WISCONSIN
UNIVERSITY OF WISCONSIN–MADISON

FEDERAL CROP INSURANCE

AAE 320: Farming Systems Management

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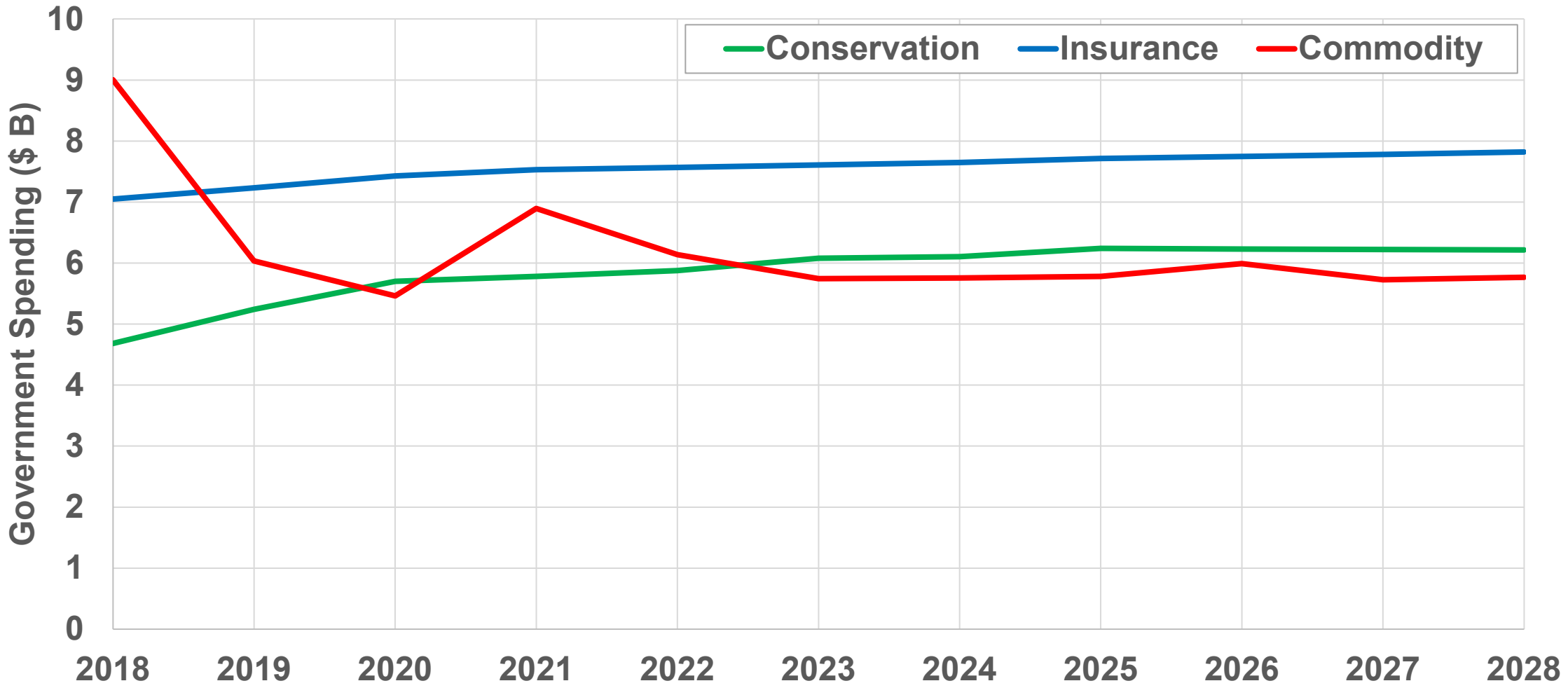
Agricultural and Applied Economics

AGRICULTURAL & APPLIED ECONOMICS
College of Agricultural & Life Sciences

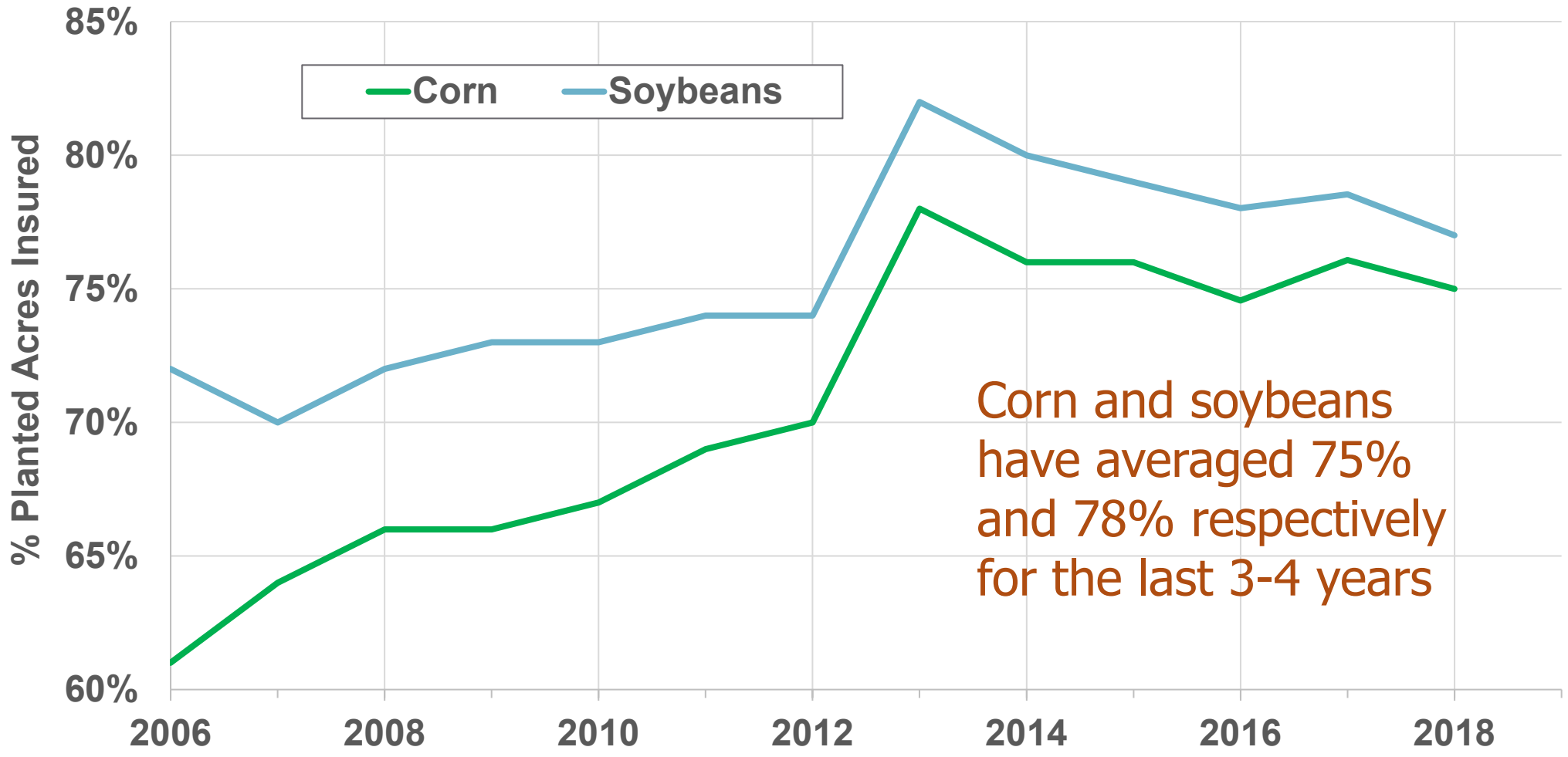
Learning Goals

- Overview current crop insurance programs for major crops
  - What the various crop insurance options are
  - How the various options work
  - The choices a famer must make when using crop insurance

CBO Projected Spending:
Crop Insurance the Largest Spending Category



Trends in WI Crop Insurance Participation



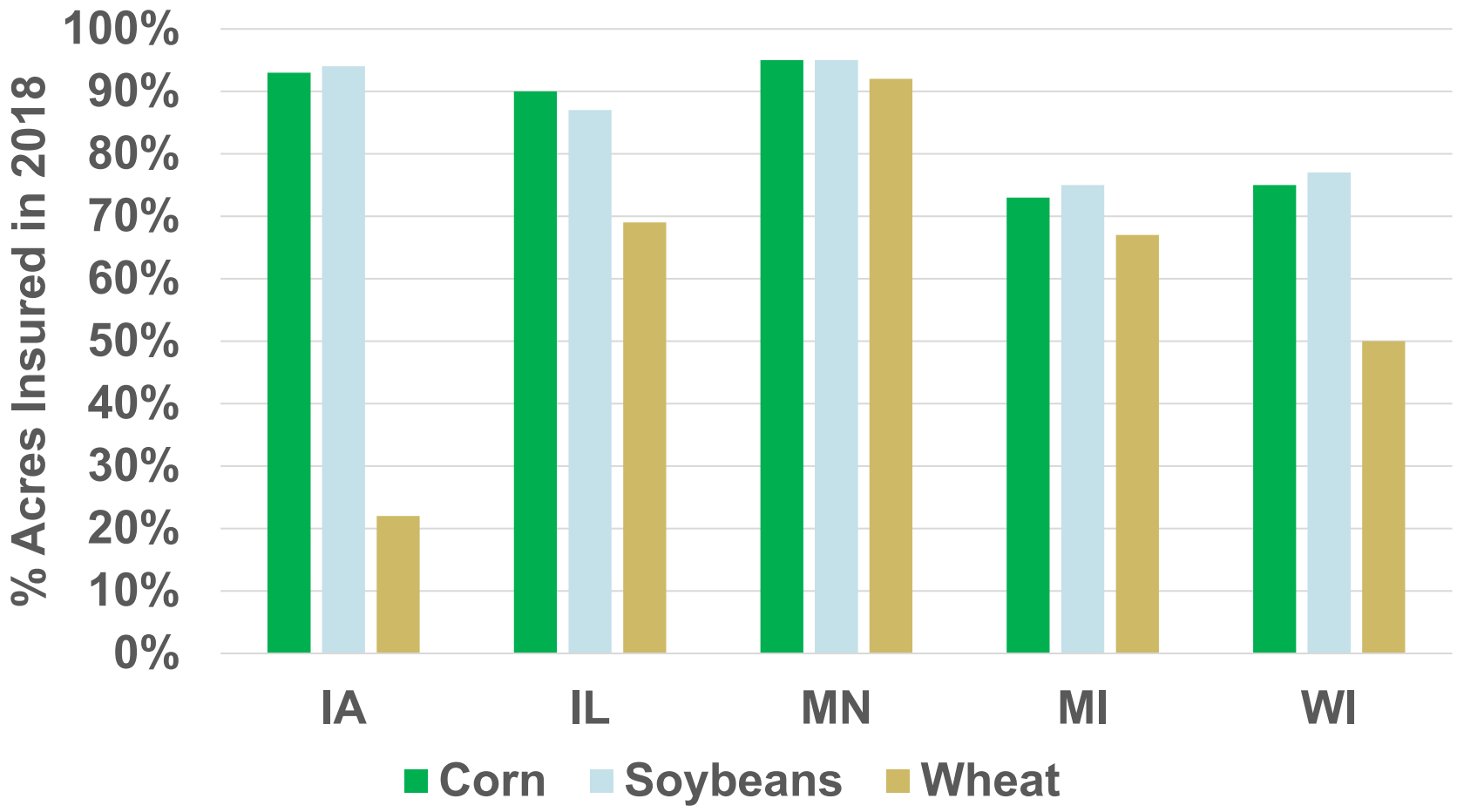
WI vs. neighboring states

% planted acres insured in **2018**

State	Corn	Soybeans	Wheat
IA	93%	94%	22%
IL	90%	87%	69%
MN	95%	95%	92%
MI	73%	75%	67%
WI	75%	77%	50%

