

Setting up for a Profitable 2021 for Illinois and Midwest Farms

Last Financial Issues Before Planting



ILLINOIS

Agricultural &
Consumer Economics

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& ENVIRONMENTAL SCIENCES



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Housekeeping

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Topics

1. Price Increases
2. 2020 Incomes
3. 2021 Incomes
4. Financial Situation
5. Strategies for 2021
6. Looking to 2022

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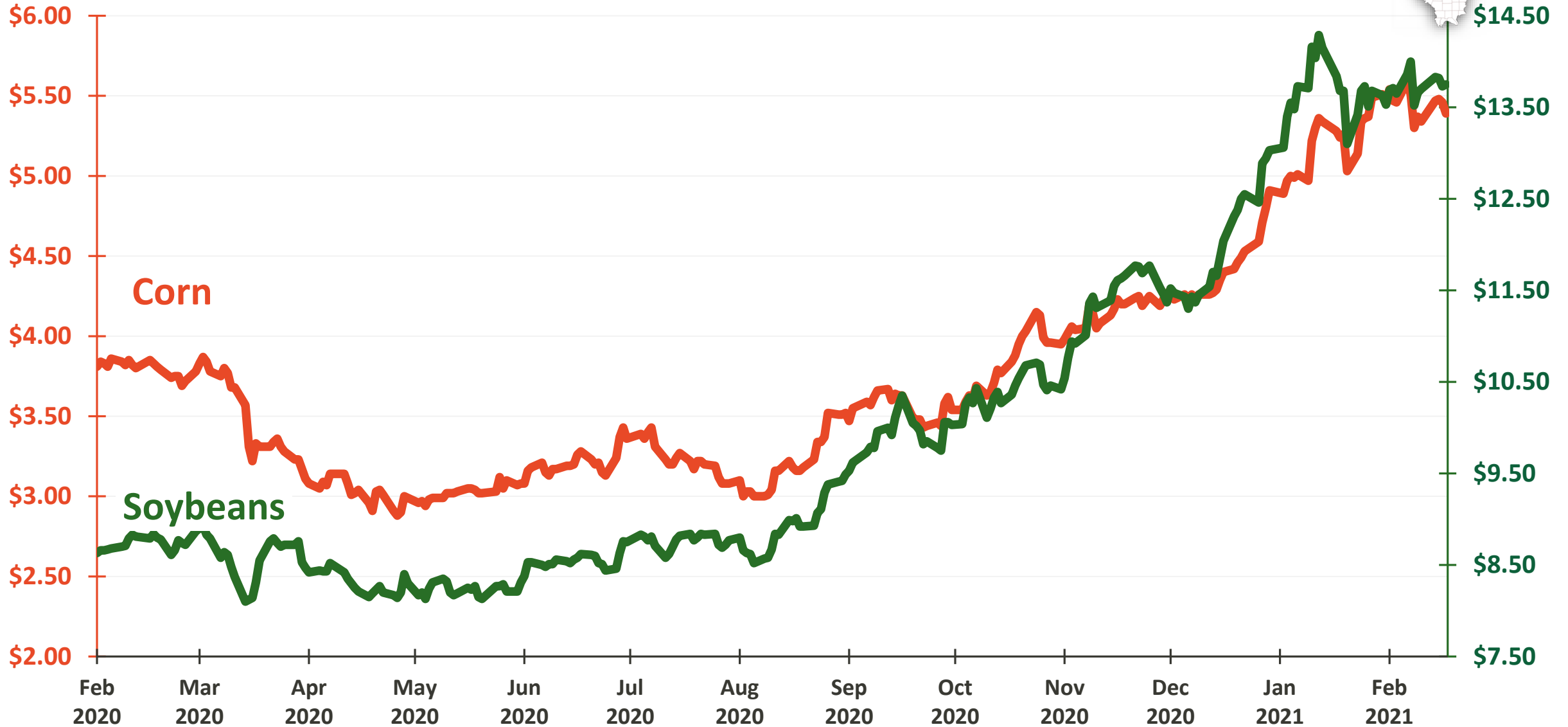
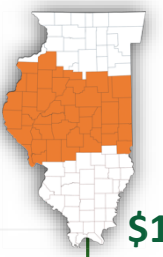


