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Soybean Industry Chair in Agricultural Strategy

Luke Worrell, ALC

**Worrell Land Services** 

## **Topics**

- 1. Farmland prices up to now
- 2. Farmland prices and cash rents now
- 3. Five-years from now
- 4. Can it last
- 5. Cash rents and rental arrangements



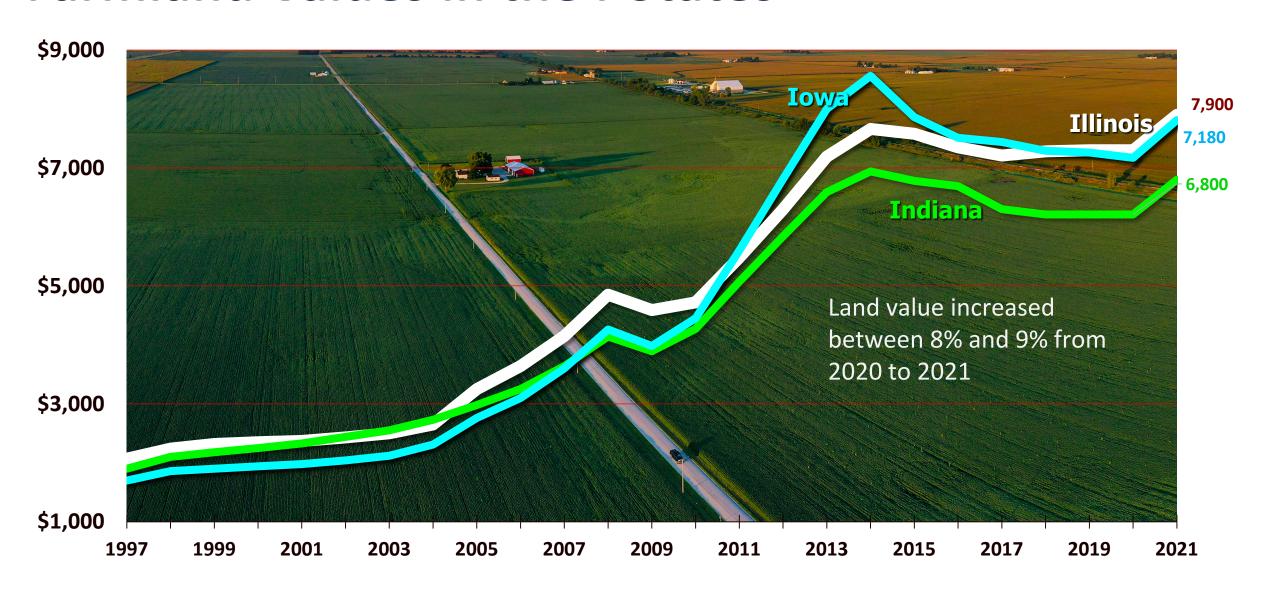
# What do you think Farmland Prices will do in the last-half of 2020?

- O Decrease more than 3%
- O Decrease less than 3%
- Stay the same
- Increase less than 3%
- Increase more than 3%





#### Farmland Values in the I-States





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#### All Categories of Farmland The Great State of Illinois-2020

These figures are the median values from the committee data as reported by each region on the categories shown.