WI vs. neighboring states

% planted acres insured in **2018**



Crop Insurance

- Suppose I'm interested: Where do I start? **Contact a crop insurance agent!**
  - They all sell exactly the same polices for exactly the same prices, you are buying service – Find someone you like to work with
- For corn and soybeans: Choices you make
  1. What policy to buy?
  2. What coverage level to chose?
  3. What unit structure to use?

Types of Crop Insurance Policies

- Farmers have four choices for most crops
  - Are exceptions for regionally minor crops
- Yield Insurance vs Revenue Insurance
  - What triggers a payment? Yield or Revenue below the guarantee
- Individual vs. Area-Wide Coverage
  - Whose yield/revenue triggers payment? Your own or your county's

WI Crop Insurance Policies: Corn & Soybeans

So Many Options!!	Individual (Farm)	Area-Wide (County)
Yield	YP Yield Protection	AYP Area Yield Protection
Revenue	RP Revenue Protection	ARP Area Revenue Protection
	RP-HPE: Harvest Price Exclusion	ARP-HPE w/ Harvest Price Exclusion

- **Catastrophic coverage (CAT):** For YP, AYP
- **Whole-Farm Revenue Protection**: Insure Schedule F income

WI Crop Insurance Policies: Corn & Soybeans

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Types of Policies

- Yield Protection (YP)
  - Individual Yield Insurance
- Revenue Protection (RP) and RP-HPE (harvest price exclusion)
  - Individual Revenue Insurance
- Area Yield Protection (AYP)
  - Area-wide (County) Yield Insurance
- Area Revenue Protection (ARP) and ARP-HPE (harvest price exclusion)
  - Area-wide (County) Revenue Insurance

Farmer Choices

- After farmer chooses a policy (YP, RP, AYP, ARP), then they have three choices to make
  - Coverage Level (like the deductible)
  - Price Election (payment rate for losses)
  - Unit Structure (some policies have no options)
- Explain Yield Protection details to understand the other policies

YP: Yield Protection

- If actual harvested yield is less than your Yield Guarantee, receive an indemnity
- Actual Production History (APH): Average harvested yields over last 4-10 years
- Yield Guarantee: chose Coverage Level as % of your APH (Actual Production History)
- Coverage Level: % average yield (APH) chosen as guarantee, from 50% to 85% by 5% intervals
- Price Election: Choose price paid for each bushel below your yield guarantee, from 100% to 55% of established Base Price

Coverage Level sets Yield Guarantee: Example to Illustrate

Year	Yield
2015	165
2016	175
2017	150
2018	110
2019	145
2020	185
AVG	**155**

APH = 155

Coverage Level	Yield Guarantee
50% x 155 =	78 bu/ac
55% x 155 =	85 bu/ac
60% x 155 =	93 bu/ac
65% x 155 =	101 bu/ac
70% x 155 =	109 bu/ac
75% x 155 =	116 bu/ac
80% x 155 =	124 bu/ac
85% x 155 =	132 bu/ac

Price Election

- How much you are paid for each bushel that actual harvested yield is below yield guarantee
- Base Price set by USDA-RMA: Average of Dec corn (Nov soybean) futures contracts on Chicago Mercantile in Feb
- Choose 100% to 60% of this price in 1% intervals, appears as $/bu options
  - **Most farmers choose 100%**
  - Price set for large regions
  - 2014: Corn $4.62, Soybeans $11.36, Wheat $6.51
  - 2015: Corn $4.15, Soybeans $9.73, Wheat $5.85
  - 2016: Corn $3.86, Soybeans $8.85, Wheat $5.13
  - 2017: Corn $3.96, Soybeans $10.19, Wheat $4.74
  - 2018: Corn $3.96, Soybeans $10.16, Wheat $5.02
  - 2019: Corn $4.00, Soybeans $9.54, Wheat $4.35
  - 2020: Corn $3.88, Soybeans $9.17, Wheat $4.94

YP Indemnity

- If Actual Harvested Yield < Yield Guarantee
- Indemnity = Price x ($Y_{guarantee} - Y_{harvested}$)
- Price: Chosen Price Election
  - **Most farmers choose 100%**
- Coverage Level determines your trigger, pay more for higher coverage levels (lower deductible)
- Price Election determines how much you are paid when you have a loss, pay more for higher price election

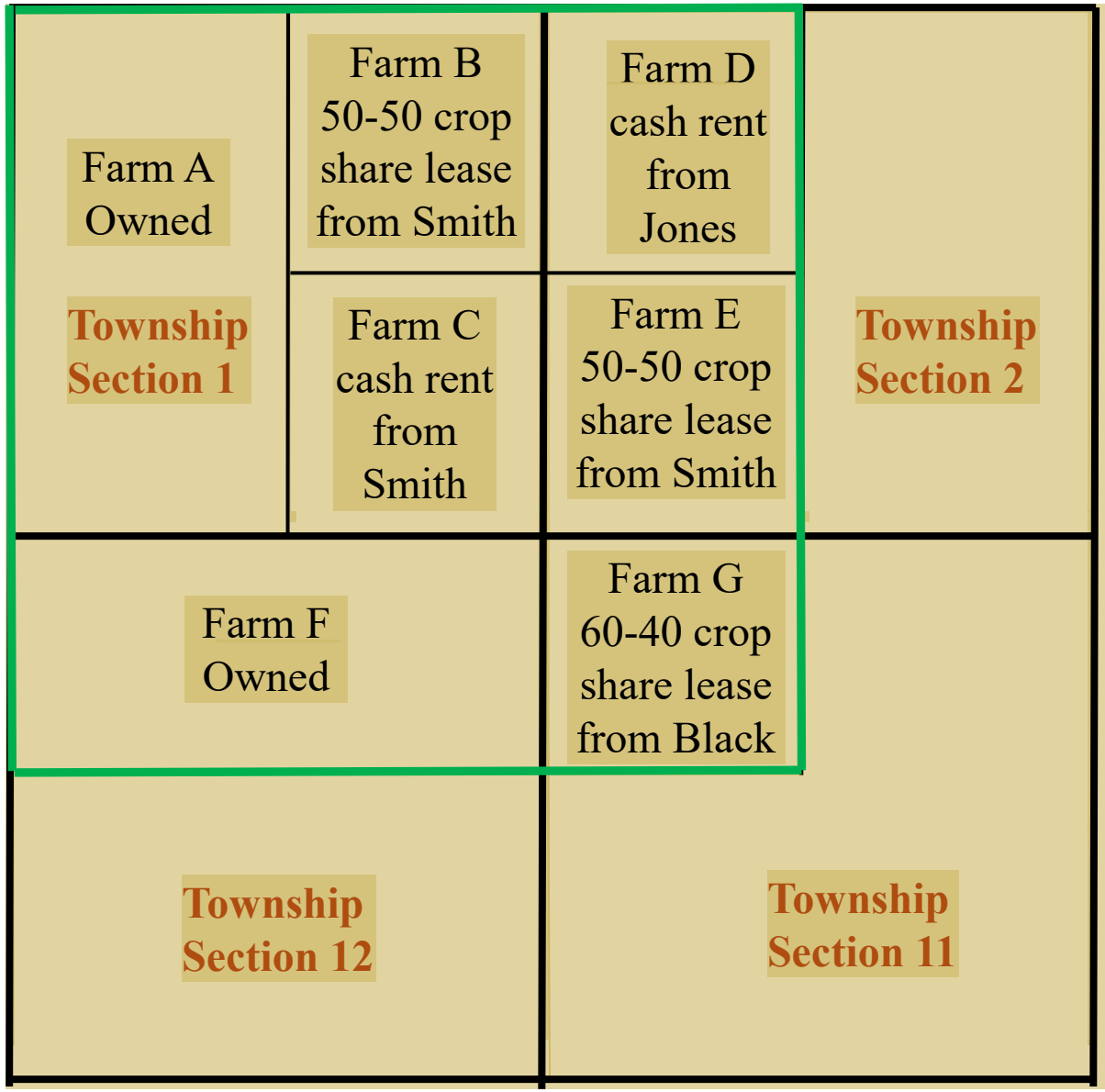
Unit Structure

- Legally define the area (fields) insured
  - Planted to the same crop during the insurance period
  - Cannot cut across a county line
  - **Must have separate production records for each unit**
- Three unit types (smallest to largest)
  - Optional Unit, Basic Unit, Enterprise Unit
- Current Recommendation: Choose Enterprise Units if you qualify because of the large premium discount
  - Otherwise choose Optional Units
- Enterprise unit: need two units, with the smallest > 20 acres or 20% insured acres, or 660 total acres in one unit
- Lots of rules: Crop insurance agent can help you figure out rules

Unit Structure Choices

- All insurance guarantees work at the unit level, not on a per acre basis
- 100 acre unit, average yield 160 bu/ac, 75% coverage level = 100 x 160 x 0.75 = 12,000 bushels
  - Guaranteed 12,000 bu from those 100 acres
- Have to choose how to combine fields together into units
- Can't just combine fields any way you want: Rules to follow
- Unit Sizes (smallest to largest):
  - Optional < Basic < Enterprise
- Smaller units means more indemnities (averaging over smaller area) and so larger premiums
- Government encourages larger units by giving larger premium subsidies for larger units (enterprise unit discount)