Price Increases

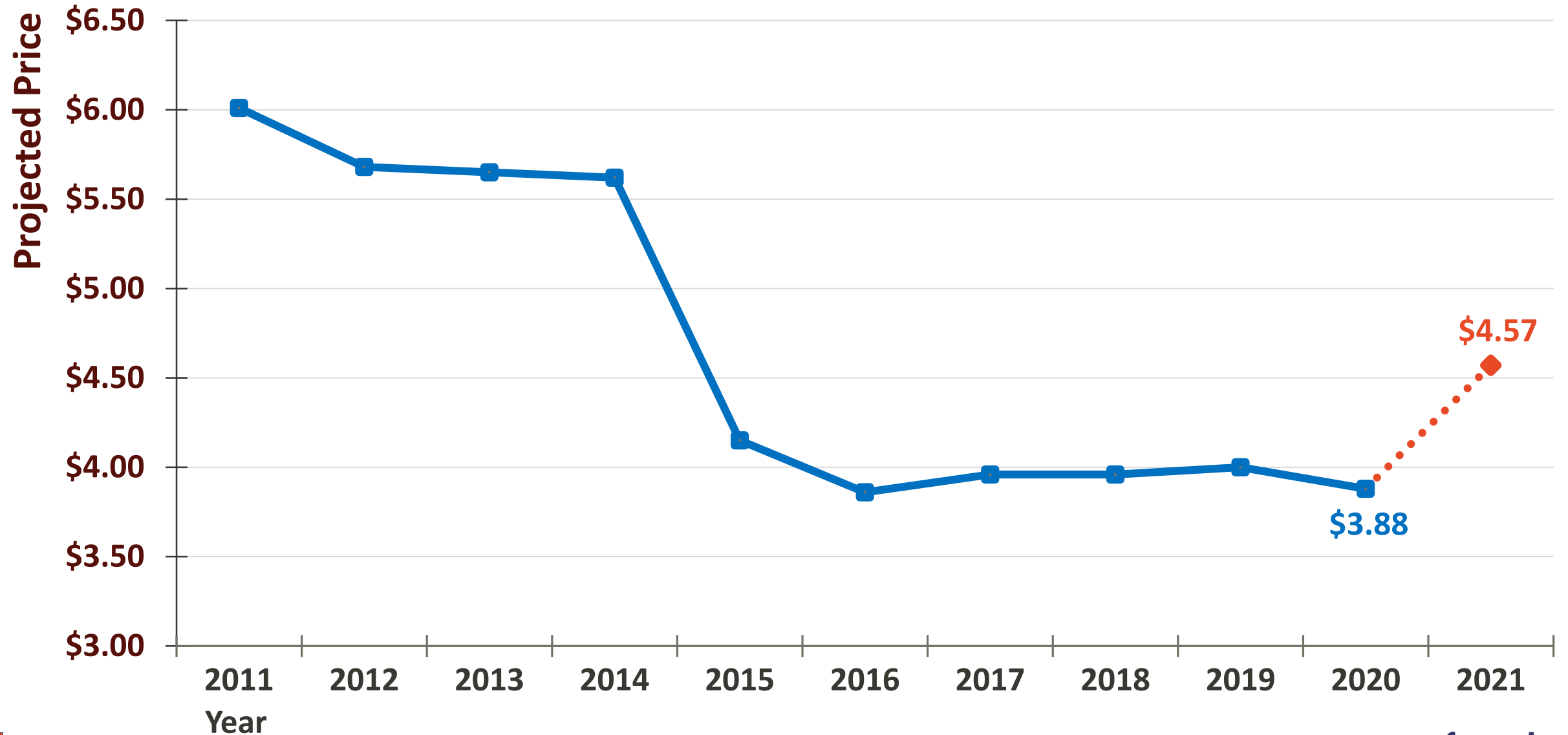
The Reason for Optimism



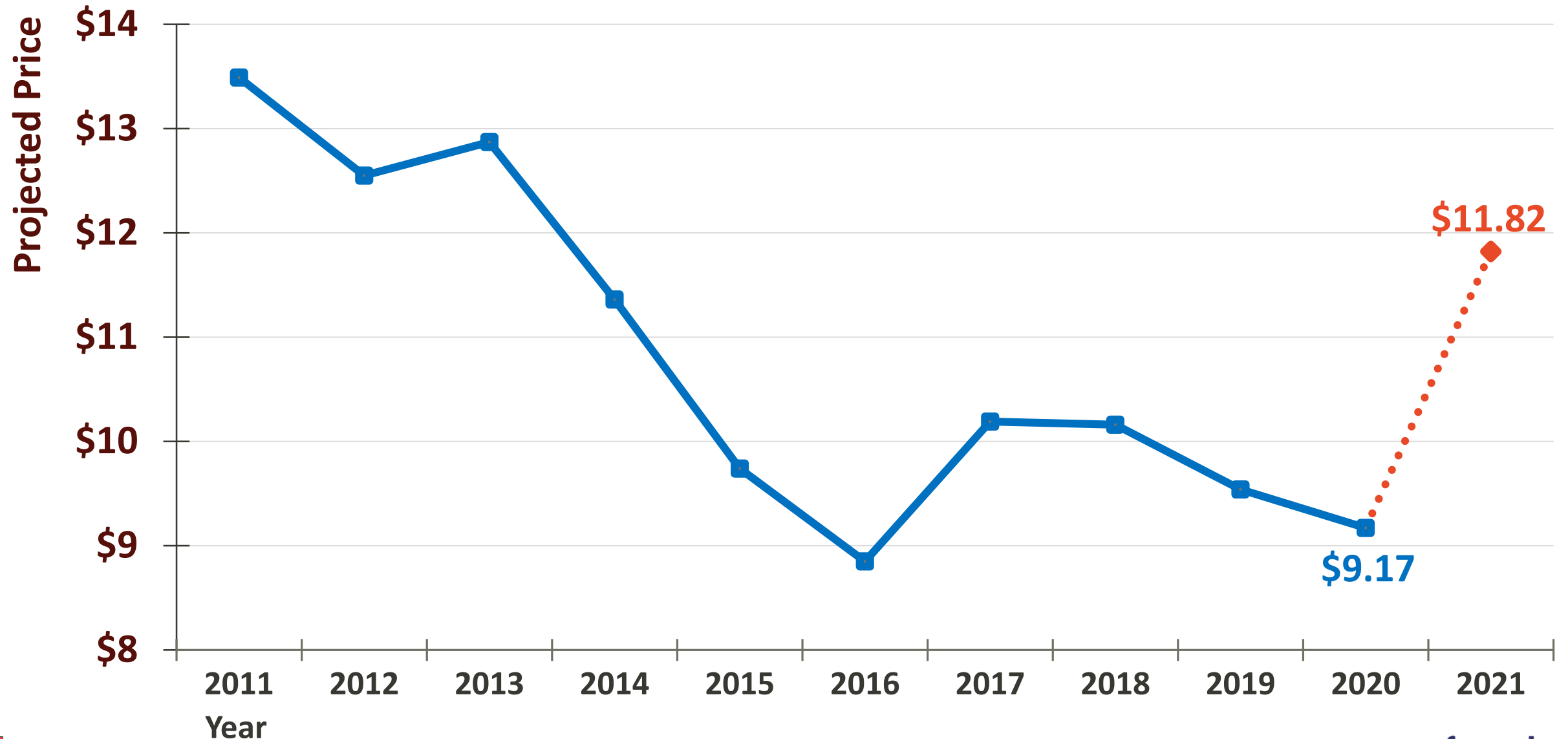
Cash Corn and Soybean Prices in Central Illinois



Projected Prices (Crop Insurance), Corn



Projected Prices (Crop Insurance), Soybeans





How much 2020 crop is left to price?

- Over 50%
- Between 25% and 50%
- Between 10% and 25%
- Between 5% and 10%
- Less than 5%

2020 Grain Farm Income

Good Grain Farm Incomes



Corn and Soybeans, Central Illinois, High-Productivity

	Corn			Soybeans		
	2018	2019	2020P	2018	2019	2020P
Yield per acre	237	208	228	75	64	72
Price per bu	\$3.60	\$3.65	\$4.25	\$9.36	\$8.58	\$11.20
Crop revenue	853	759	969	702	549	806
ARC/PLC	0	10	0	0	10	0
Ad hoc payments	1	110	68	112	94	45
Crop insurance	2	14	0	2	9	0
Gross revenue	856	893	1037	816	662	851
Total non-land costs	574	606	571	353	372	359
Operator and land return	282	287	466	463	290	492
Cash rent	274	275	275	274	275	275
Farmer return	8	12	191	189	15	217

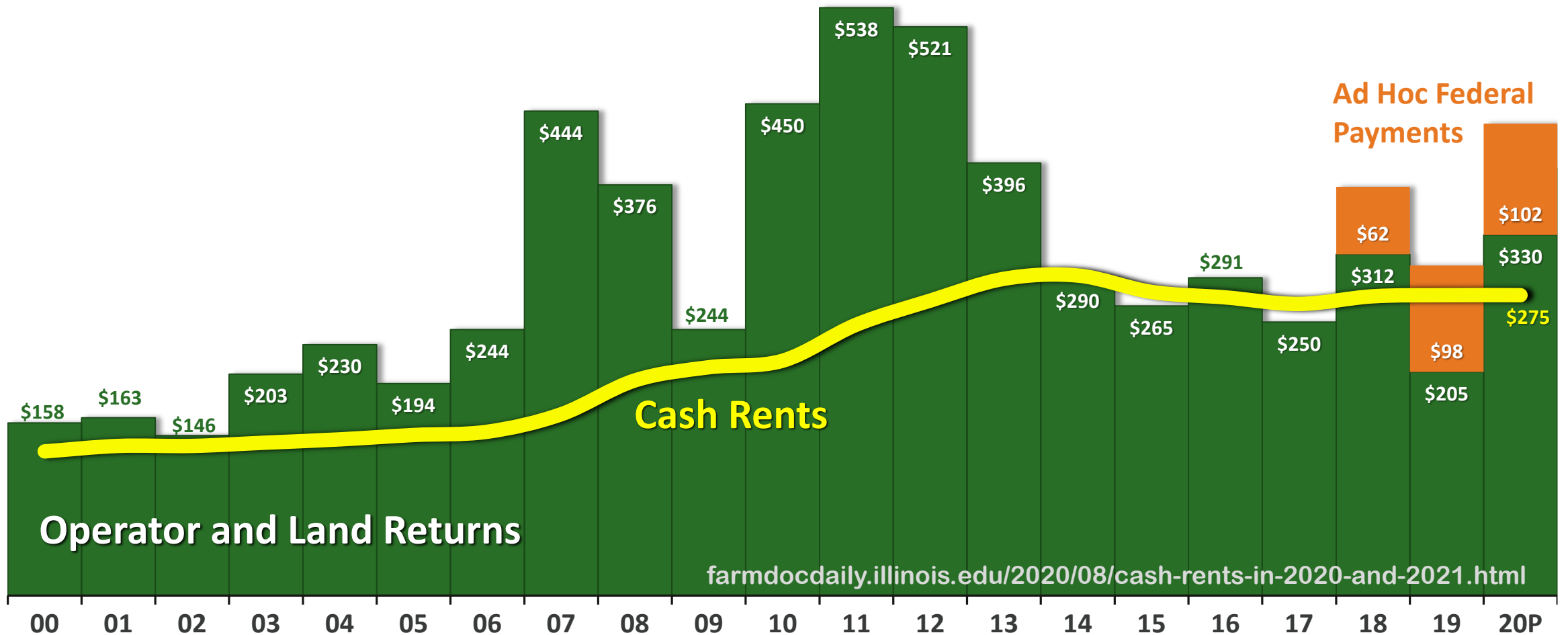
- 2020 yields are above trend
- 2020 Prices are good
- Yellowed items are ad hoc disaster assistance payments

50% Corn and 50% Soybean Rotation

Farmer return	99	14	204 (with <i>ad hoc</i> Federal payments)
	42	-88	147 (without <i>ad hoc</i> Federal payments)

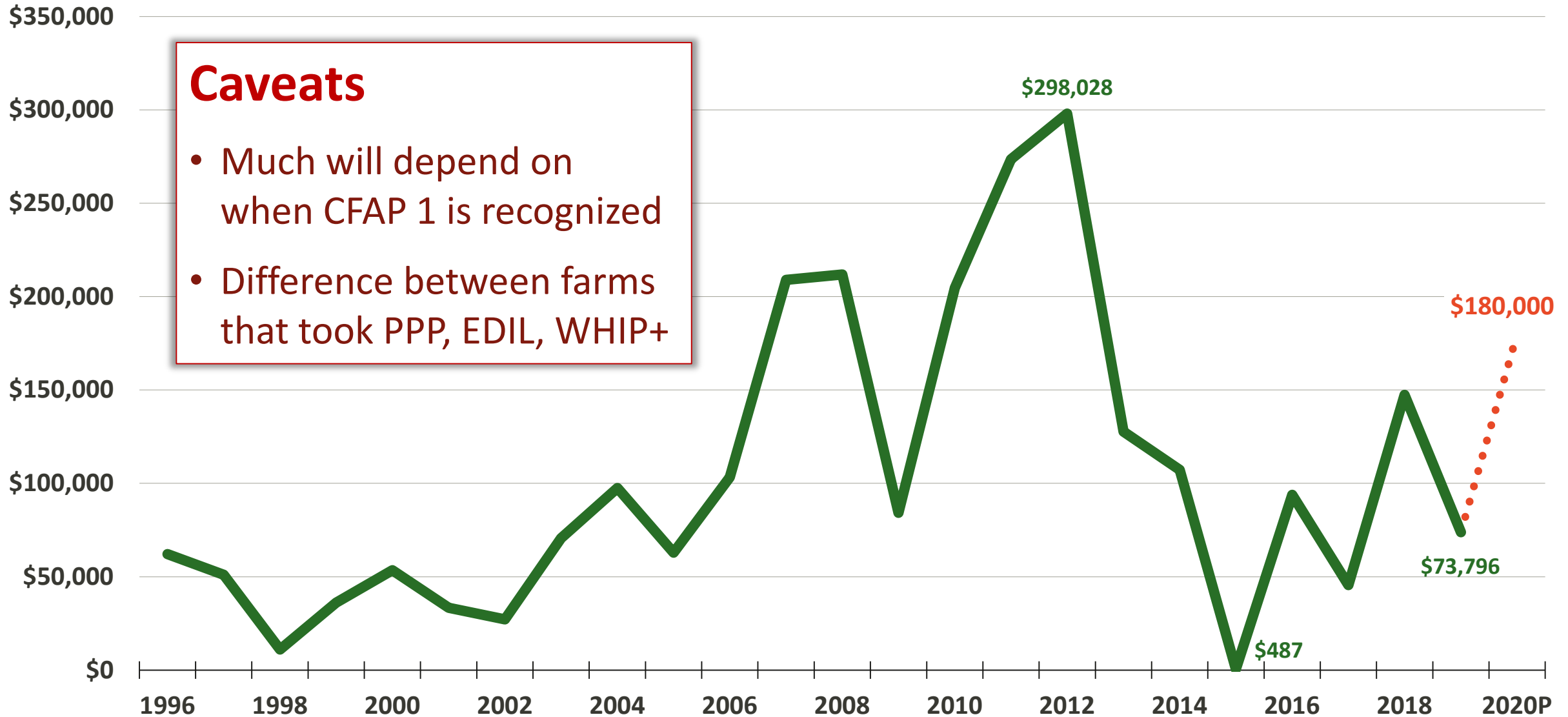
Operator and Land Returns and Cash Rents

