times (100 \times 0.85) = \$5,780$

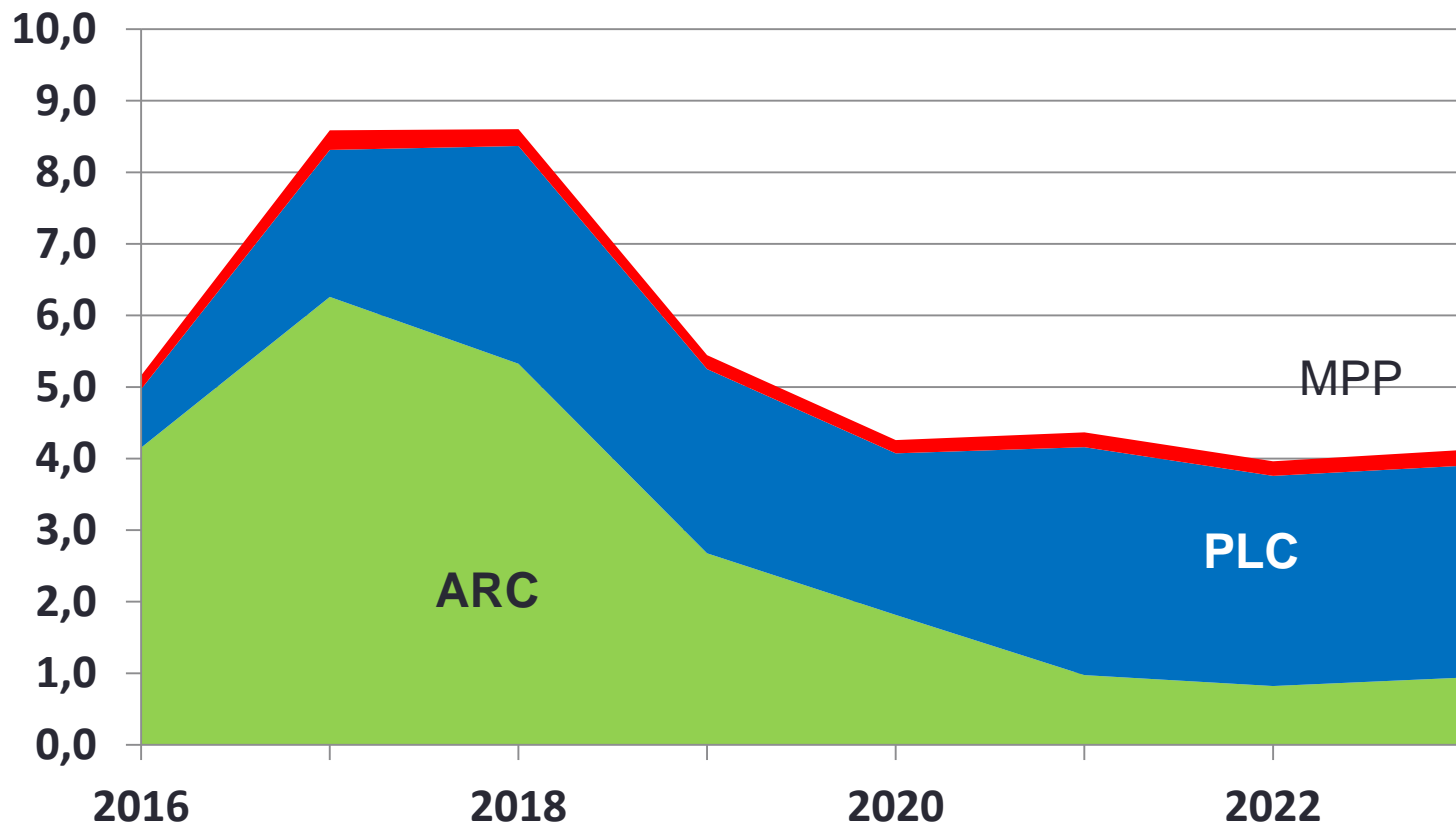


2015 example: Central Illinois farmer with corn base enrolled in ARC

	Rev guarantee	Yield bu/acre	Price \$/bu	Actual rev \$/acre	Payment \$/acre
Piatt	\$769	221	\$3.61	\$798	\$0
McLean	\$787	199	\$3.61	\$718	\$69

ARC payments are expected to fall after 2019

Billion dollars



Data: CBO.

Crop insurance examples

Each year a farmer can choose

- Acres of which crop to cover
- Type of insurance product: yield, revenue, area, etc.
- Amount of coverage to purchase [50% to 85%]

Requirements

- Farmer pays (ranging from 20% to 62% of fair premium)
- Data on expected yield and yield variance
- Futures and options markets for prices and price variance
- Private sector participation: information about choices, sells the policy, and services the policy (payment arrives quickly after a loss)
- Conservation compliance

Crop insurance example

Revenue (\$/ac)