Farms A-G: Same operator planting the same crop



Basic Units

1) A, C, D, and F
2) B and E
3) G

Optional Units

1) A and C
2) B
3) D
4) E
5) F
6) G

Enterprise Unit

1) A thru G

Simple YP Example for a Unit

- Suppose have one unit, 100 acres of corn
- APH (average yield) is 160 bu/ac
- Choose 70% coverage level, and 100% price election $5.65/bu
- Yield guarantee = 70% x 160 bu/ac = 112 bu/ac
- Unit Guarantee = 112 x 100 ac = 11,200 bushels
- Actual harvest from Unit is 10,500 bu (or 105 bu/ac)
- Indemnity: $5.65 x (11,200 – 10,500) = $3,955 (or $39.55/ac)
- Notice how guarantee and indemnity work at the unit level
- However, farmer and others often talk about it at the per acre level

Revenue Protection

- Combines Yield Protection with price protection based on CBOT futures prices
- Your yield history and the CBOT prices set your preliminary Revenue Guarantee
- Same coverage levels, same unit structures as YP
- Your actual revenue at harvest is your yield x CBOT prices (e.g., Nov average of Dec corn or Oct average of Nov soybean)
- If your actual harvested revenue is below your guarantee, triggers an indemnity payment

Initial and Final Revenue Guarantee: RP vs. RP-HPE

- Base Price: Feb avg of Dec corn futures
- Harvest Price: Nov avg of Dec corn futures
- Initial Revenue Guarantee: calculated using the Base Price
- Final Revenue Guarantee: calculated using the **maximum** of Base Price and Harvest Price
- With RP, if price increases over season, your revenue guarantee increases, if price falls, your guarantee remains unchanged
- RP-Harvest Price Exclusion: revenue guarantee is not updated with the maximum of the Base price and the Harvest price
- Lower indemnities with RP-HPE if price increases and have low yield, so Lower Premiums
- Very few farmers buy RP-HPE

RP Protects Against Both Price Increases & Decreases

- If the price falls or you have a low yield, you know you will have the grain, or the money to buy grain at harvest time prices, to fulfill contracts or feed livestock
- If the price increases, your revenue guarantee increases too, so again you know you will have the grain, or the money to buy the grain at existing prices, to fulfill contracts or feed livestock
- Payments base on CBOT prices, you still have to market your grain
  - Can now market more aggressively since you will have grain or indemnities to buy grain at existing harvest time market prices if you have a yield loss

Simple Example Comparing the YP, RP, RP-HPE

- Assume 150 bu/ac APH and 70% coverage level, so
- YP: per acre guarantee is 105 bu/ac
- Base price at plant $5.00, so RP and RP-HPE Initial Guarantee $5.00 x 105 = $525/ac
- Actual yield is 75 bu/ac, so loss is 105 – 75 = 30 bu/ac
- YP pays $5.00 x 30 bu/ac = $150/ac
- What happens if harvest price increased to $6.00?
  - RP Guarantee $6.00 x 105 bu/ac = $630/ac
  - RP pays: $630 – ($6.00 x 75) = $630 – $450 = $180/ac
  - RP-HPE: Guarantee not change: $525 – $450 = $75/ac
- What happens if harvest price decreased to $4.00?
  - RP and RP-HRE Guarantees do not change
  - Both pay $525 – ($4.00 x 75) = $525 – $300 = $225/ac
- Note: all of these would be at unit level, not per acre

RP vs. RP-HPE vs. YP (150 bu/ac APH & 70% coverage level)

Policy	Base Price $/bu	Guarantee $/ac bu/ac	Harvest Price $/bu	Guarantee $/ac bu/ac	Actual Yield bu/ac	Actual Revenue $/ac	Indemnity $/ac
RP	$5.00	$525	$6.00	**$630**	75	$450	630 – 450 = **$180**
RP-HPE	$5.00	$525	$6.00	**$525**	75	$450	525 – 450 = **$75**
YP	$5.00	105 bu/ac	$6.00	105 bu/ac	75	$450	$5x(105 - 75) = **$150**
RP	$5.00	$525	$4.00	**$525**	75	$300	525 – 300 = **$225**
RP-HPE	$5.00	$525	$4.00	**$525**	75	$300	525 – 300 = **$225**
YP	$5.00	105 bu/ac	$4.00	105 bu/ac	75	$300	$5x(105 - 75) = **$150**

RP vs. RP-HPE vs. YP

- If harvest price > base price and low yield, larger indemnity for RP than for RP-HPE
- If harvest price < base price, no difference for RP vs RP-HPE
- Note: RP-HPE: can do worse than YP if high prices and low yields
  - RP-HPE uses actual higher harvest price to calculate actual revenue, while YP uses actual yield loss at lower base price
- RP-HPE: worst if low yields and high prices, best if low yields and low prices

Simple RP Example for a Unit

- Suppose have one unit, 100 acres of corn
- APH (average yield) is 160 bu/ac
- Announced Base Price is $3.75
- Choose 70% coverage level
- Initial Revenue Guarantee = 70% x 160 bu/ac x $3.75/bu x 100 ac = $42,000 (or $420/ac)
- Harvest time price announced as $4.00/bu
- Final Revenue Guarantee = 70% x 160 bu/ac x $4.00/bu x 100 ac = $44,800 (or $448/ac)
- Actual harvest from Unit is 10,500 bu (or 105 bu/ac), so actual revenue from Unit = $4.00 x 10,500 = $42,000
- Indemnity: $44,800 – $42,000 = $2,800 (or $28/ac)
- Again, guarantee and indemnity work at the unit level, but farmers and others often talk about it at the per acre level

AYP Area Yield Protection
ARP Area Revenue Protection

- AYP is same as YP, except that it uses USDA-NASS county average yield (not your yield)
- ARP is the same as RP except that it uses USDA-NASS county average yield
- ARP-HPE is the same as RP-HPE except uses USDA-NASS county average yield
- Payments not made until Mar/Apr when USDA-NASS yields come out, while RP and YP are paid sooner
  - Can create cash flow issues

WI Crop Insurance Policies: Corn & Soybeans

So Many Options!!	Individual (Farm)	Area-Wide (County)
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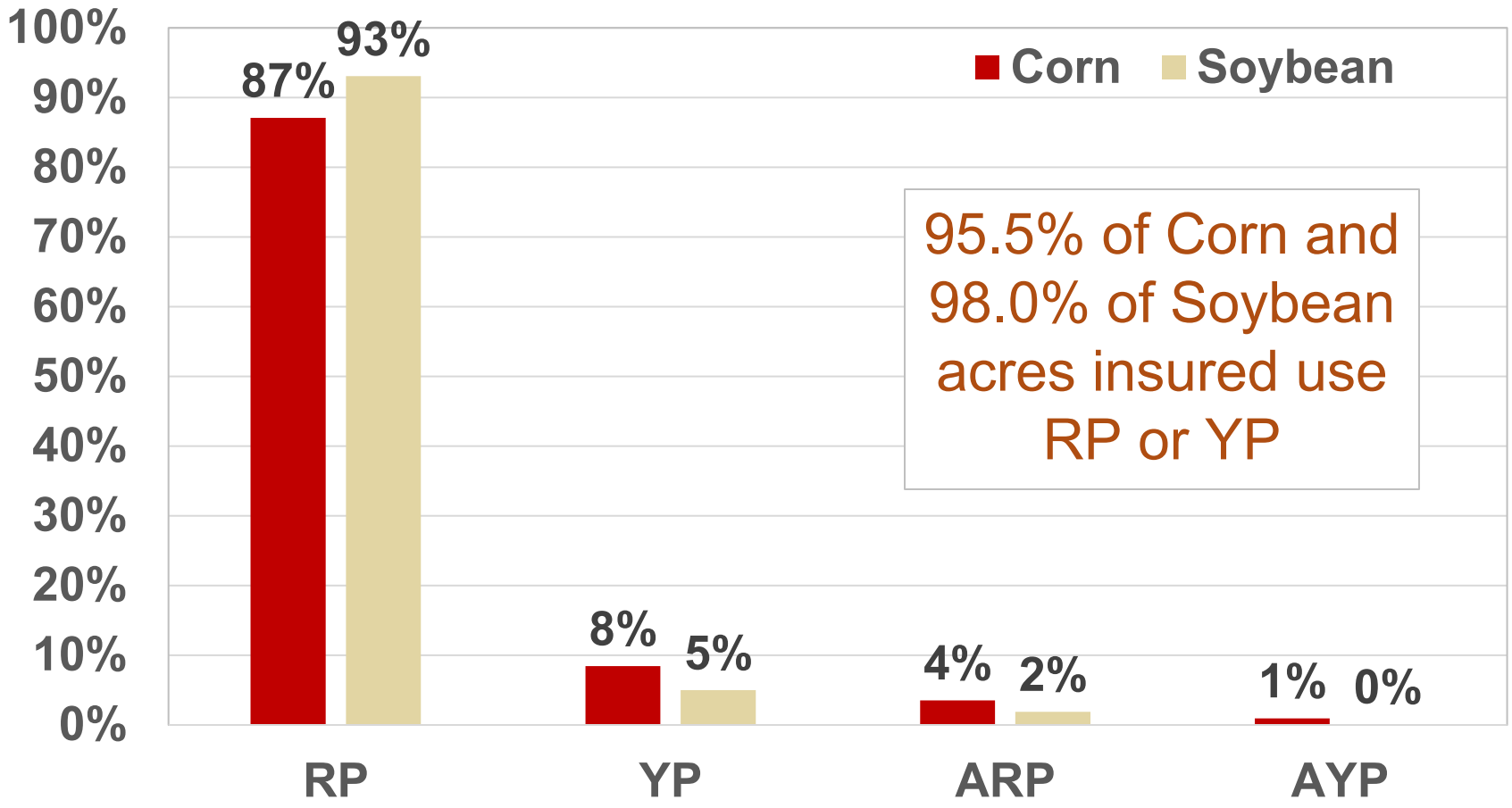
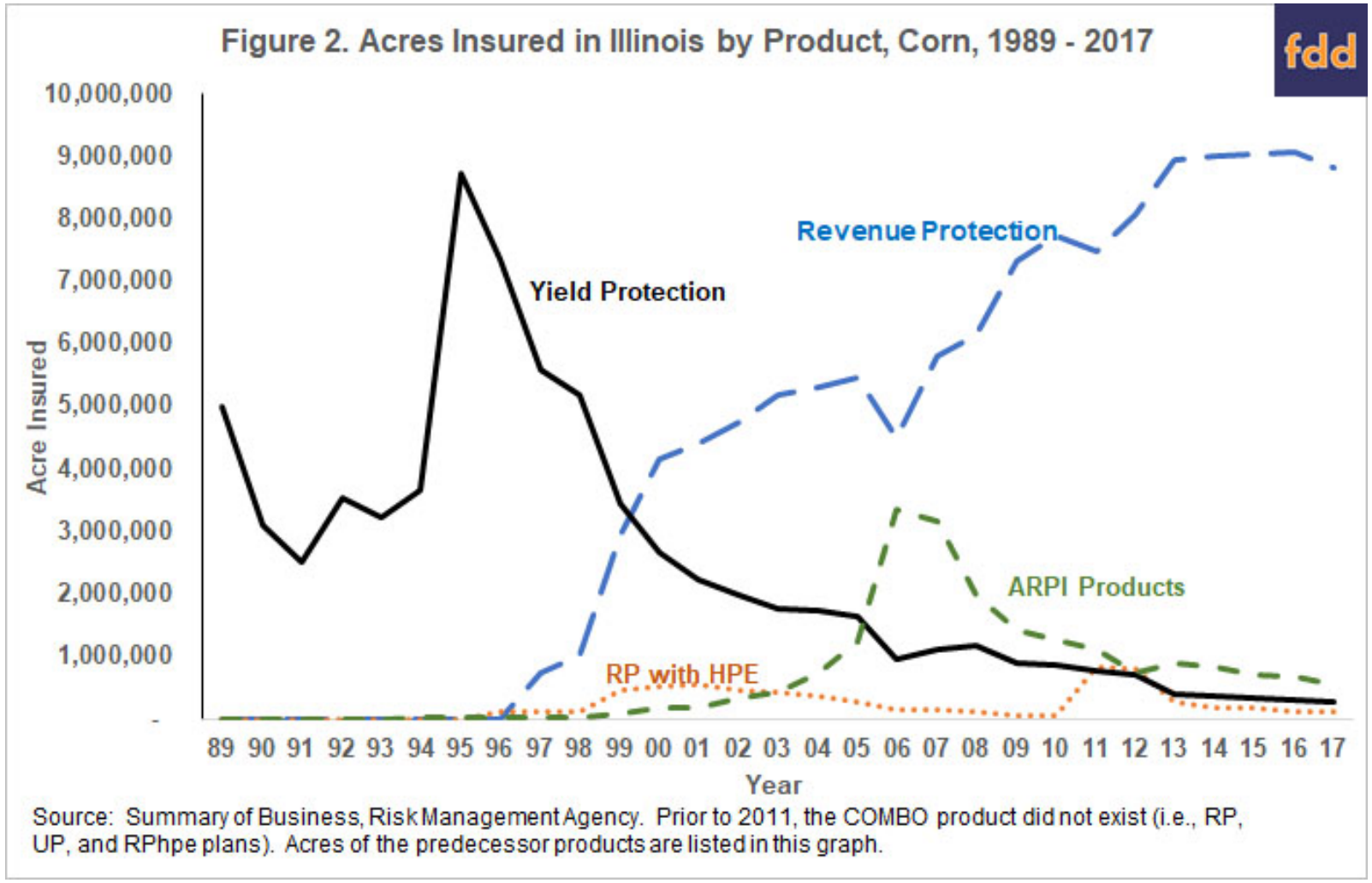
Revenue	**RP** **Revenue Protection**	ARP Area Revenue Protection
	RP-HPE: Harvest Price Exclusion	ARP-HPE w/ Harvest Price Exclusion