High-Productivity Farmland in Central Illinois, 2000 to 2021P



farmdocdaily.illinois.edu/2020/08/cash-rents-in-2020-and-2021.html

Grain Farm Net Incomes, Illinois FBFM



Caveats

- Much will depend on when CFAP 1 is recognized
- Difference between farms that took PPP, EDIL, WHIP+

2021 Incomes

Reason for Optimism



Let's put that nasty
word 'plummet' out
of our minds

How much of 2021 expected production is sold?

- Over 50%
- Between 25% and 50%
- Between 10% and 25%
- Between 5% and 10%
- Less than 5%



THREE 2021 Budgets

Baseline

Trend yields

- Corn: 217 bu/acre
- Soybeans: 68 bu/acre

No ad hoc disaster assistance

Current fall bids

Optimistic

Above trend yields
(and no lowering of price)

\$25 ad hoc Federal disaster assistance

Back to normal

Trend yields

Prices

- Corn: \$4.00/bu
- Soybeans: \$10.75/bu

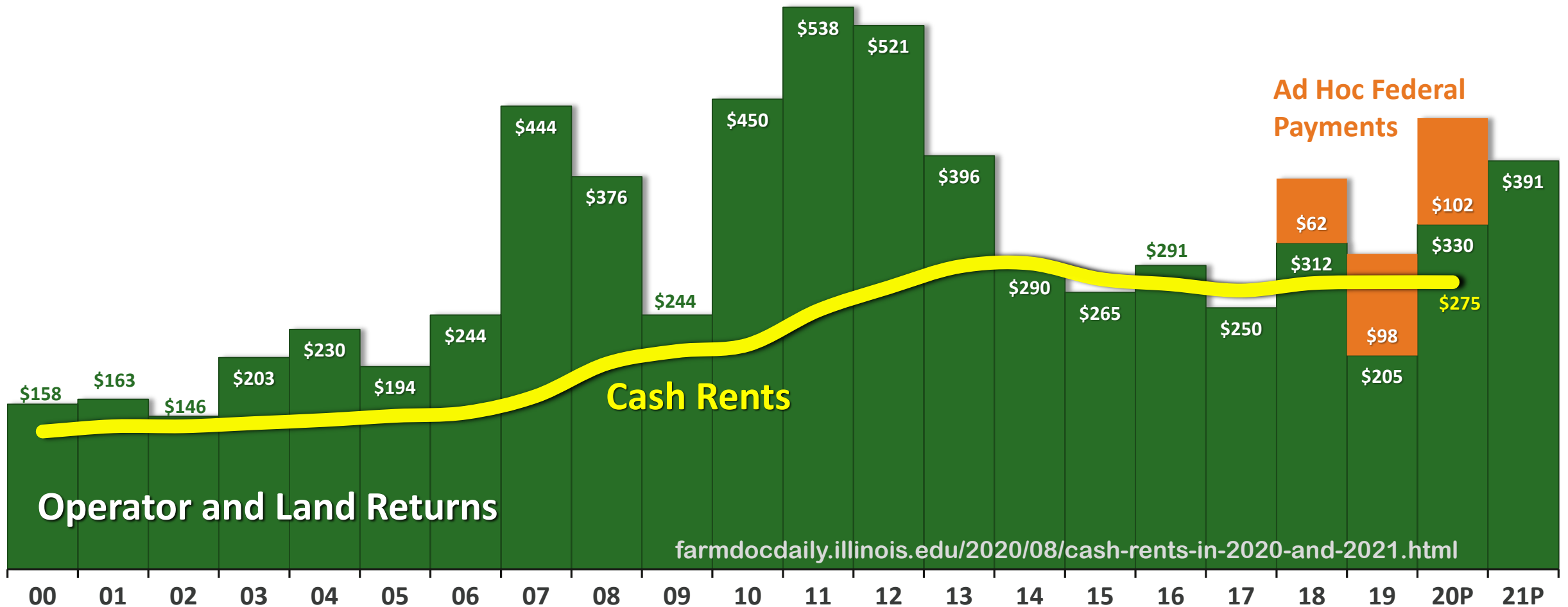


Corn and Soybeans: Baseline

Central Illinois, High-Productivity	Corn			Soybeans		
	2019	2020P	2021P	2019	2020P	2021P
Yield per acre	208	228	217	64	72	68
Price per bu	\$3.65	\$4.25	\$4.25	\$8.58	\$11.20	\$11.90
Crop revenue	\$759	\$969	\$922	\$549	\$806	\$809
ARC/PLC	\$10	\$0	\$0	\$10	\$0	\$0
Ad hoc payments	\$110	\$68	\$0	\$94	\$45	\$0
Crop insurance	\$14	\$0	\$0	\$9	\$0	\$0
Gross revenue	\$893	\$1,037	\$922	\$662	\$851	\$809
Total non-land costs	\$606	\$571	\$580	\$372	\$359	\$368
Operator & land return	\$287	\$466	\$342	\$290	\$492	\$441
Cash rent	\$275			\$275		
Farmer return	\$12	\$191	\$67	\$15	\$217	\$166
50% Corn and 50% Soybean Rotation						
Farmer return	\$14	\$204	\$117	with ad hoc Federal payments		
	-\$88	\$147	\$117	without ad hoc Federal payments		