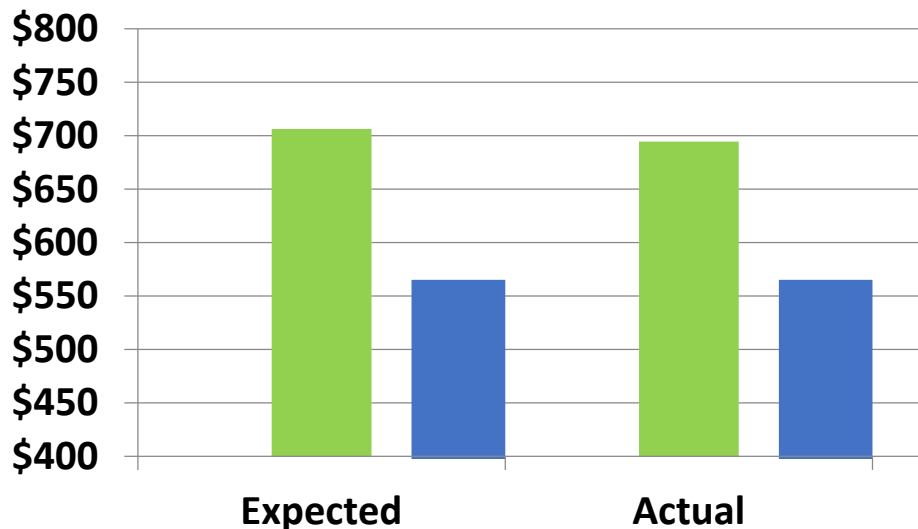


Farm in Mclean County, Illinois

- 500 acres corn
- Expected yield = 183 bu/acre
- Expected price = \$3.86 / bu
- Expected revenue = \$706/acre, or \$353,000
- 80% coverage revenue insurance = \$565/acre, or a liability of \$283,000
- Fair premium = \$12/acre, or \$6,025
- Farmer pays \$3.86/acre, or \$1,930
- Govt subsidizes \$8.19/acre, or \$4,095

Crop insurance examples

Revenue (\$/ac)



Farm in McLean County

- 500 acres corn
- Actual yield = 199 bu/acre
- Actual price = \$3.49 / bu
- Actual revenue = \$695/acre, or \$347,000
- No indemnity payment made