- **Catastrophic coverage (CAT):** For YP, AYP
- **Whole-Farm Revenue Protection**: Insure Schedule F income

% of Insured Corn and Soybean Acres by Policy Type in 2017 in Wisconsin



What policies have IL farmers used?



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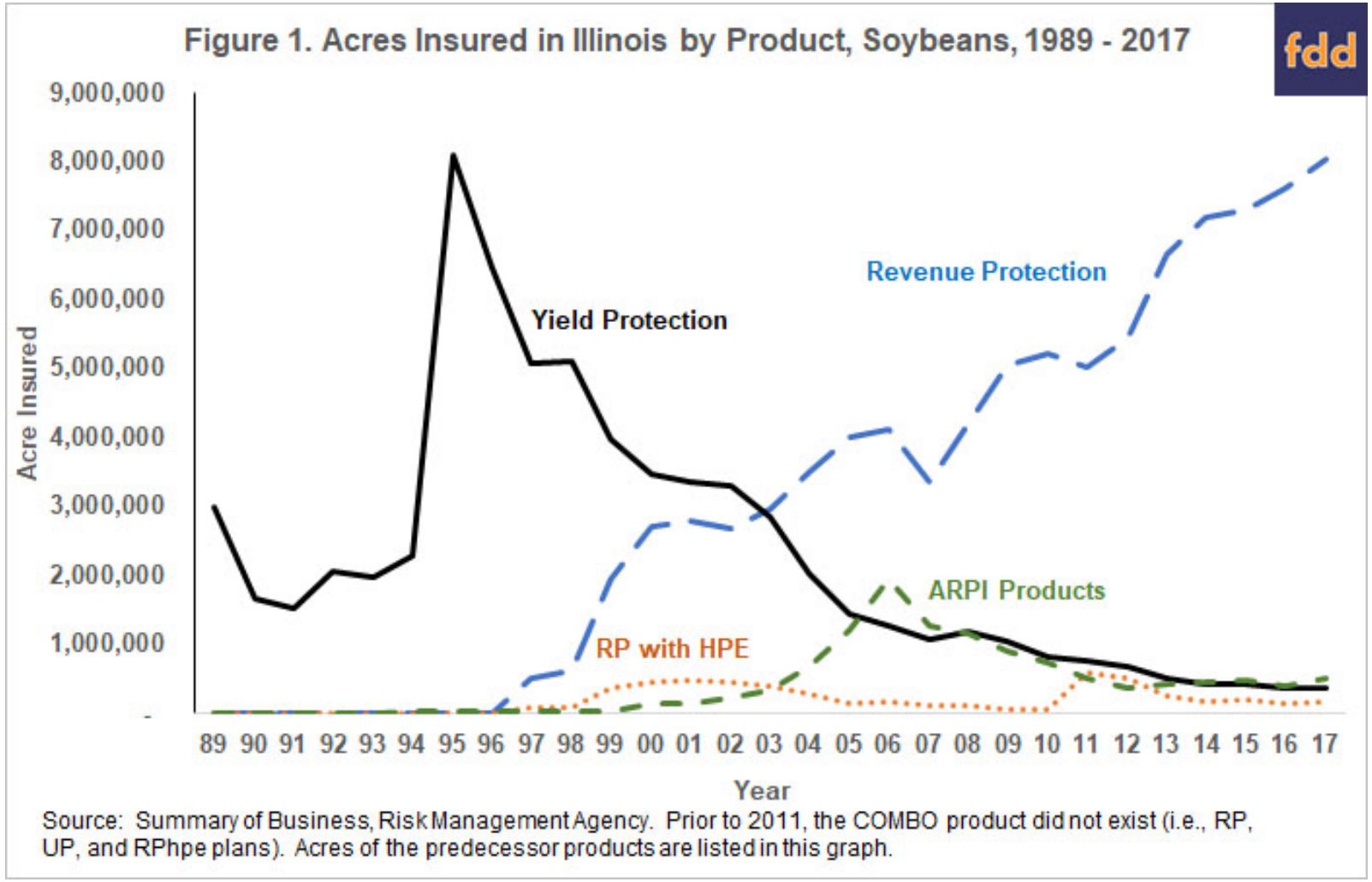
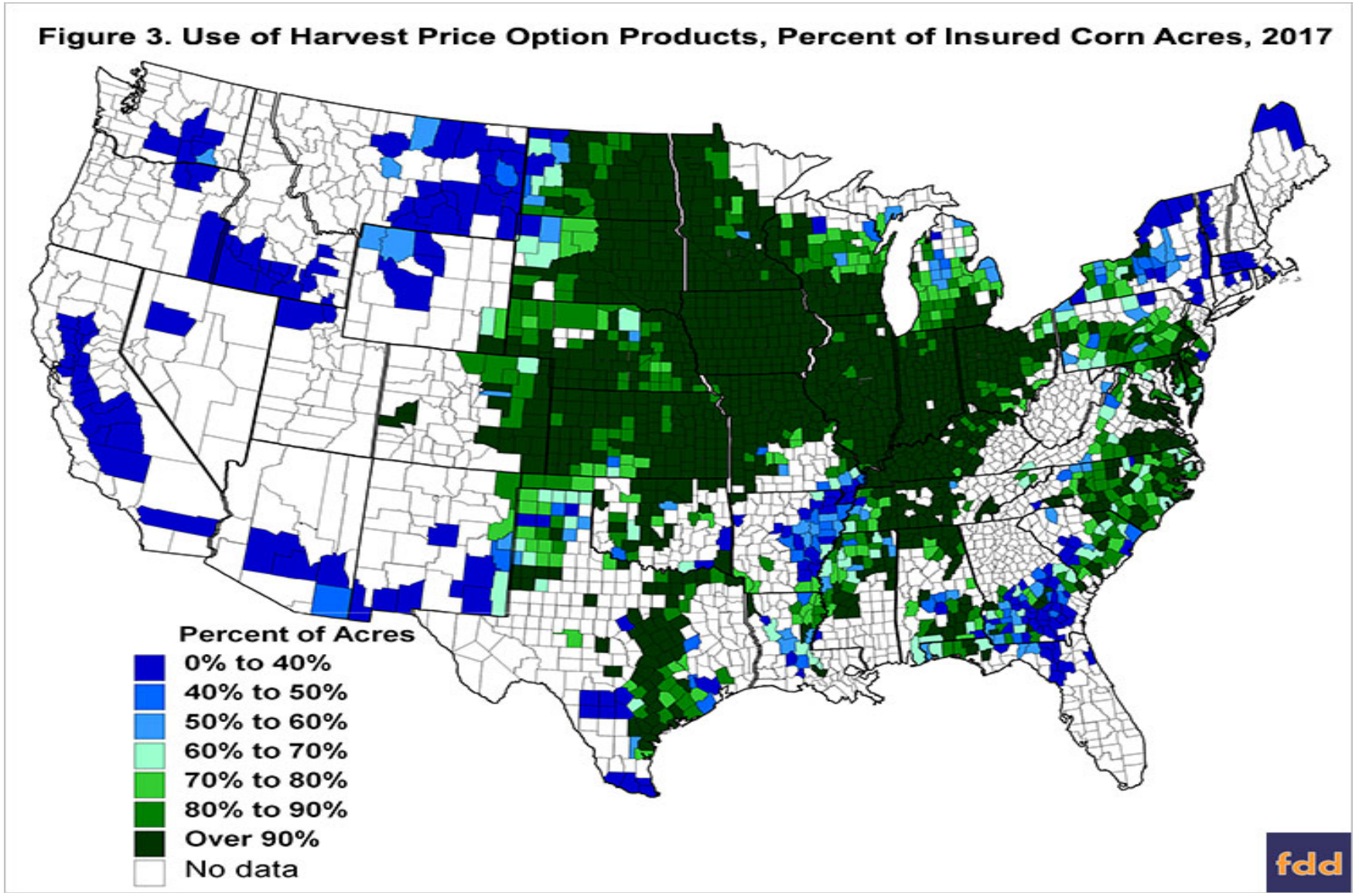