Operator and Land Returns and Cash Rents

High-Productivity Farmland in Central Illinois, 2000 to 2021P

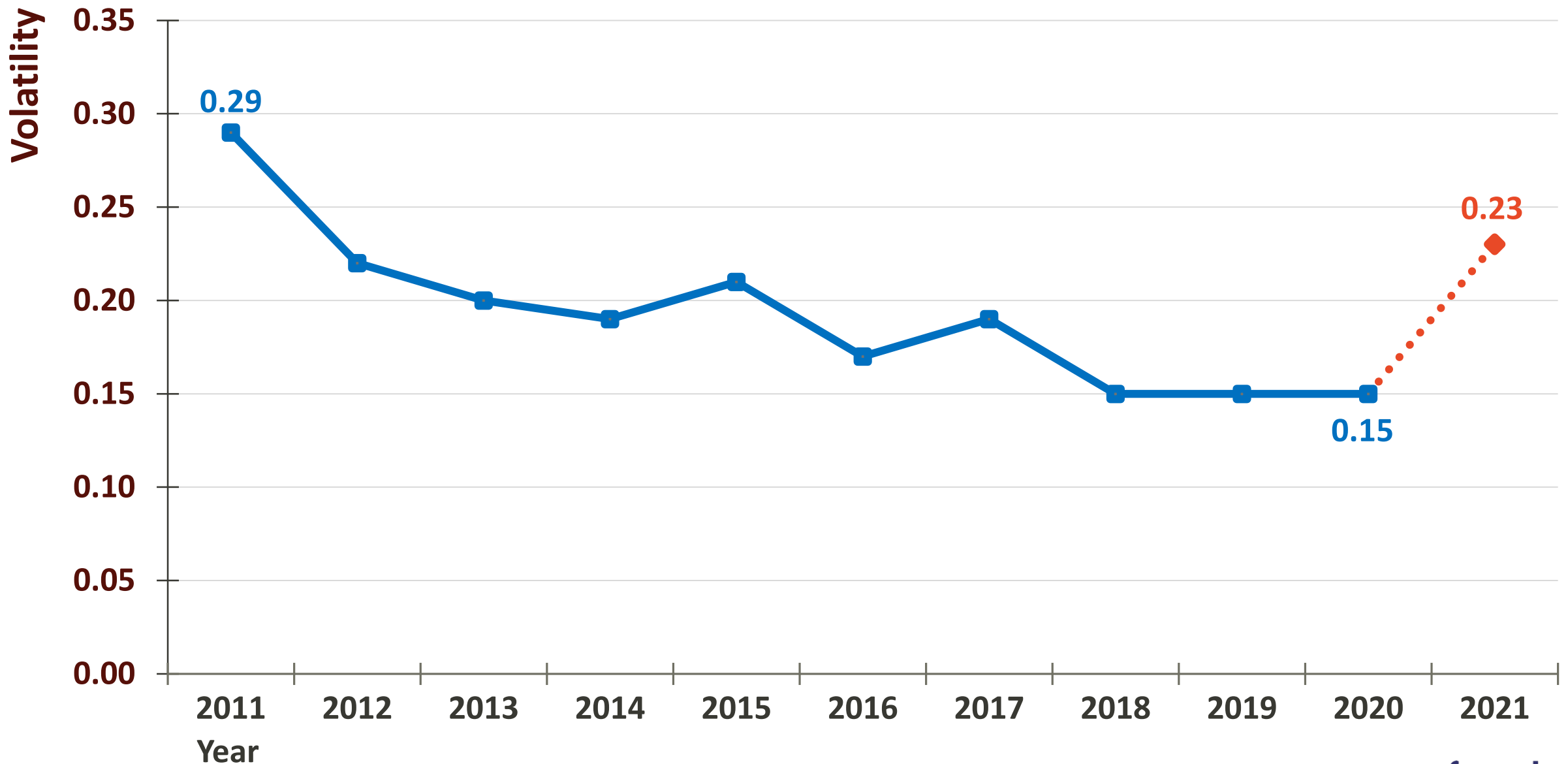


farmdocdaily.illinois.edu/2020/08/cash-rents-in-2020-and-2021.html

Corn and Soybeans: Optimistic

Central Illinois, High-Productivity	Corn			Soybeans		
	2019	2020P	2021P	2019	2020P	2021P
Yield per acre	208	228	230	64	72	72
Price per bu	\$3.65	\$4.25	\$4.25	\$8.58	\$11.20	\$11.90
Crop revenue	\$759	\$969	\$978	\$549	\$806	\$857
ARC/PLC	\$10	\$0	\$0	\$10	\$0	\$0
Ad hoc payments	\$110	\$68	\$25	\$94	\$45	\$25
Crop insurance	\$14	\$0	\$0	\$9	\$0	\$0
Gross revenue	\$893	\$1,037	\$1,003	\$662	\$851	\$882
Total non-land costs	\$606	\$571	\$580	\$372	\$359	\$368
Operator & land return	\$287	\$466	\$423	\$290	\$492	\$514
Cash rent	\$275			\$275		
Farmer return	\$12	\$191	\$148	\$15	\$217	\$239
50% Corn and 50% Soybean Rotation						
Farmer return	\$14	\$204	\$194	with ad hoc Federal payments		
	-\$88	\$147	\$169	without ad hoc Federal payments		

Volatility for crop insurance indicate high price variability



Downside Risk on CME Futures Contracts

Corn

Dec 2021,
CME contract
\$4.69 per bushel
on Feb 23

Price at Expiration	Probability Below
\$3.75	21.54%
\$4.00	30.01%
\$4.25	39.11%
\$4.50	48.28%
\$4.75	57.06%
\$5.00	65.08%
\$5.25	72.13%
\$5.50	78.14%
\$5.75	83.11%

Probabilities from
Price Distribution Tool
on farmdoc

<https://farmdoc.illinois.edu/crop-insurance>



Downside Risk on CME Futures Contracts

Soybeans

Nov 2021,
CME contract
\$11.85 per bushel
on Feb 17

Price at Expiration	Probability Below
\$11.25	37.17%
\$11.50	41.54%
\$11.75	45.92%
\$12.00	50.25%
\$12.25	54.50%
\$12.50	58.61%
\$12.75	62.55%
\$13.00	66.28%
\$13.25	69.80%

Probabilities from
Price Distribution Tool
on *farmdoc*

<https://farmdoc.illinois.edu/crop-insurance>



Corn and Soybeans: Back to Normal

Central Illinois, High-Productivity	Corn		Soybeans	
	2019	2020P	2019	2020P
Yield per acre	208	228	64	72
Price per bu	\$3.65	\$4.25	\$8.58	\$11.20
Crop revenue	\$759	\$969	\$549	\$806
ARC/PLC	\$10	\$0	\$10	\$0
Ad hoc payments	\$110	\$68	\$94	\$45
Crop insurance	\$14	\$0	\$9	\$0
Gross revenue	\$893	\$1,037	\$662	\$851
Total non-land costs	\$606	\$571	\$372	\$359
Operator & land return	\$287	\$466	\$290	\$492
Cash rent		\$275		\$275
Farmer return	\$12	\$191	\$15	\$217
50% Corn and 50% Soybean Rotation				
Farmer return	\$14	\$204	with ad hoc Federal payments	
	-\$88	\$147	without ad hoc Federal payments	

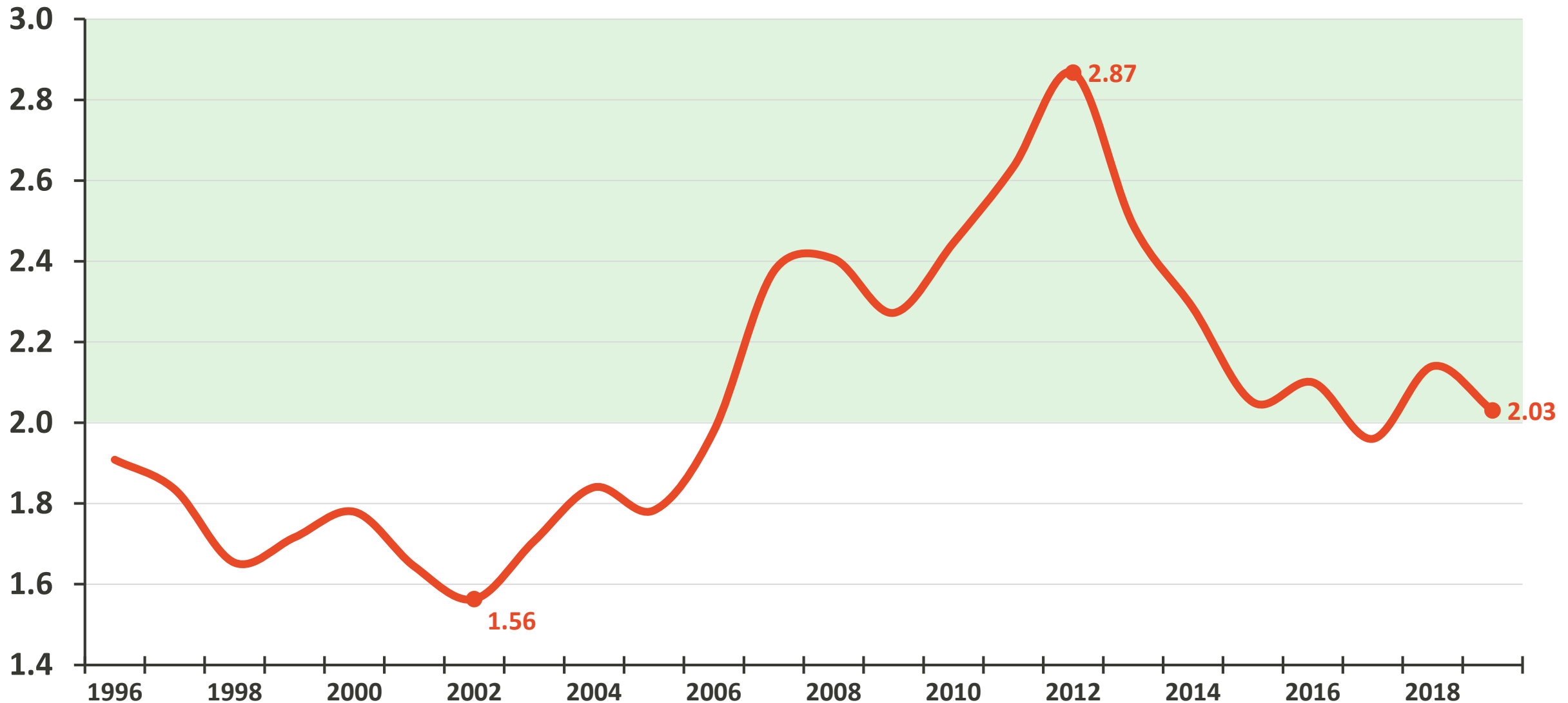
Comparison of 2021 Predicted Budgets

Central Illinois, High-Productivity	Corn			Soybeans		
	Baseline	Optimistic	Back to Normal	Baseline	Optimistic	Back to Normal
Yield per acre	217	230	217	68	72	62
Price per bu	\$4.25	\$4.25	\$4.00	\$11.90	\$11.90	\$10.50
Crop revenue	\$922	\$978	\$868	\$809	\$857	\$651
ARC/PLC	\$0	\$0	\$0	\$0	\$0	\$0
Ad hoc payments	\$0	\$25	\$0	\$0	\$25	\$0
Crop insurance	\$0	\$0	\$0	\$0	\$0	\$0
Gross revenue	\$922	\$1,003	\$868	\$809	\$882	\$651
Total non-land costs	\$580	\$580	\$580	\$368	\$368	\$368
Operator & land return	\$342	\$423	\$288	\$441	\$514	\$283
Cash rent	\$275	\$275	\$275	\$275	\$275	\$275
Farmer return	\$67	\$148	\$13	\$166	\$239	\$8
50% Corn and 50% Soybean Rotation						
Farmer return	\$117	\$194	\$11	with ad hoc Federal payments		
	\$117	\$169	\$11	without ad hoc Federal payments		