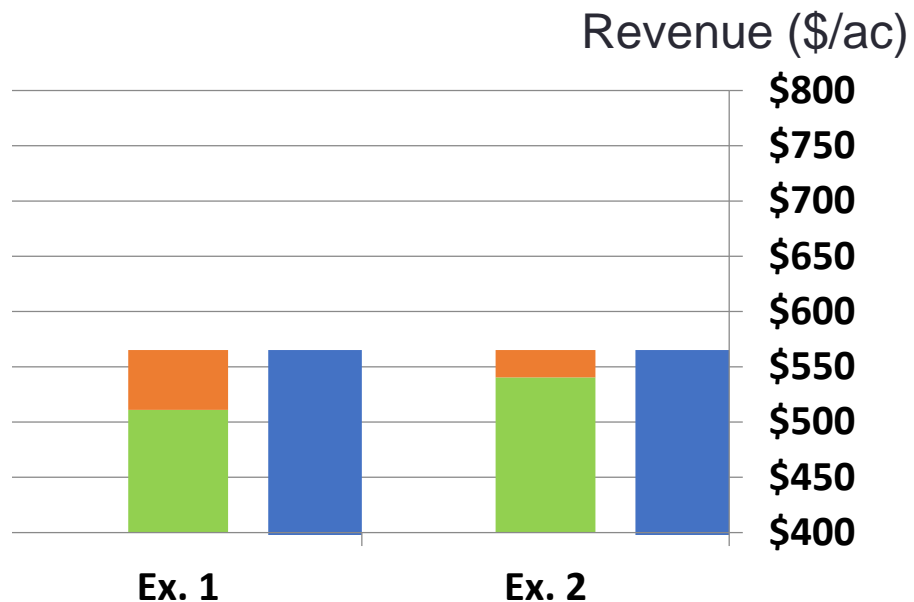
Crop insurance examples

Ex. 1

- Yield down 20%
- Price as realized (-10%)
- Loss = \$54/ac, or \$27,000

Ex. 2

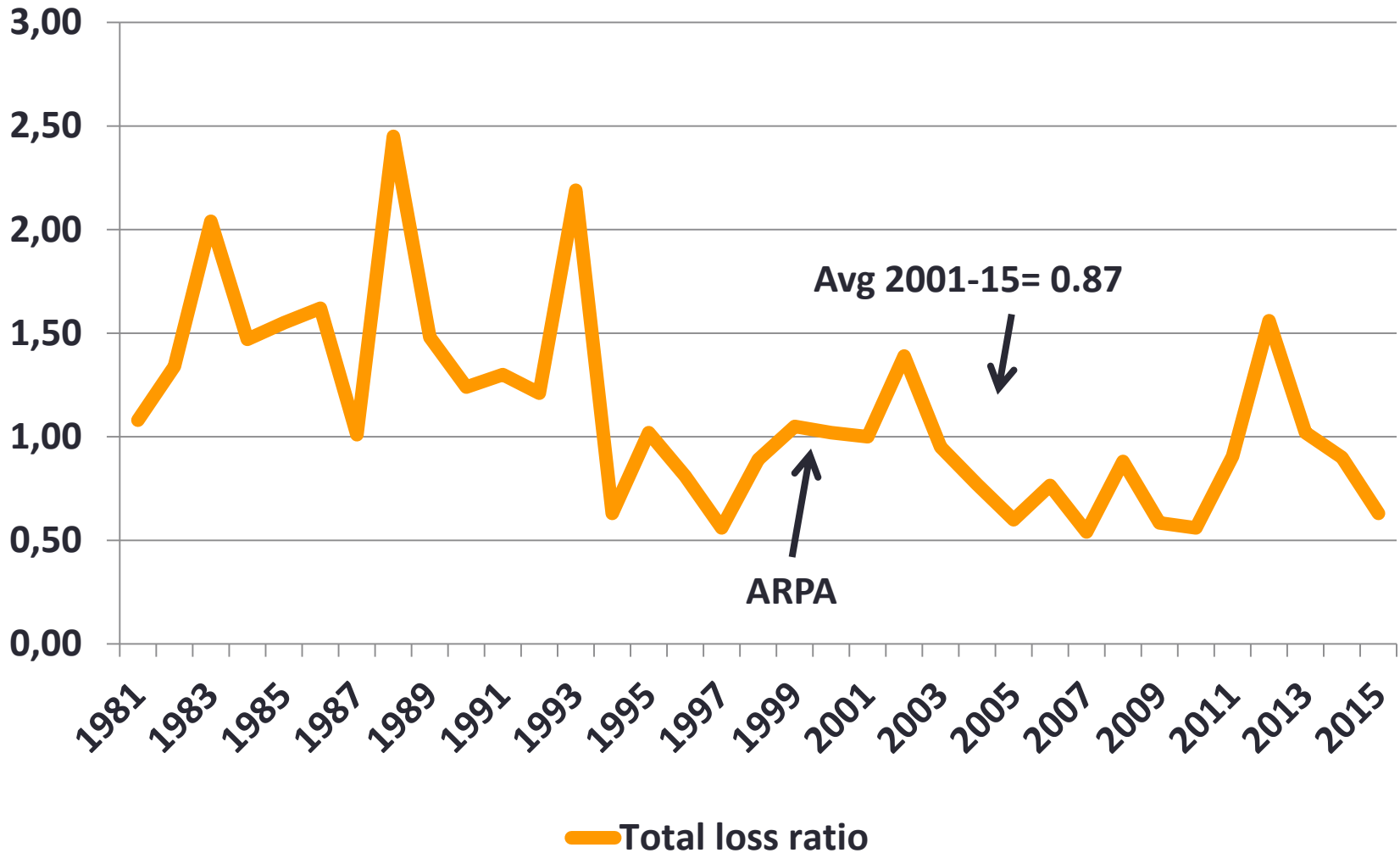
- Yield down 10%
- Price down 15%
- Loss = \$25/ac, or \$12,000



Farmer payment = \$1,930

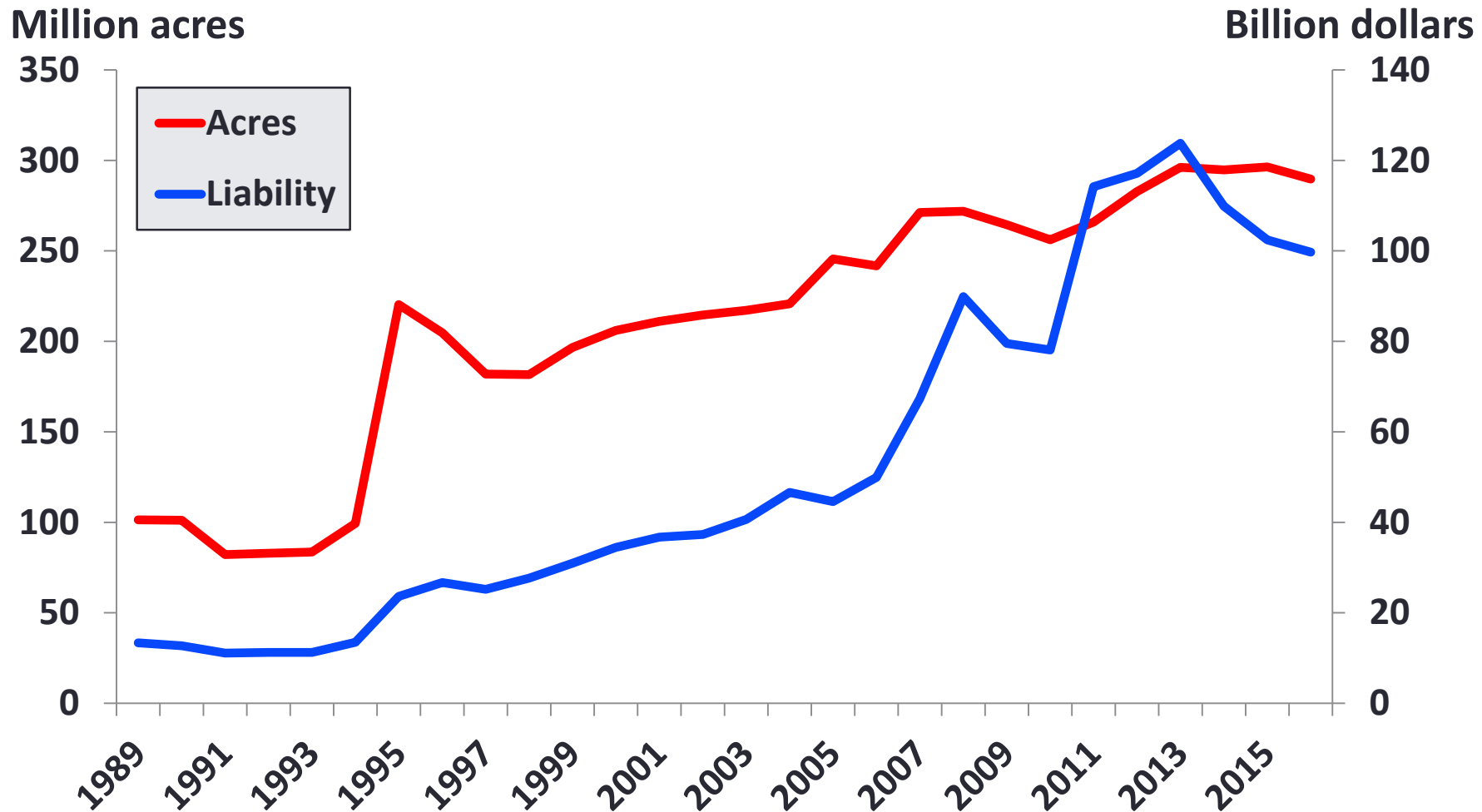
- 80% yield policy would have been \$1,236