RP (Harvest Price Option) on Corn, 2017



https://farmdocdaily.illinois.edu/2018/05/overwhelming-use-of-harvest-price-option.html

- **Farmers not using RP with the Harvest Price Option are using RP-HPE**
- **Farmers use RP-HPE if local prices are less tied to CBOT prices**

Number of Policies Sold in WI in 2019 by Policy Type

Policy	Corn	Soybeans
RP	12,456	9,499
RP+SCO	1	0
RP-HPE	23	11
RP-HPE+SCO	262	199
YP	1,251	629
ARP	198	54
AYP	49	8
MP	33	30

Coverage Levels used by WI farmers for RP and YP in **2019** for Corn and Soybeans

Coverage Level	Corn RP	Soy RP	Corn YP	Soy YP
50%	1%	1%	**51%**	**45%**
55%	0%	0%	1%	1%
60%	1%	1%	4%	8%
65%	3%	3%	7%	10%
70%	15%	15%	**18%**	**21%**
75%	**44%**	**42%**	15%	11%
80%	30%	31%	3%	3%
85%	5%	6%	0%	0%

Coverage Levels used by WI farmers for RP and YP in **2019** for Corn and Soybeans

Coverage Level	Corn RP	Soy RP	Corn YP	Soy YP
50%	1%	1%	51%	45%
55%	0%	0%		
60%	1%	1%		
65%	3%	3%		
70%	15%	15%		
75%	44%	42%		
80%	30%	31%	3%	3%
85%	5%	6%	0%	0%

65%-70% of all corn & soybean acres planted in WI use RP with a 70% to 80% coverage level

89% of RP

88% of RP

Average Number of Units per Policy in WI

Year	CORN RP	SOY RP	CORN YP	SOY YP
2011	1.98	1.73	1.84	1.57
2012	1.78	1.58	1.80	1.54
2013	1.71	1.53	1.78	1.49
2014	1.67	1.51	1.74	1.38
2015	1.60	1.50	1.67	1.39
2016	1.56	1.48	1.64	1.43
2017	1.51	1.47	1.57	1.31
2018	1.48	1.44	1.55	1.41
2019	1.49	1.40	1.56	1.32

- **More and more WI farmers are using Enterprise Units**

Lots of Crop Insurance Rules

- There are lots and lots of crop insurance rules not covered here
- Planting dates, Late and prevented planting, Double cropping, Alternative crop uses, Corn maturity, Yield guarantees, Unit structures, Breaking new ground (CRP vs pasture)
- You can forfeit your coverage if you break a rule, so know the rules, always communicate with your agent
- Insurance agents don't always know all the rules, but good agents do
- Agents all sell exactly the same polices for exactly the same prices, you are buying service – Find someone you like to work with
- There are ways to get the most out of your policy, to use the rules to your advantage, good agents know how

Government Role in Crop Insurance

- Administered by USDA-Risk Management Agency (RMA) and Federal Crop Insurance Corporation (FCIC)
- USDA develops policies, rules, and premium rates
  - Development & administration costs paid by the public
- USDA pays subsidy to companies for Administration and Operating (A&O) ~20-25% of total premiums
- FCIC reinsures the insurance companies (insures the insurance companies), plus retains some of the policies (pays some of the indemnities)

Government Role in Crop Insurance

- Private companies sell insurance policies, but the government regulates the market
  - All companies sell exactly the same policies at the same prices set by the government
- USDA subsidizes the premiums
- Farmers pay about ⅓ of the “actuarially fair” premiums on average, the USDA subsidizes the rest
  - If on average, $100 indemnity paid once every 4 years, then actuarially fair premium is $25
- **Means on average, farmers should make money from crop insurance**

Premiums Subsidized: For RP and YP, % of the Fair Premium Farmers Pay

Coverage Level	Optional Units	Basic Units	Enterprise Units
50%	33%	33%	20%
55%	36%	36%	20%
60%	36%	36%	20%
65%	41%	41%	20%
70%	41%	41%	20%
75%	45%	45%	23%
80%	52%	52%	32%
85%	62%	62%	47%

Premiums Subsidized: For AYP and ARP
% of Fair Premium Farmers Pay

Coverage Level	AYP	ARP
70%	41%	41%
75%	41%	41%
80%	45%	45%
85%	45%	51%
90%	49%	56%

- Main point: Government and farmers share the premium cost
  - Higher coverage, farmer pays greater share
- CAT: 100% subsidized, just pay $300 admin fee

Premiums ($/A): Dane County WI, 2018

(165 Trend Adjusted APH) **Yield Protection**

Coverage	Enterprise	Basic	Optional	Guarantee
50%	1.01	1.66	2.55	82 bu
55%	1.41	2.53	3.79	91 bu
60%	1.88	3.38	4.98	99 bu
65%	2.48	5.08	7.36	107 bu
70%	3.34	6.86	9.74	115 bu
75%	4.93	9.65	13.5	124 bu
80%	9.24	15.43	21.16	132 bu
85%	16.72	22.67	30.58	140 bu

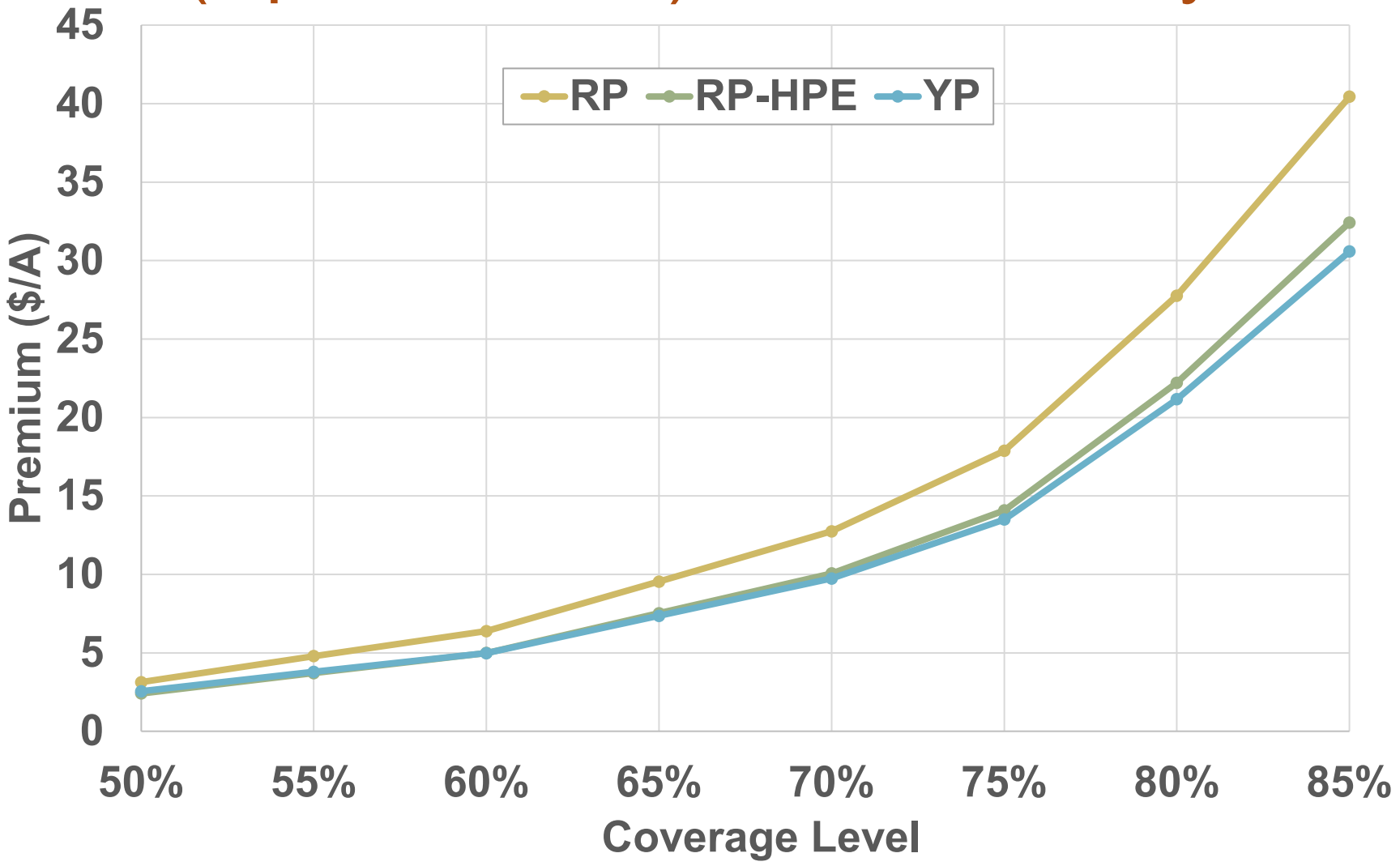
Premiums ($/A): Dane County WI, 2018 (165 Trend Adjusted APH) **Revenue Protection**

Coverage	Enterprise	Basic	Optional	Initial Guarantee
50%	1.21	2.00	3.13	$327/A
55%	1.78	3.25	4.79	$359/A
60%	2.32	4.46	6.39	$392/A
65%	3.16	6.92	9.54	$424/A
70%	4.47	9.53	12.75	$457/A
75%	6.81	13.66	17.88	$490/A
80%	12.56	21.76	27.76	$522/A
85%	23.02	32.36	40.44	$555/A

Premiums ($/A): Dane County WI, 2018
(165 Trend Adjusted APH) **Revenue Protection-HPE**