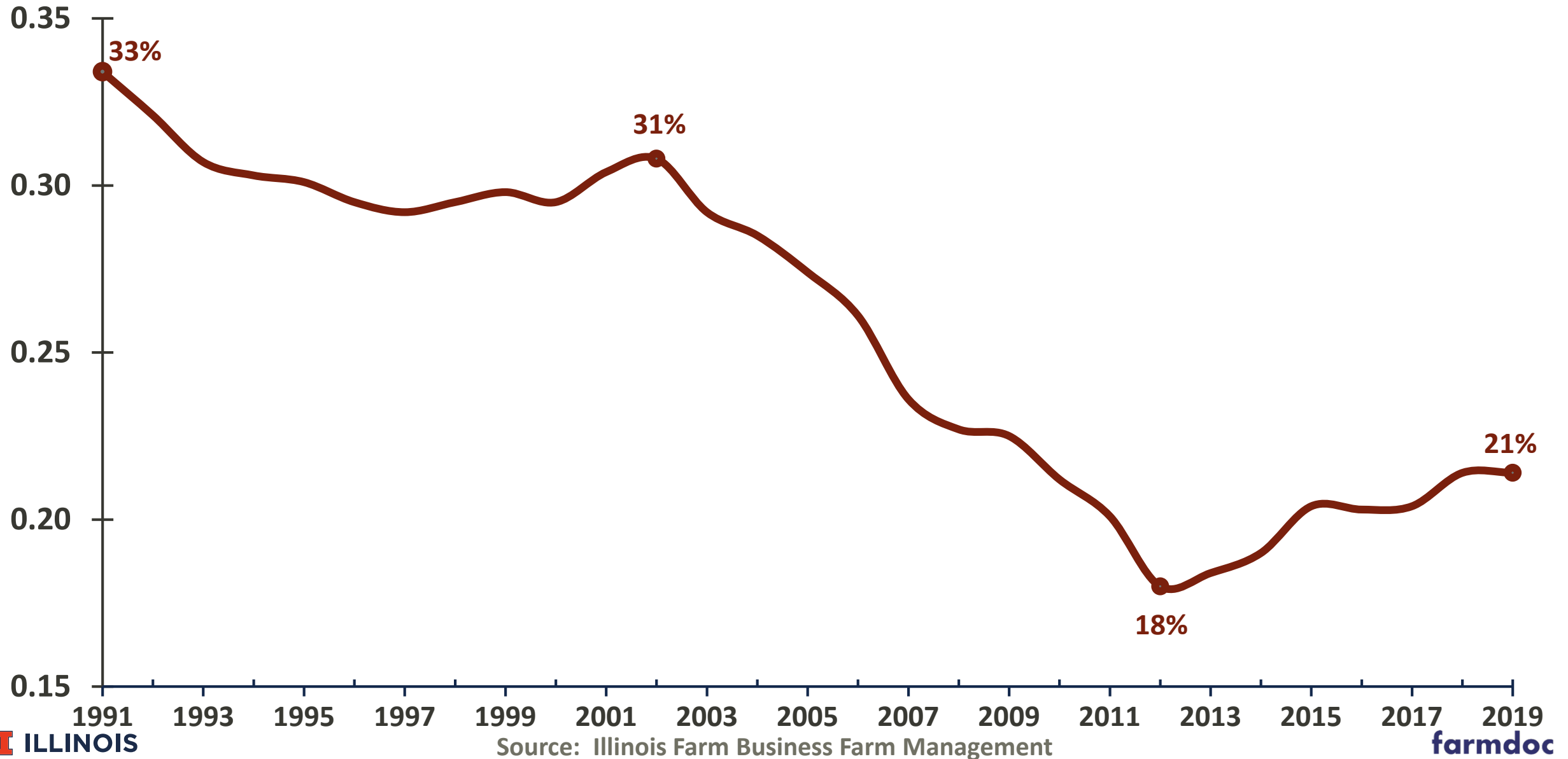
Financial Situation



Current Ratio for Illinois Grain Farms

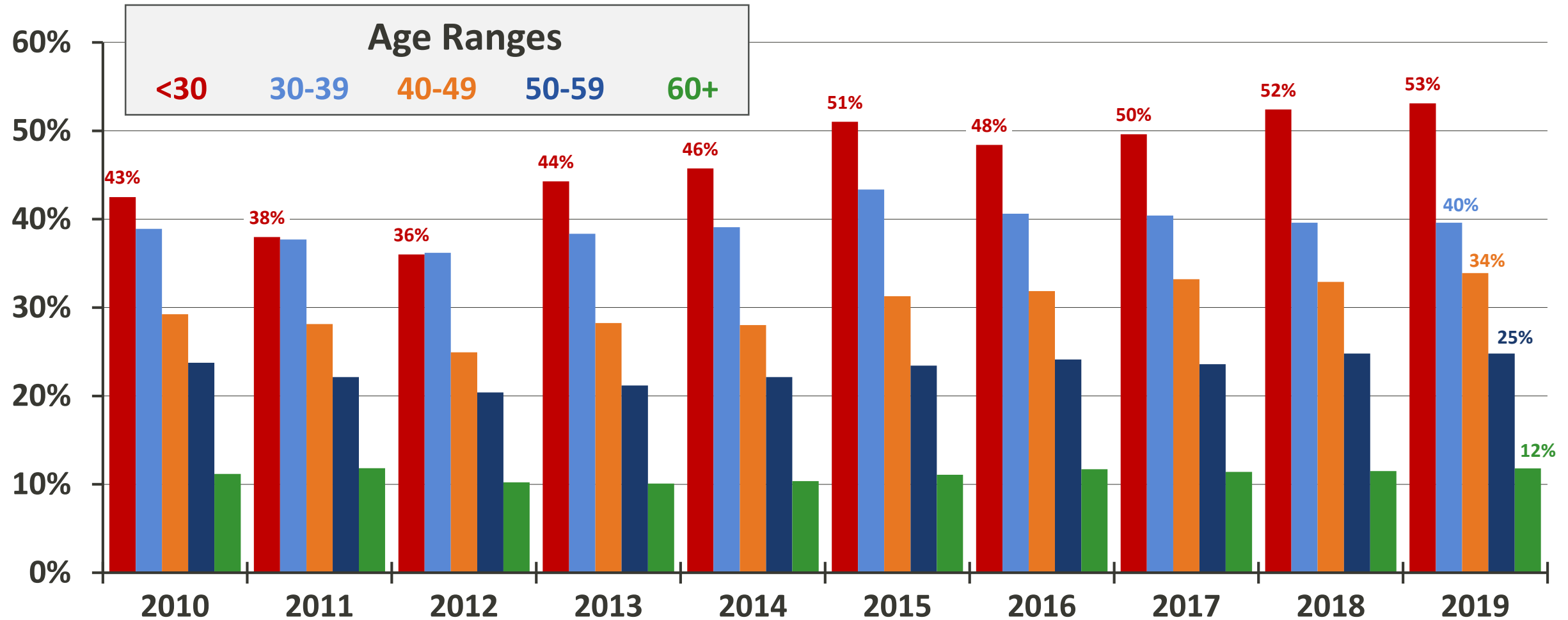


Debt-to-Asset Ratio (Illinois Grain Farms)

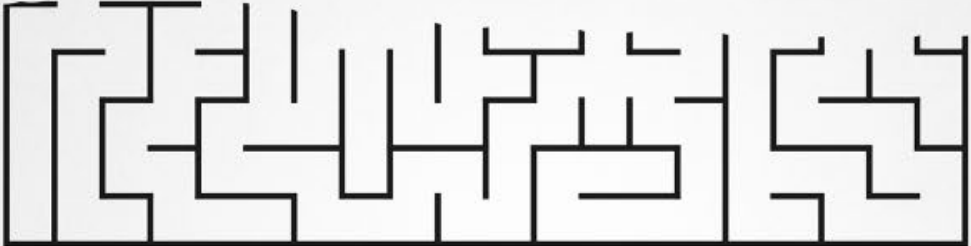
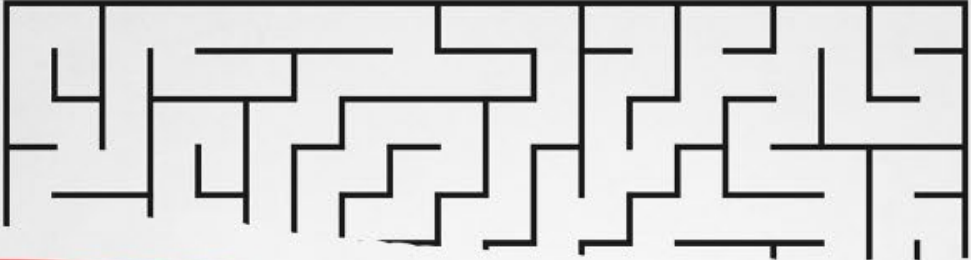