Loss ratio (indemnities/premiums)



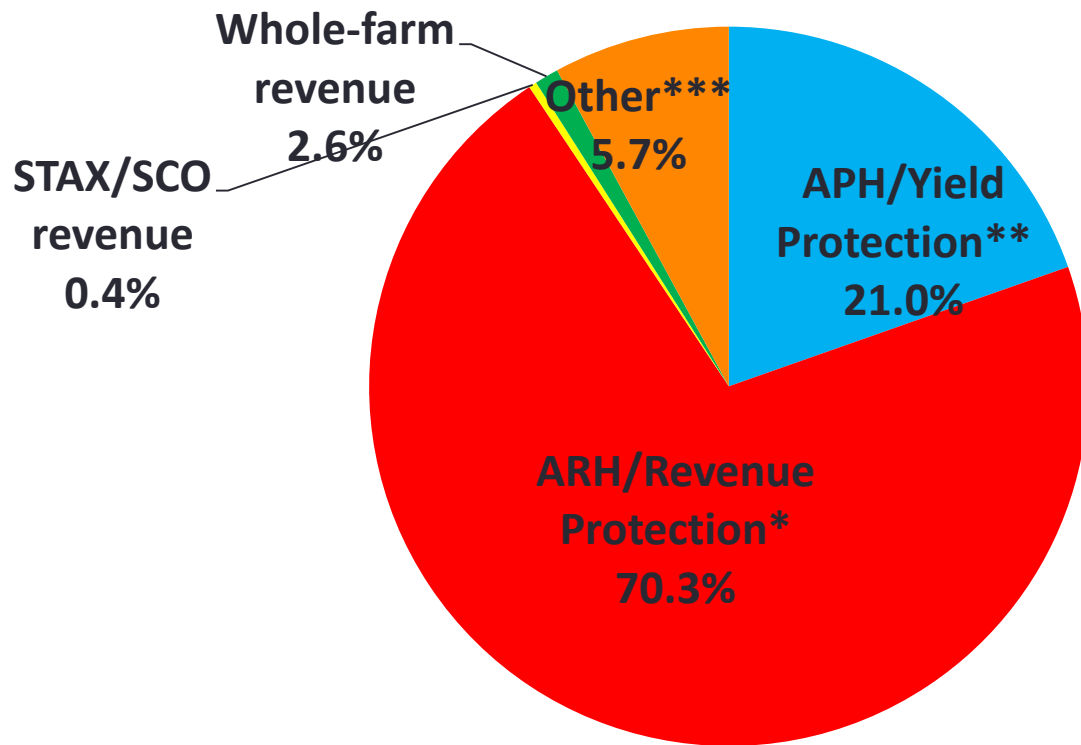
Data: USDA.

Growth in the US crop insurance program



Data: USDA.