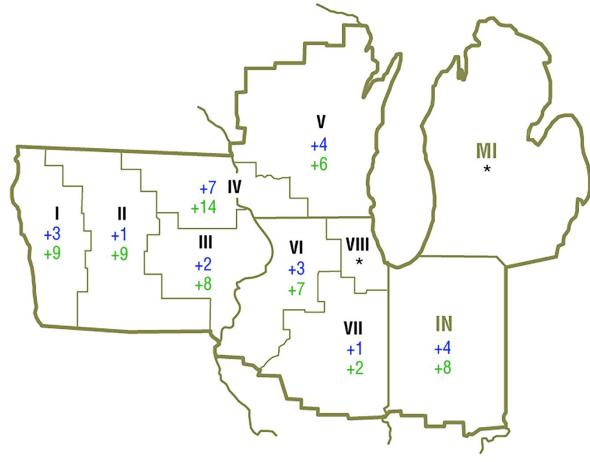
	Excellent	Good	Average	Fair	Recreational	Transitional
Region 1	\$10,050	\$8,165	\$6,055			
Region 2	\$10,372	\$8,300	\$5,683	\$4,784	\$4,159	
Region 3	\$12,100	\$6,790	\$4,450		\$3,500	
Region 4	\$11,000	\$8,750	\$5,925	\$6,945		
Region 5	\$10,382	\$8,088	\$6,152		\$4,600	
Region 6	\$10,750	\$9,250	\$7,025	\$6,000	\$4,000	\$33,333
Region 7	\$11,600	\$9,000	\$7,050		\$3,380	
Region 8		\$11,548	\$8,532	\$6,893	\$3,400	\$10,041
Region 9		\$7,001	\$7,039	\$4,870	\$3,033	
Region 10		\$9,761	\$5,250	\$4,000	\$2,627	
All Regions	\$10,695	\$8,400	\$6,055	\$5,000	\$3,658	\$10,379
Averages are dangerous - but they give us a snapshot of each category (for comparison).						
Percent Avg. Price Change	+4.2%	+1.3%	-1.4%	+5.1%	-5.5%	-25.3%
Compared to Median change	+3.7%	+2.0%	-4.6%	+2.3%	-2.2%	-27.3%



## Federal Reserve Bank of Chicago, *AgLetter May 2021*, David Oppendahl

#### Percent change in dollar value of "good" farmland

	January 1, 2021 to April 1, 2021	April 1, 2020 to April 1, 2021
Illinois	+2	+4
Indiana	+4	+8
lowa	+4	+10
Michigan	*	*
Wisconsin	+4	+8
Seventh District	+3	+7



Top: January 1, 2021 to April 1, 2021

Bottom: April 1, 2020 to April 1, 2021



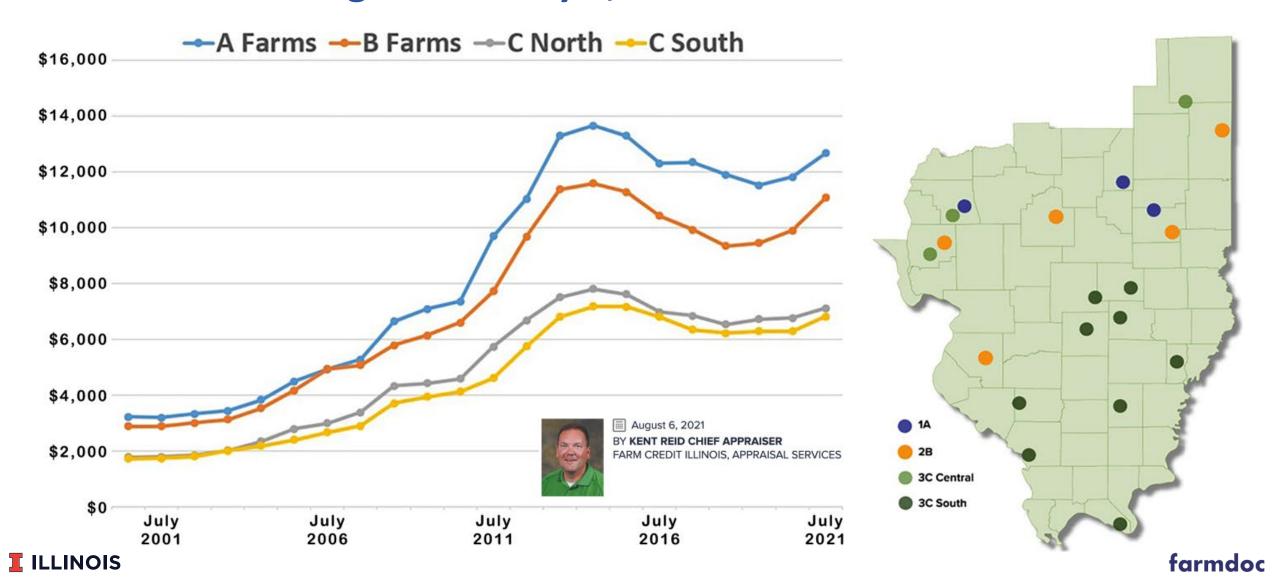
## Purdue study has land values increasing between 7 and 8% first half of 2021