2019 FBFM Records Summary

Debt to Asset Ratio by Age



Strategies for 2021



2020

2021



Take A Sharp Look At Financial Records

- Review 2020 financial statements
- Historical trend can provide valuable insight
- Calculate ratios

Strategy Goal:

Know your business financial status to make the best management decisions

Projected Balance Sheet Summary		
	Per Acre	Total
Bank Balance (Inc. Savings & CD's)	\$46.02	\$78,238.43
Inventory	\$395.50	\$672,350.00
Other Current Assets	\$126.56	\$215,151.43
Total Current Assets	\$568.08	\$965,739.86
Machinery & Equipment	\$719.48	\$1,223,119.99
Other Intermediate Assets	\$273.81	\$465,471.32
Total Intermediate Assets	\$993.29	\$1,688,591.31
Farm Real Estate-Bare Land	\$1,115.33	\$1,896,059.02
Buildings & Improvements	\$91.42	\$155,415.83
Other Fixed Assets	\$165.93	\$282,082.25
Total Fixed Assets	\$1,372.68	\$2,333,557.10
Total Assets	\$2,934.05	\$4,987,888.27
Accrued Interest	\$44.38	\$75,441.95
Prin Due Within 12 Months	\$51.16	\$86,976.04
Operating / Short Term Notes	\$213.81	\$363,474.41
Estimated Accrued Tax Liability (Inc & RE)	\$33.55	\$57,037.42
Total Current Liabilities	\$342.90	\$582,929.82
Total Intermediate Liabilities	\$225.88	\$383,997.33
Total Long Term Liabilities	\$368.07	\$625,713.12
Total Liabilities	\$936.85	\$1,592,640.28
Net Worth	\$1,997.20	\$3,395,247.99
Total Liab & Net Worth	\$2,934.05	\$4,987,888.27

2021 Cash Flow Plan Now

Allow for adjustments and scenario analysis

		Break Even Price Combinations				Break Even Yield Combinations			
<u>Fix Price</u>	<u>Fix Yield</u>	Projections 2021	All Farm Operating Costs	Positive Income	Positive Cash Flow	Projections 2021	All Farm Operating Costs	Positive Income	Positive Cash Flow
	Corn	\$4.25	\$1.94	\$2.27	\$3.91	196	89	105	180
	Soybeans	\$11.90	\$5.42	\$6.36	\$10.94	60	27	32	55

Strategy Goal:

Ensure an adequate level of income to meet operational needs of the farm

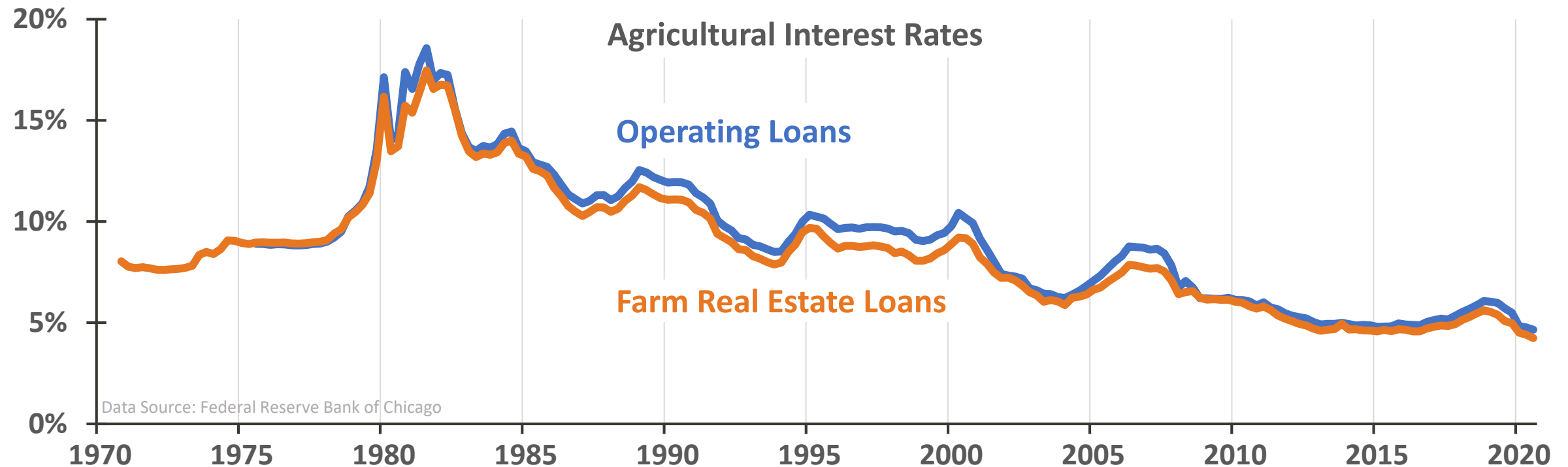
Do you expect rising interest rates in 2021?

- Stable or lower
- Less than a 1% increase on the rate
- Between 1% and 3%
- Over 3%



Refinance & Reduce Farm Debt

Opportunities to manage debt in good times



Strategy Goal:

Keep debt relative to assets in line and working capital at a sustainable level

Manage Input Costs for Profit Potential

What is the profit maximizing combination of inputs?

Examples of Input Changes Impact on Cost and Profit

	Base Case	New Replacement Rate for P & K	Use Variable Rate Fertilizer #1	Use Variable Rate Fertilizer #2	
Price	\$4.00	\$4.00	\$4.00	\$4.00	Highest Yield May Not Be Most Profitable
Yield	220	220	222	218	
Gross	\$880	\$880	\$888	\$872	
Costs	\$855	\$855	\$855	\$855	Lowest Cost May Not Be Most Profitable
Change in Costs		(\$9)		(\$16)	
Total Costs	\$855	\$846	\$855	\$839	
Net Profit	\$25	\$34	\$33	\$33	

Strategy Goal:

Manage inputs in a way
that maximizes profitability

Utilize A Marketing Plan

Challenge to market agriculture commodities with price volatility

Central IL Cash Bids by Delivery Month

	Corn	Soybeans
February	\$5.63	\$14.16
March	\$5.65	\$14.25
April	\$5.70	\$14.28
May	\$5.70	\$14.30
June	\$5.71	\$14.26
July	\$5.62	\$14.26
Oct	\$4.65	\$12.32

Price Range
Corn 9¢
Soybeans 14¢

New Crop
Corn \$1 Lower
Soybeans \$2 Lower

Strategy Goal:

Develop and use a marketing plan that aids in making marketing decisions

Looking to 2022

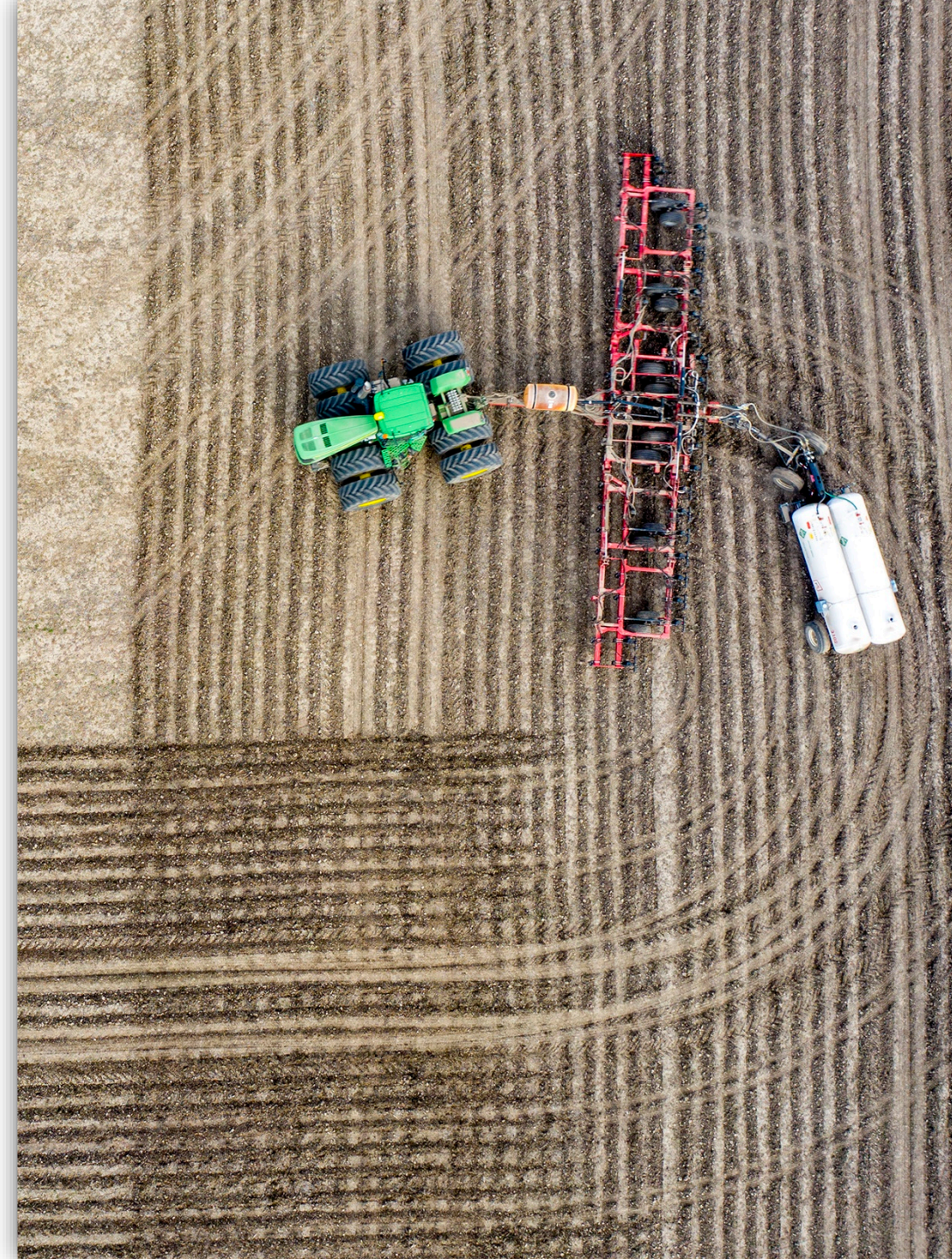
With higher prices in fall, expect:

- Rising input costs
- Pressure on cash rents

Longer-run questions on level of commodity prices

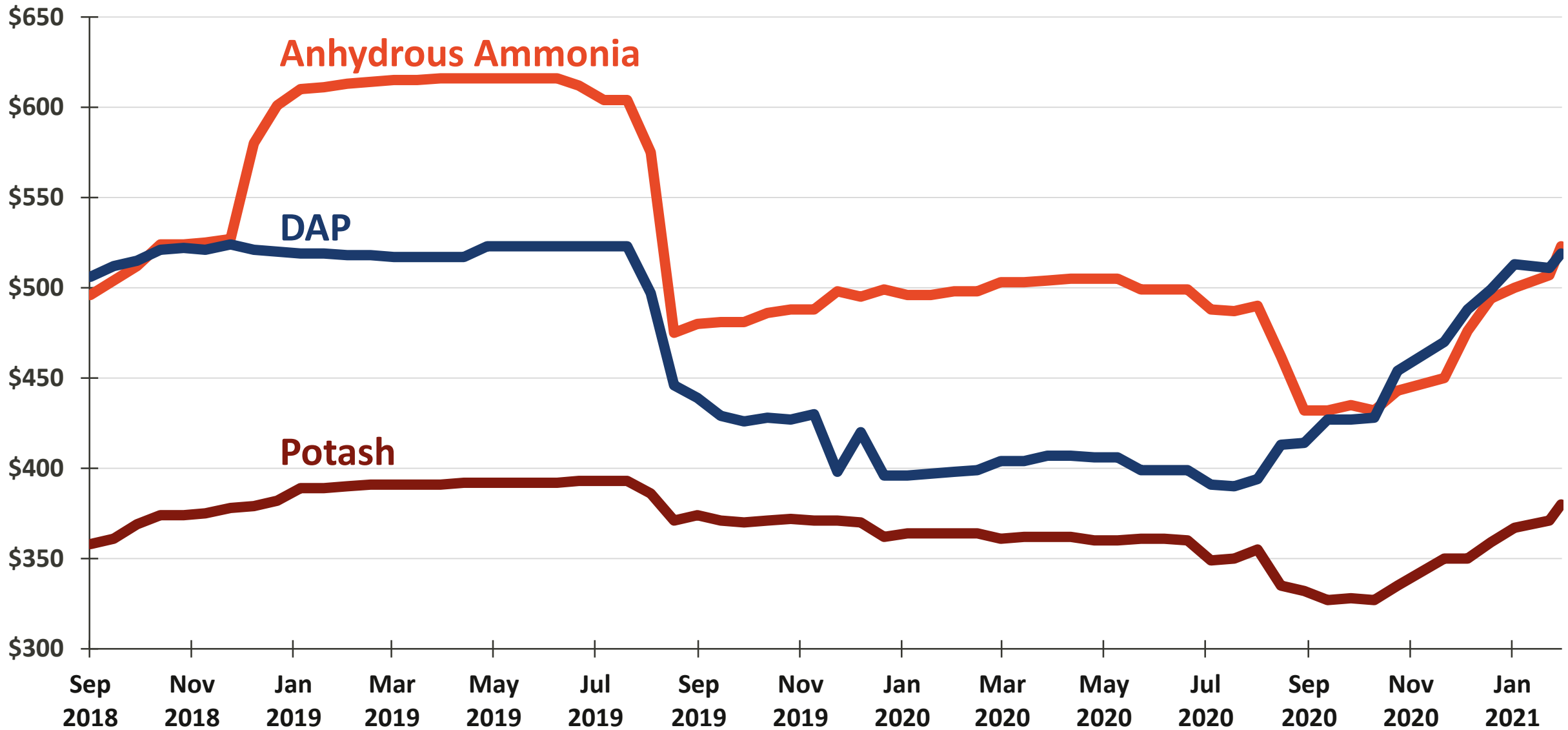
What will anhydrous ammonia prices be in fall 2021?

- Less than \$400 per ton
- Between \$400 and \$500 per ton
- Between \$500 and \$600 per ton
- Over \$600 per ton