Crop insurance liabilities heavily weighted to revenue protection plans



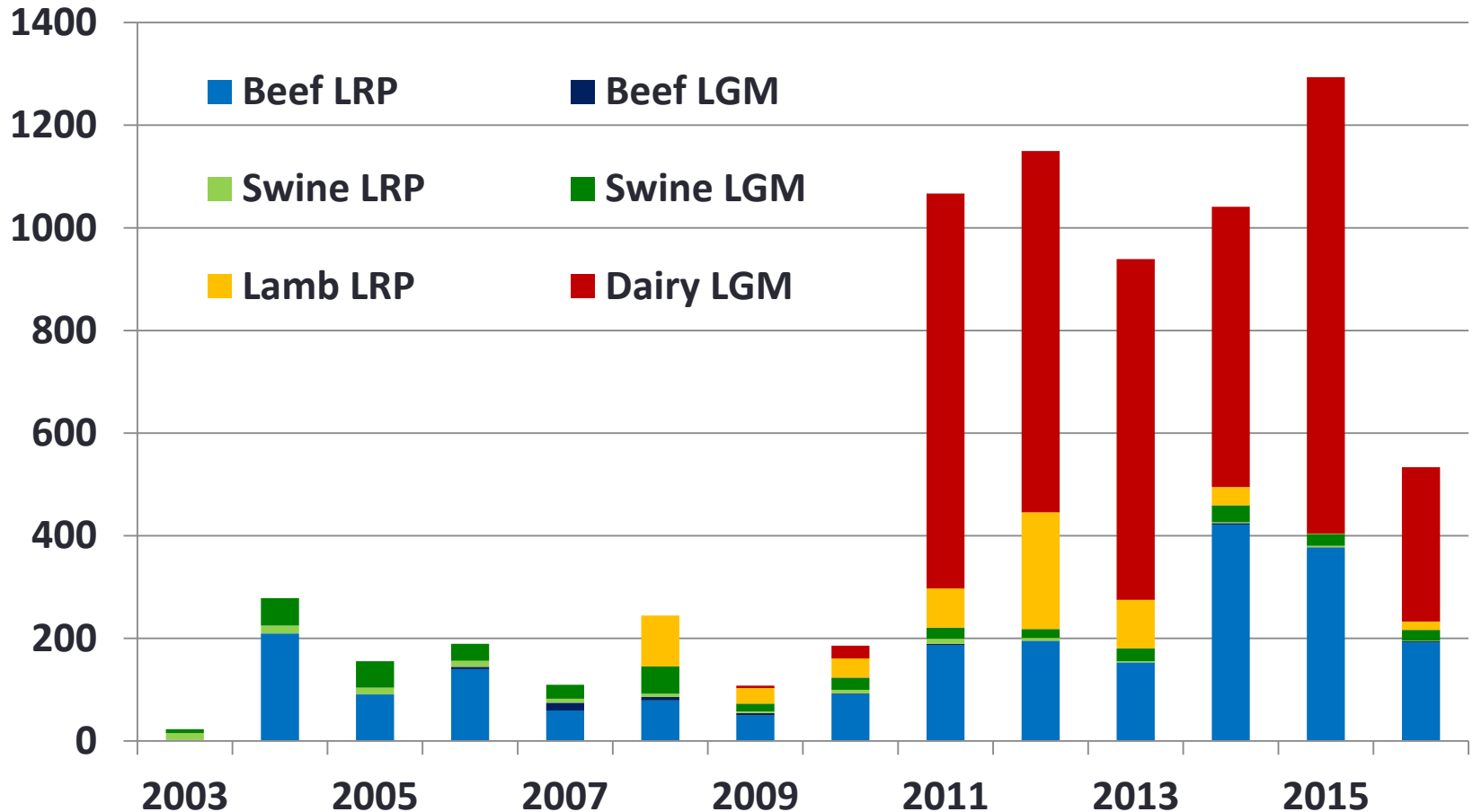
*Includes Area Revenue Protection (ARP). **Includes SCO yield and Area Yield Protection (AYP).

***Includes dollar value protection, and rainfall/vegetation index plans. ARH = Actual Revenue History; APH = Actual Production History; STAX = Stacked Income Protection Plan; SCO = Supplemental Coverage Option.

Data: USDA.