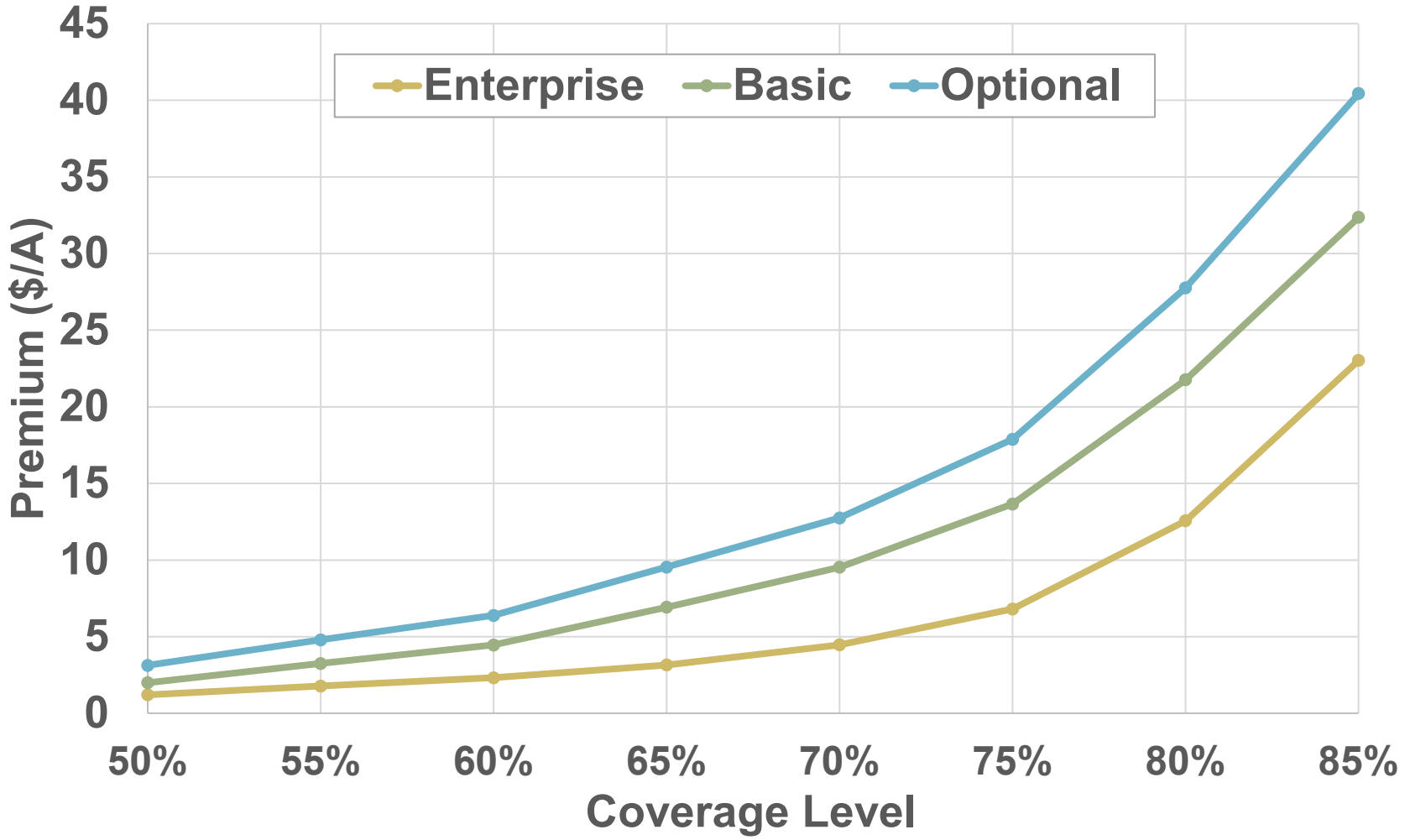
Coverage	Enterprise	Basic	Optional	Guarantee
50%	0.92	1.52	2.41	$327/A
55%	1.30	2.40	3.71	$359/A
60%	1.68	3.31	4.99	$392/A
65%	2.33	5.21	7.53	$424/A
70%	3.35	7.24	10.06	$457/A
75%	5.10	10.32	14.08	$490/A
80%	9.39	16.62	22.21	$522/A
85%	17.27	24.78	32.42	$555/A

Compare 2018 Policy Prices (Optional Units) in Dane County



Revenue Protection Farmer Premiums in 2018 Dane County, WI

165 bu/A Yield, $3.96/bu Base Price



Wisconsin Farmer Experiences with Crop Insurance

- Quick overview of WI farmer practices
  - Which policies are most popular?
  - Which coverage levels are most commonly used?
- Quick overview of WI farmer experiences
  - What are Farmer Loss Ratios for corn and soybeans

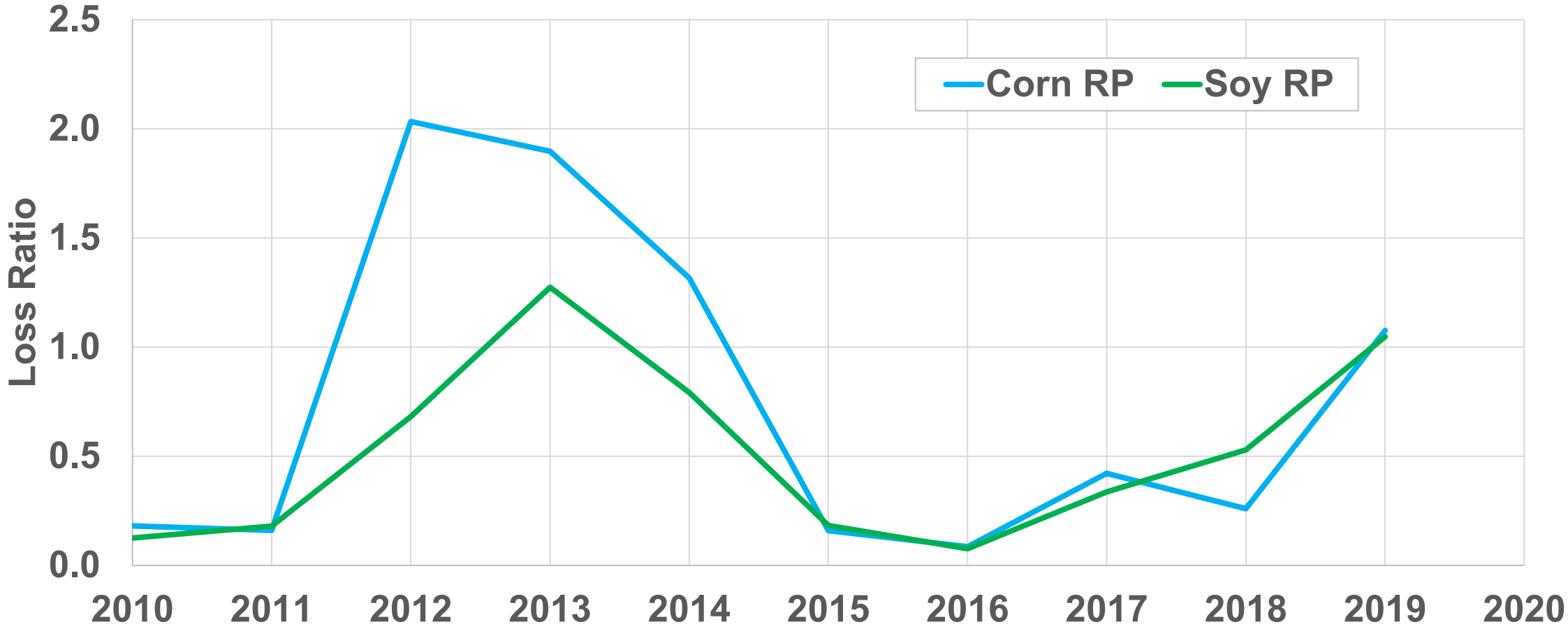
Loss Ratio and Farmer Experience with Crop Insurance

- Loss ratio is the insurance's average payout over years or regions
- Program Loss Ratio = Total Indemnities / Total Premiums
- Total Premium = Farmer Premium + Premium Subsidy
- Farmer Loss Ratio = Total Indemnities / Farmer Premium
- By law, USDA-RMA is supposed to target a total crop insurance program loss ratio of 1.0 over the long-term for each crop
- Farmers pay less than actuarially fair premiums, and so on average they should make money on crop insurance
  - In aggregate, farmers pay about 1/3 of the fair premiums
- Break it down by crop, policy, region and year
- WI for 2011 to 2019 for RP and YP for corn and soybean