## Farm Credit Illinois up 8.4% (August 2021)

Benchmark Averages as of July 1, 2000 - 2021



# **Expectations for 2022 Farmland Prices** and 2022 Cash Rents



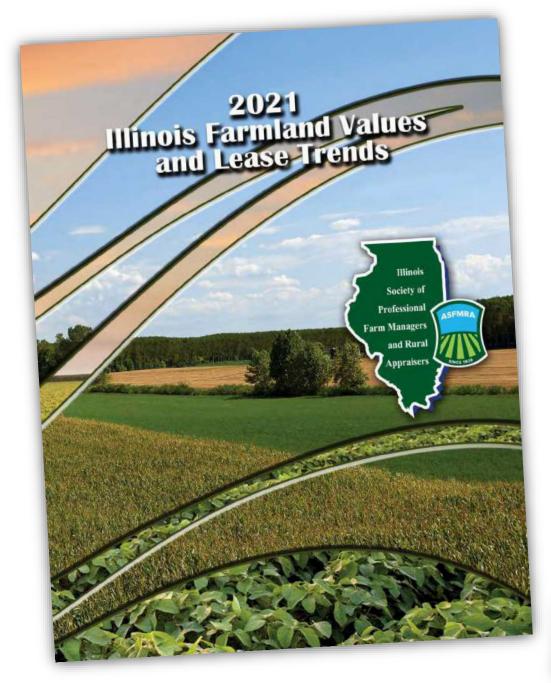
Illinois Society of Professional Farm Managers and Rural Appraisers

The ISPFMRA is an organization of professional men and women engaged in the management of farms and the appraisal of rural property. The Society was founded in 1928 and has grown to a membership of over 350 active members and "friends."

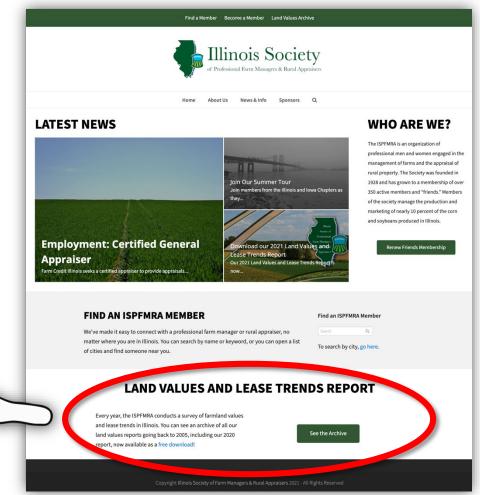


Illinois Society of **Professional** Farm Managers and Rural **Appraisers** farmdoc

ISPFMRA.org



# 2021 Illinois Farmland Values and Lease Trends Report may be downloaded at http://ispfmra.org/



## **OPTIMAL PRODUCTIVITY INDEX** LEGEND - Soil PL (Productivity Index) 1-87 88-106 107-126 127-147

# 2021 Illinois Farmland Values & Lease Trends

#### **Understanding Our Farmland Categories**

Using the Productivity Index from the University of Illinois (Bulletin 811)