Livestock insurance liabilities rise, especially for beef

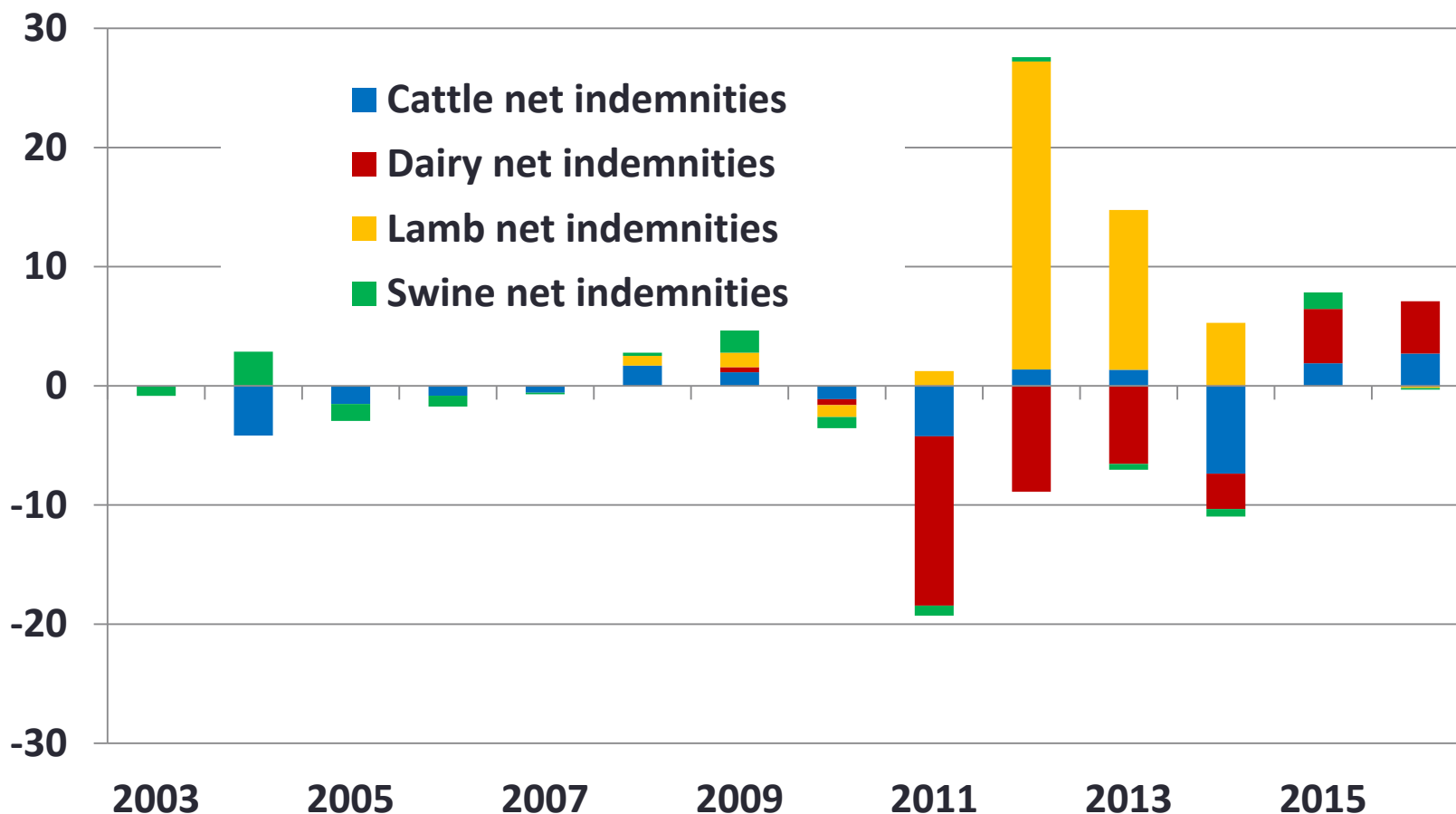
Million dollars



Data: USDA.

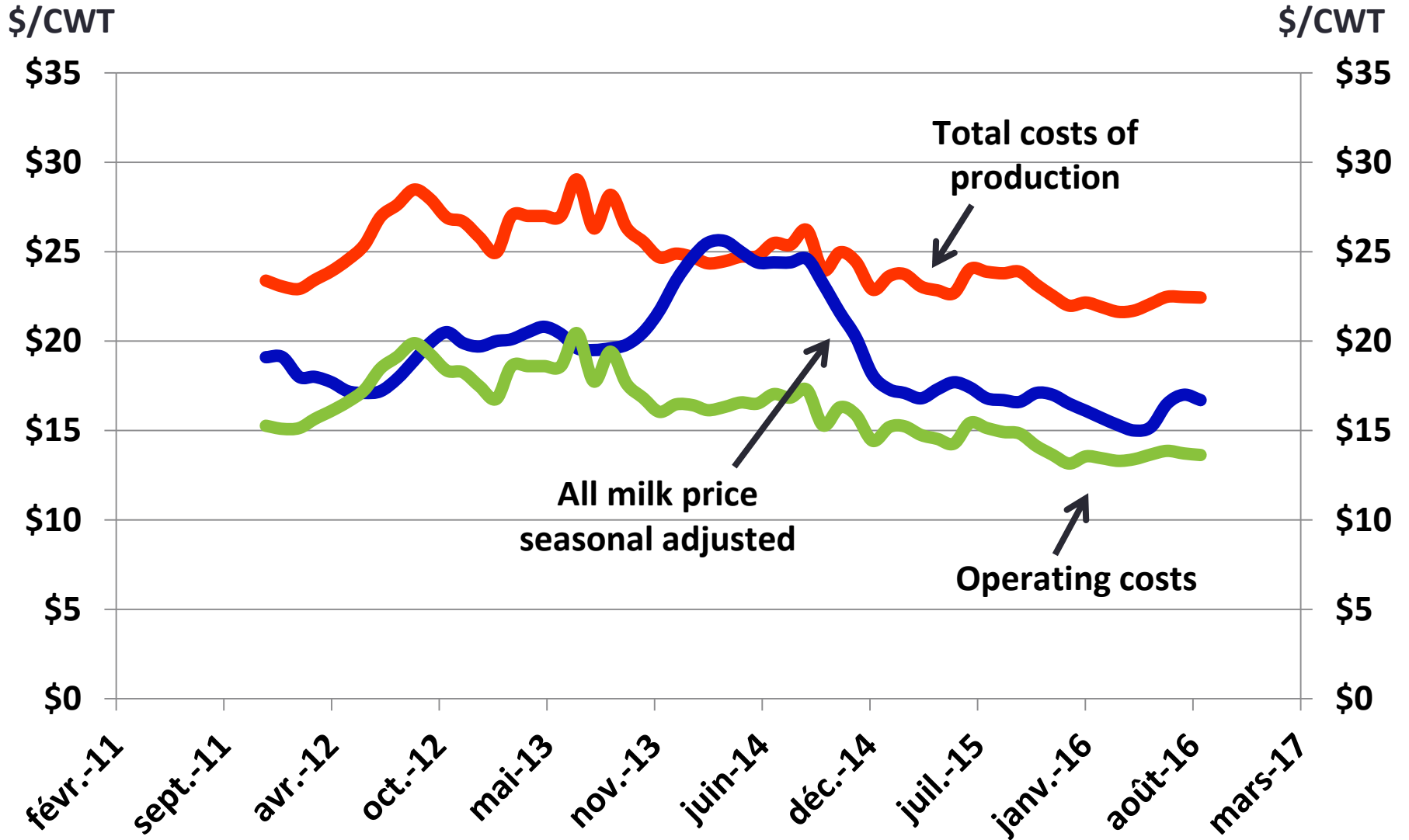
Indemnities are below producer premiums in many years