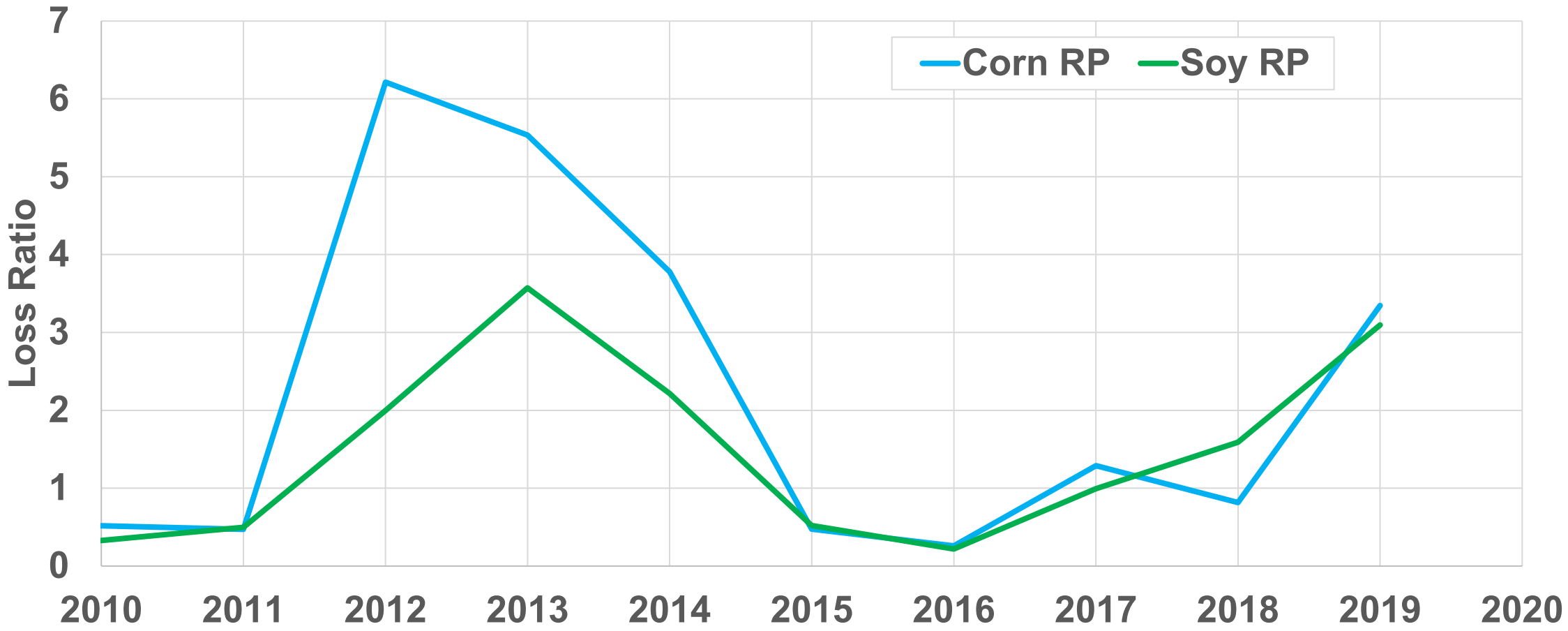
RP Loss Ratios in WI for Corn and Soy

	Program Loss Ratio		Farmer Loss Ratio	
Year	Corn RP	Soy RP	Corn RP	Soy RP
2010	0.181	0.125	0.516	0.329
2011	0.160	0.179	0.470	0.496
2012	2.033	0.682	6.216	1.997
2013	1.897	1.274	5.536	3.571
2014	1.317	0.792	3.780	2.214
2015	0.159	0.183	0.475	0.519
2016	0.085	0.076	0.259	0.220
2017	0.421	0.336	1.289	0.992
2018	0.259	0.529	0.815	1.590
2019	1.076	1.047	3.345	3.097
Avg	**0.759**	**0.522**	**2.270**	**1.503**

RP Program Loss Ratio in Wisconsin

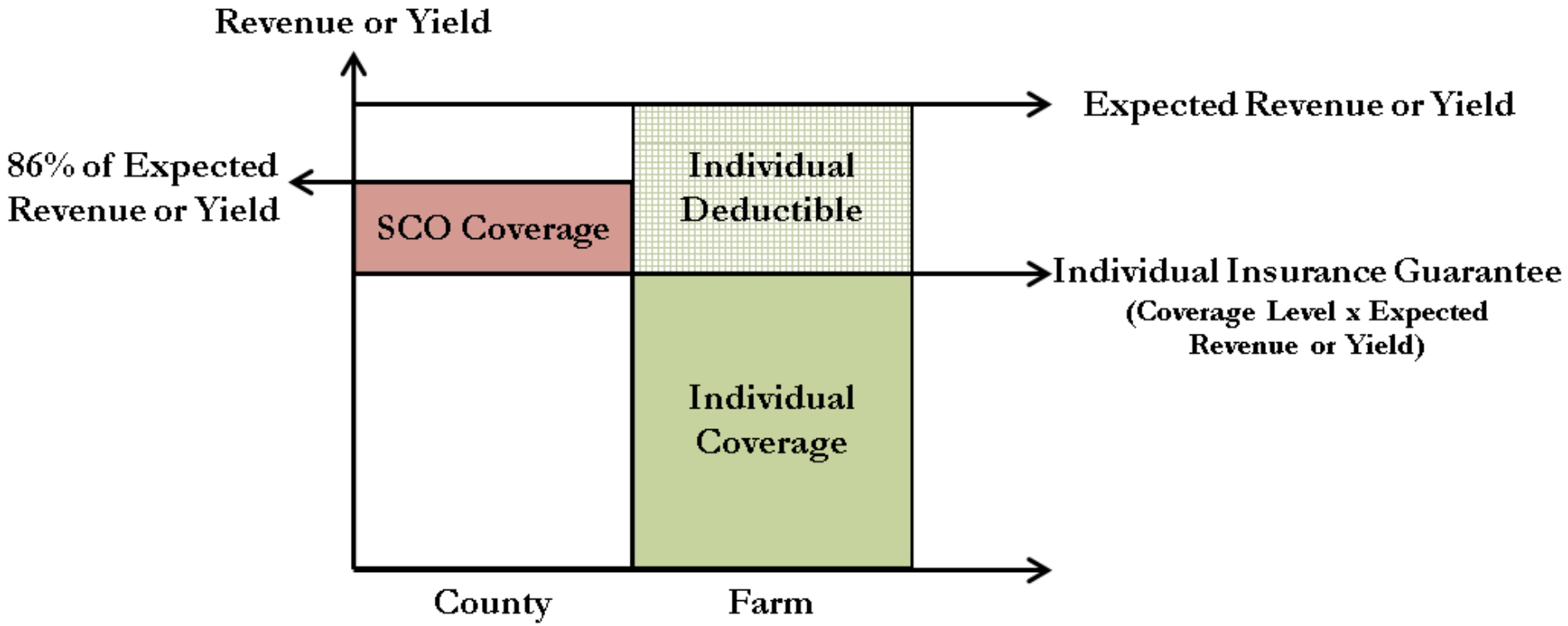


RP Farmer Loss Ratio in Wisconsin



Supplemental Coverage Option (SCO)

- SCO: allows you to insure part of your RP/YP deductible with a county policy (ARP/AYP)
  - Layer individual & county coverage
  - Can't exceed 86% total coverage
- Add SCO to your RP policy to increase coverage up to the 86% of your expected revenue
  - SCO will not pay until county loss exceeds 14%
  - 65% SCO premium subsidy (farmer pays 35%)
- SCO available in 2015, only if choose PLC
  - If choose ARC, cannot buy SCO



Possible outcomes with RP plus SCO

1. SCO pays, but not RP
2. RP pays, but not SCO
3. Both SCO and RP pay
4. Neither SCO nor RP pays

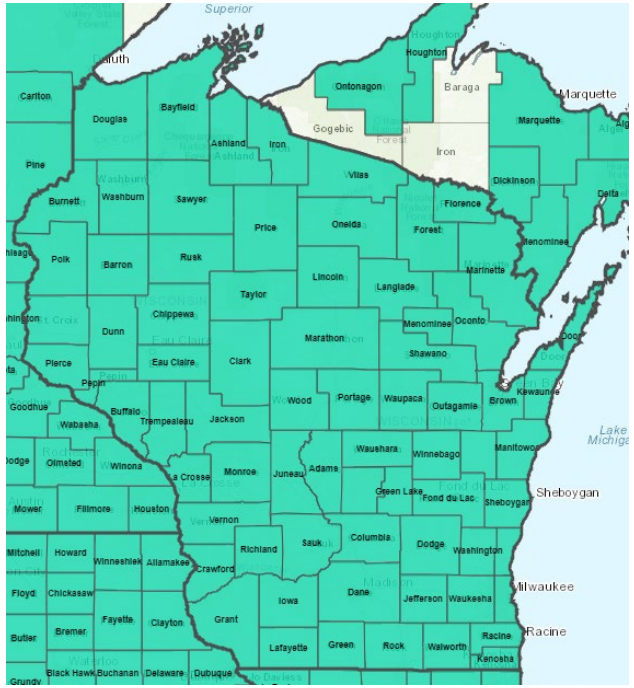
Supplemental Coverage Option (SCO)

- Suppose you have 75% RP on corn (25% deductible)
- Suppose you added 86% SCO (max you can buy)
- Outcome 3: both RP and SCO pay
- Suppose county revenue is 80% of average
- Suppose your revenue is 65% of your guarantee
- Receive SCO indemnity for a 6% loss
- Receive RP indemnity for a 10% loss
- Sales in WI: RP-SCO sold 1 policy for corn in 2019
- RP-HPE+SCO sold 262 for corn and 199 for soybeans in 2019

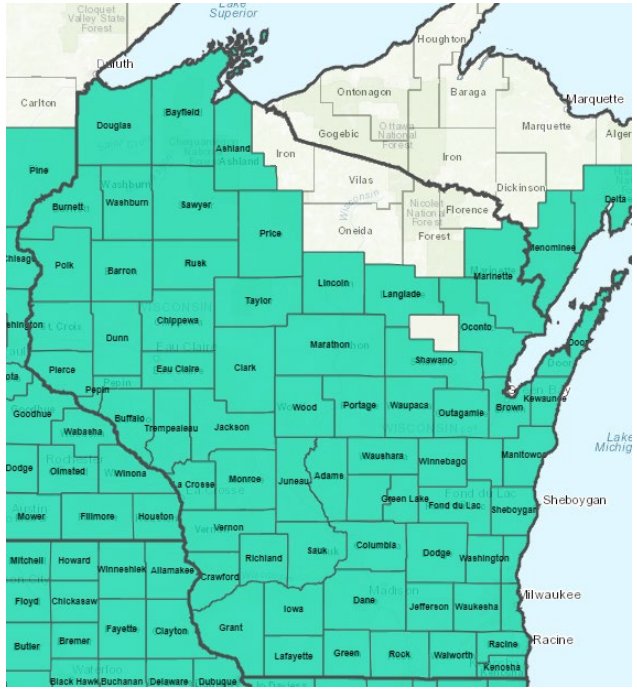
SCO Availability in Wisconsin

- SCO available for corn, soybeans and wheat in most Wisconsin counties (https://prodwebnlb.rma.usda.gov/apps/MapViewer/index.html)
- Available in 2020 in the green counties on these maps