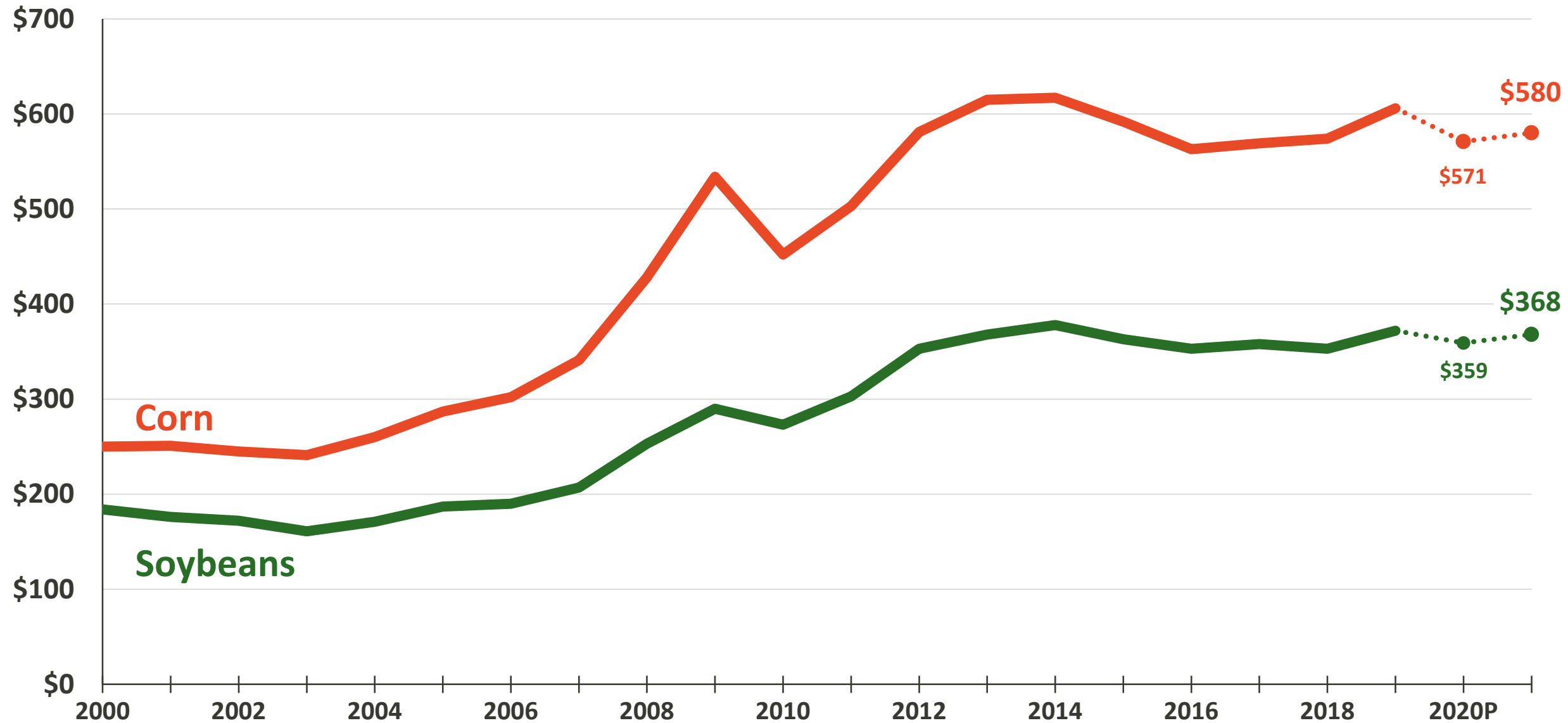


Fertilizer Prices in Illinois

Expect Rising Input Prices



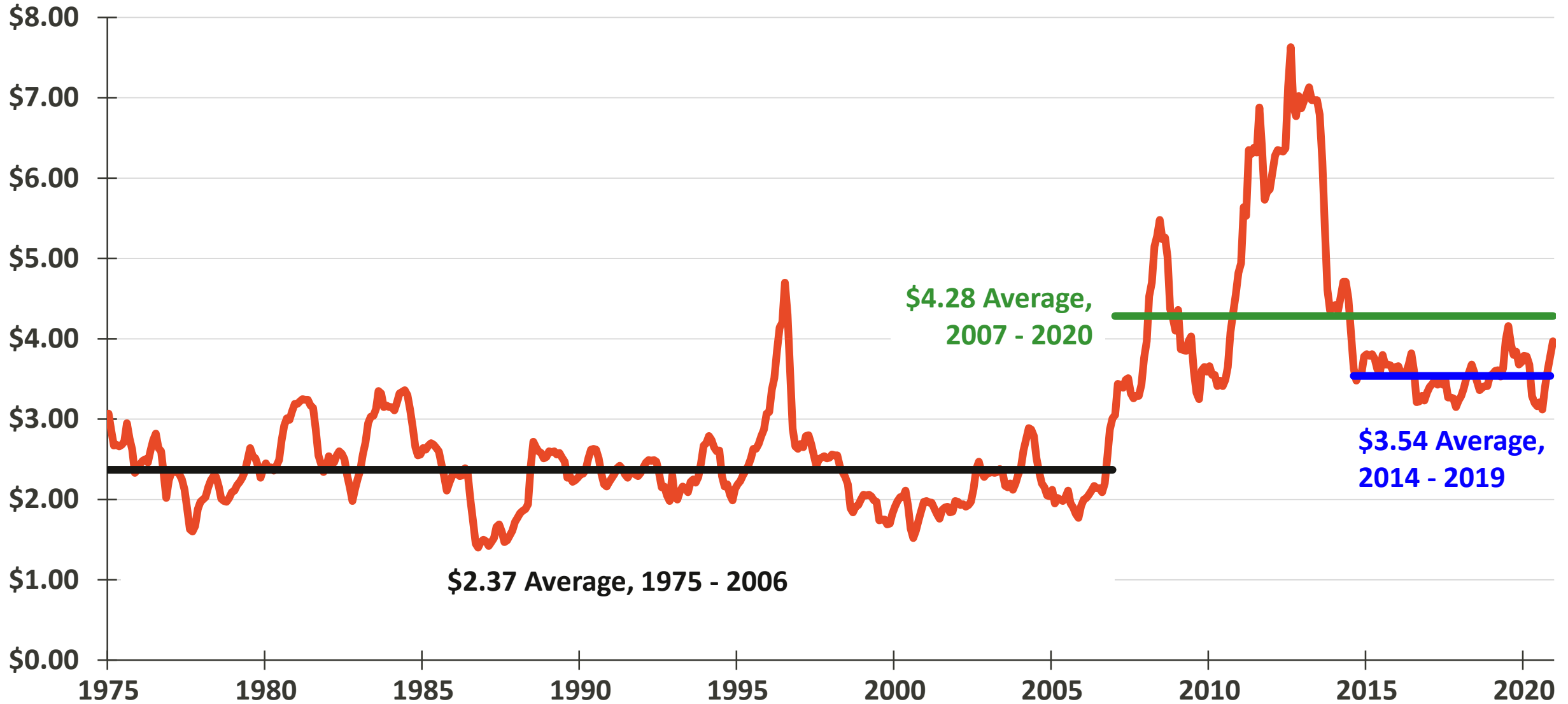
Non-land Costs, Central Illinois



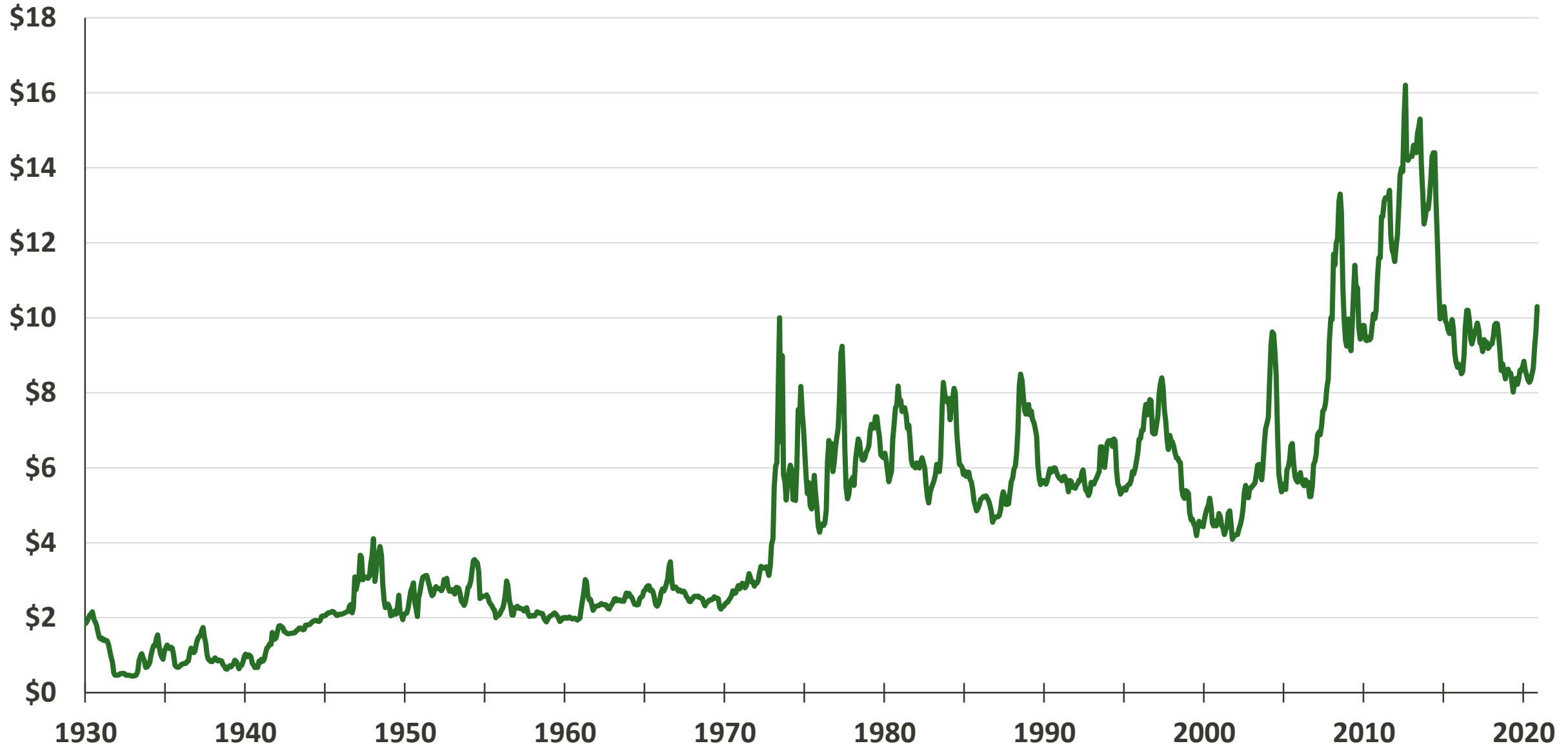
A wide, flat green field of crops, likely corn, stretching to the horizon under a cloudy sky. The field is filled with rows of young plants. In the distance, there are some trees and a few buildings. The sky is filled with large, grey clouds, suggesting an overcast day.

Expect Upward Pressure on Cash Rent

Corn Prices, National, US, Monthly



Soybean Prices, National, US, Monthly



Summary

- Prices of many ag commodities at highest levels since 2012/13
- Income from commodities sales projected up in 2021
 - With current estimated prices and trend yields, grain farms will be profitable
 - Income from government payments lower resulting in lower total income in 2021 compared to 2020
- Overall more positive outlook for farm income (less government payments) than we have seen in years
- Can take advantage of this with strategies to strengthen farm financial position
- Expect cost increases this fall (What is the long-run commodity price)

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February 10, 2021

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Upcoming Webinars

Final Look at Commodity Title and Crop Insurance Decisions

11:00 to noon CT, Thursday March 3rd

All the information is needed to calculator crop insurance premiums. Deadlines for crop insurance and commodity title choices are nearing. This webinar will update any information that needs to be covered before decisions are final.

FAST Tools and Financial Planning

11:00 to noon CT, Thursday March 11th

FAST is a set of Microsoft Excel spreadsheets that can be used to evaluate management decisions on farm. We will demonstrate use of the Farm Projections Tool.

Thank You for joining us!

Please submit your questions

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Weekly Farm Economics
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February 23, 2021
Gary Schnitkey, Nick Paulson, Carl Zulauf, and Krista Swanson
Payments from the crop insurance add-on Enhanced Coverage Option (ECO) at different prices and yields are illustrated in this article. Since ECO coverage levels are high, ECO will make payments in many years. Given premium support involved, ECO should average...

[Read the Article](#)

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