Million dollars



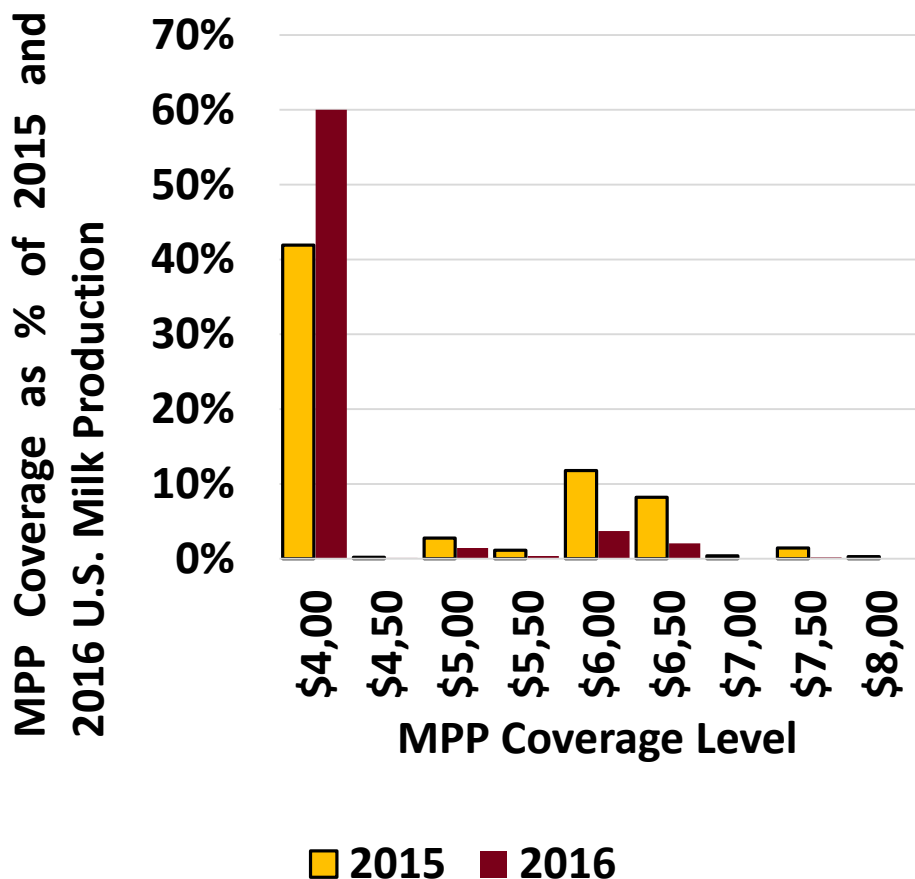
Data: USDA.

Milk costs outstripping price



Data: USDA.