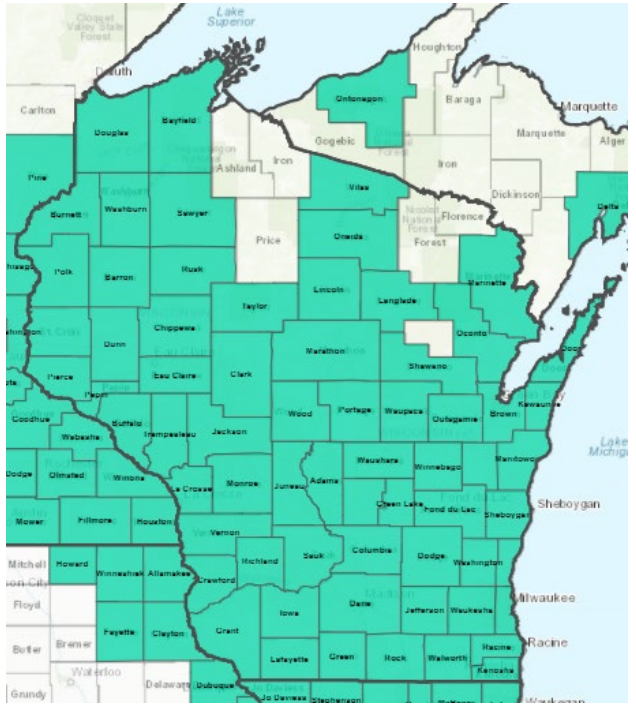
Corn



Soybeans

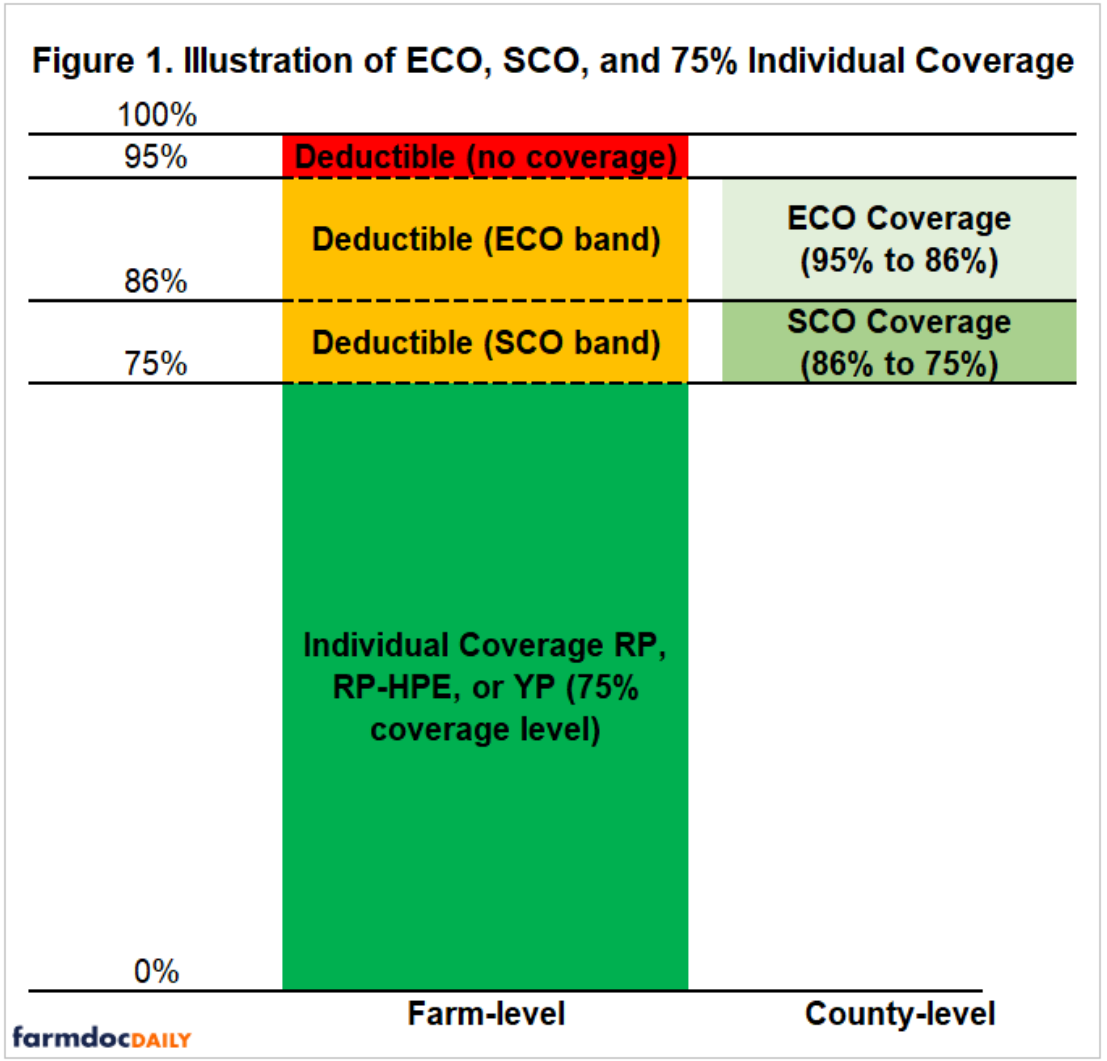


Wheat



New for 2021: Enhanced Coverage Option (ECO)

- ECO: Insure part of your RP/YP deductible with a county policy (ARP/AYP)
- Covers from 86% up to 95% of expected revenue based on county revenue
- Can use ECO whether sign up for ARC or PLC
- Can add ECO on top of to SCO or use ECO instead of SCO

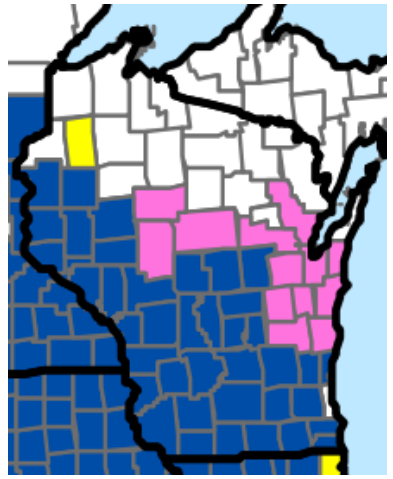


https://farmdocdaily.illinois.edu/2020/11/the-new-enhanced-coverage-option-eco-crop-insurance-program.html

Crop Insurance for Other Crops

- Almost all major WI crops have a standard crop insurance policy for them, usually only YP
  - Corn silage is a type of corn (RP, YP, ARP, AYP)
  - Small Grains: Wheat (RP, YP), oats, rye, barley, sorghum
  - Vegetables: Potatoes, sweet corn, snap beans, green peas, cabbage, cucumbers, dry beans
  - Miscellaneous: Cranberries, hybrid seed corn, apples, tart cherries
  - Forage production and seeding (1,045 & 1,046 WI policies in 2019)
  - Pasture Rangeland Forage (PRF): insure weather station precipitation and temperature ranges, for forage production (363 WI policies in 2019)

Margin Protection for Corn and Soybeans in WI



- Protects the margin between expected revenue and expected operating costs in the area
- Available for Corn, Soybeans, Wheat and Rice
- WI: only corn and soybeans: See map: blue is corn and soybeans, pink is soybeans only, yellow is corn only
- Crop prices like RP, based on CBOT
- Inputs costs based on fuel, fertilizer, interest rate with futures markets
- Corn Inputs: Diesel, Urea, Diammonium Phosphate price (DAP), Potash, Interest
- Soybean Inputs: Diesel, DAP, Potash, Interest
- First available in 2016, sold 33 corn and 30 soybean policies in 2019

Other Alternative Crop Insurance Policies

- Whole Farm Revenue Protection (WFRP): Insure Schedule F income, for farms with specialty crops, livestock, organic growers (9 WI policies in 2019)
- Alternatives if no policy exists
  - USDA-FSA non-insured crop assistance program (NAP policy)
  - Written Agreement: apply RMA policy from a similar area to your crop (e.g., grapes in WI based on MI policy)
- Organic prices now available for many crops
- Livestock price (not production) policies
  - Livestock Gross Margin (LGM): LGM Dairy was somewhat popular, but has MPP and now DMC killed it?
  - Dairy Revenue Protection (Dairy RP): new in 2018

Dairy Revenue Protection (Dairy RP)

- Area-wide revenue protection against declines in quarterly revenue from milk sales
  - Not dairy margin like LGM Dairy (and DMC)
- Uses futures prices and production data to create revenue guarantee, with payments triggered when actual market prices fall below the guarantee
  - Milk Prices: USDA-AMS monthly average
  - Milk Production: USDA-NASS Milk Production Report
- 2 pricing options: mix of class III/IV or component prices (fat, protein, other solids), you choose price weights
- Can cover up to 5 quarters into the future, depending on futures price data

Figure 3. Dairy Revenue Protection Example

Guarantee Calculations			
Quarterly Average CME Milk Futures Value		**Farmer's Choice % of Price**	**Calculated Price**
Class III	$17.00	75.00%	$12.75000
Class IV	$16.25	25.00%	$4.06250
		Price Guarantee/CWT	$16.81250

Farmer's Choice Milk Covered/Lbs	**Price Guarantee/ CWT**	**Total Revenue Guarantee**
4,000,000	$16.81	$672,500
	Coverage Level	90%
	Producer's Revenue Guarantee	$605,250

Actual Revenue Calculations			
Quarterly Average CME Milk Futures Value		**Farmer's Choice % of Price**	**Calculated Price**
Class III	$14.45	75.00%	$10.83750
Class IV	$13.81	25.00%	$3.45312
		Price Guarantee/CWT	$14.29

State-Indexed Actual Production/Lbs	**Actual Price/ CWT**	**Actual Revenue**
3,920,000	$14.29	$560,192

This is an example of realized prices and only applies to 1 quarter.
In this example, the producer would not have to pay all 5 quarters to get just one coverage.

Indemnity Calculations	
Prod Rev Guarantee	$605,250
Actual Prod Revenue	$560,192
Indemnity	$45,058

- <u>Farmer chooses</u>
  1. Price Election (%'s)
  2. Milk Covered
  3. Coverage Level
- Used to set guarantee
- I do not understand State-Indexed Actual Production and options for farmer's choice of Milk Covered
- <u>Sales in 2019</u>
- US: 2,500 policies, 30 B lbs
- WI: 800 policies, 5 B lbs
- Average cows/policy
- US ~ 480, WI ~250

Main Point

- Crop insurance has become the core of commodity support from the federal government
  - Most acres are insured and most government spending for ag support is for crop insurance premium subsidies
- Why crop insurance is popular in Congress
  - Market-based, not government run program
  - Farmers share in cost of program
  - Farmers receive payments only if demonstrated losses
  - Public-private partnership btwn government & insurance companies, who both bear some of the risk & costs
  - Historically, program has been financially solid
- Budget hawks target premium subsidies for reduction

Summary

- Overviewed 4 main types of crop insurance
  - YP, RP, AYP, ARP
  - Individual vs. Area-wide, Yield vs. Revenue
  - Farmers choices: policy type, coverage level, unit structure (& price election)
  - Know typical choices: 70-80% RP with enterprise units
- Know how payments are made for each type of policy
- Talked about subsidies and pricing: know how subsidies work and relative costs of each policy (RP > YP premium)
- Talked about government policy issues, program cost
- Lots of issues not covered (e.g., Late and prevented plant, replant, alternative crop uses, breaking new ground, trend adjusted APH, …)