Dairy Safety Net in the 2014 Farm Bill



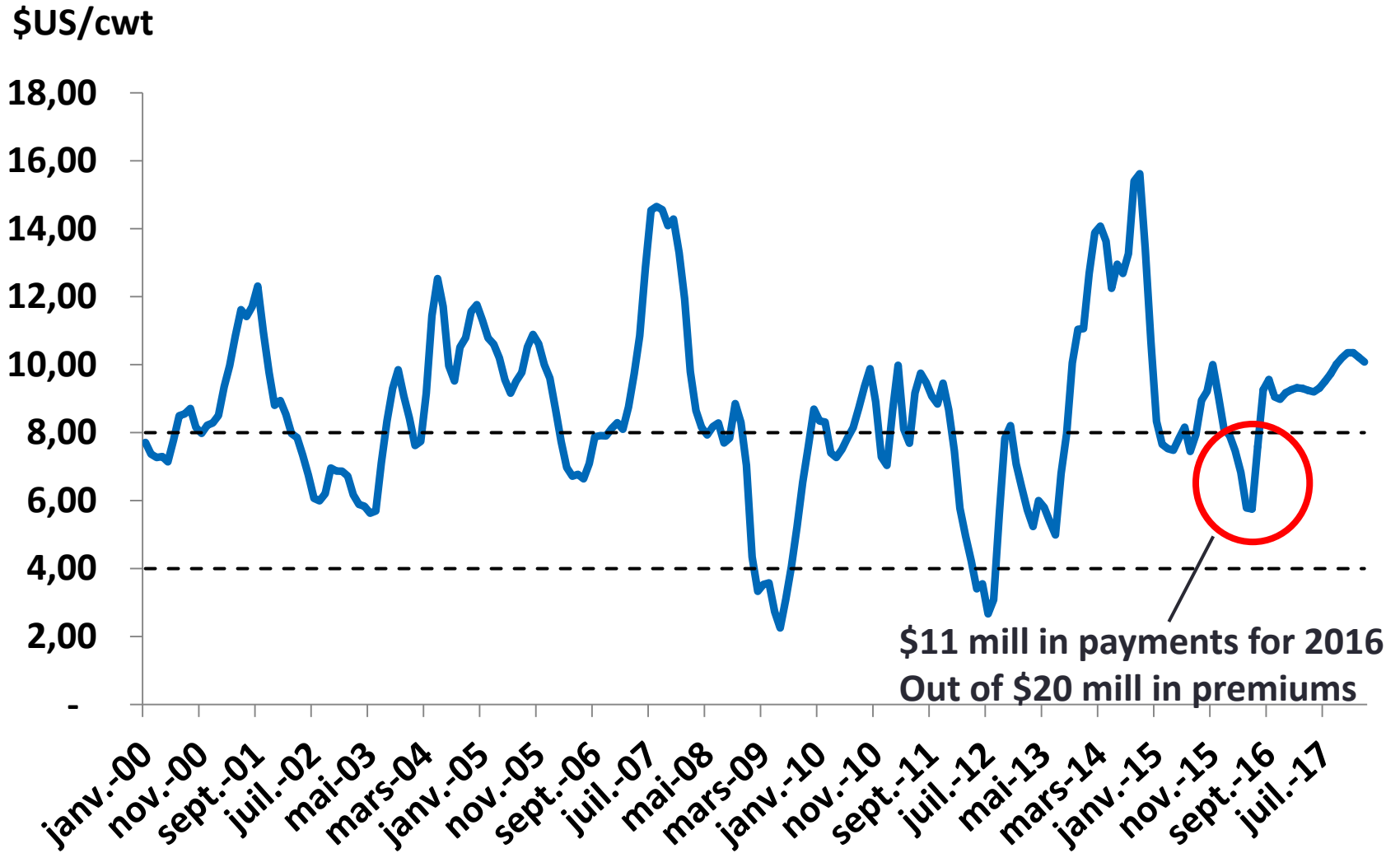
- 75% of expected 2016 milk production covered under MPP-Dairy (60% at catastrophic coverage level)
- Approximately 15% of milk covered by CME and other private risk management tool
- Less than 5% covered by LGM-Dairy.

MPP example: 500 cow operation in MN; 10 million pounds of production

- In 2015, this producer bought up MPP coverage on 90% of the operation's production history to a margin of \$6.50 at a cost of \$0.29 per CWT = \$17,500.
- In 2015, MPP margins never fell below \$7.50 / CWT
- No payments

- In 2016, this producer decided to buy-up on MPP to \$6.50 on only 50% of production history and keep the default \$4.00 margin on the remaining 40%. Cost = \$7,200
- In 2016, MPP margin fell below \$6.50 once. Indemnity to this producer would have been about \$2,300

Dairy margins recently fell within MPP coverage levels



Data: USDA.

Thanks!

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<http://www.usda.gov/oce/forum/>

http://www.usda.gov/oce/commodity/wasde/Secretary_Briefing.pdf

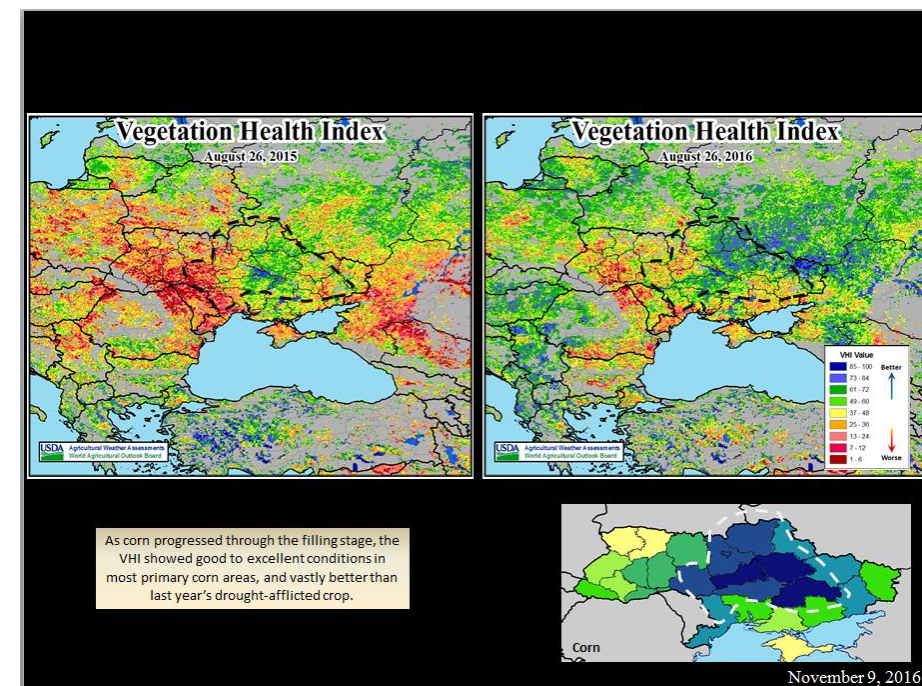
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Crop Production

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USDA United States Department of Agriculture

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