**Excellent Productivity 147 to 133** 

**Good Productivity 132 to 117** 

**Average Productivity 116 to 100** 

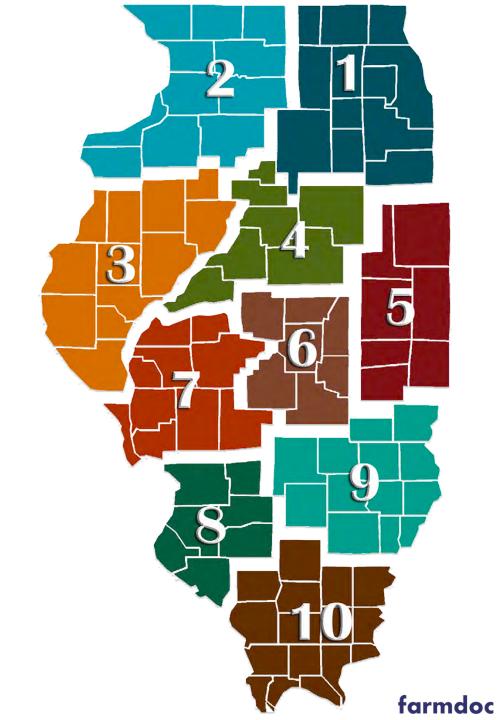
Fair Productivity Less than 100

**Recreational Tracts** 

**Transitional Tracts** 

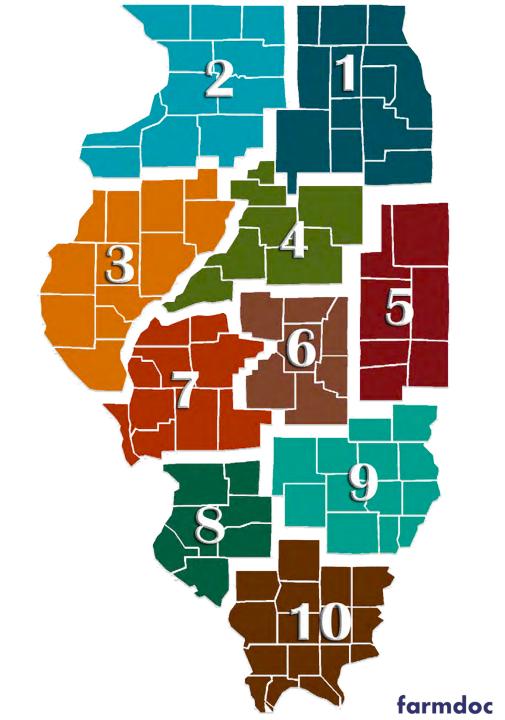
## **Excellent Quality Farmland**

	Farmland Price Jan 1, 2021	Mid-Year % change
Region 1	\$10,050	+16.5%
Region 2	\$10,370	+15.7%
Region 3	\$12,100	+11.5%
Region 4	\$11,000	+23.9%
Region 5	\$10,380	+27.6%
Region 6	\$10,750	+23.6%
Region 7	\$11,600	+15.3%
Region 8		
Region 9		
Region 10		
All Regions	\$10,695	



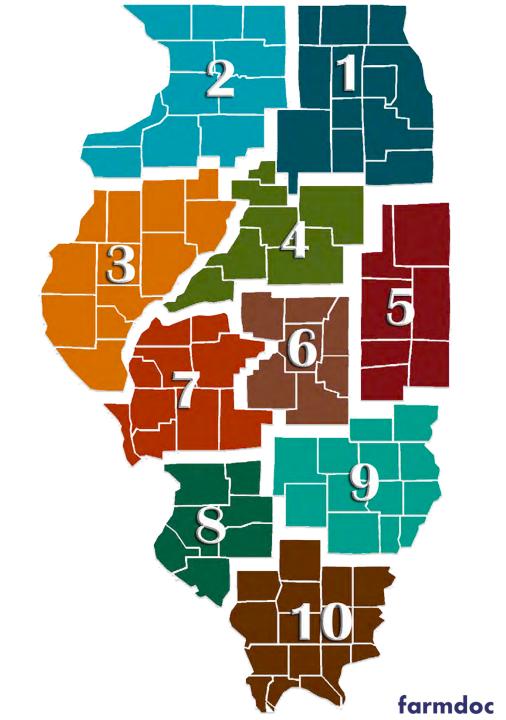
## **Good Quality Farmland**

	Farmland Price Jan 1, 2021	Mid-Year % change
Region 1	\$8,165	+16.5%
Region 2	\$8,300	+10.0%
Region 3	\$8,790	+15.2%
Region 4	\$8,750	+23.9%
Region 5	\$8,090	+24.5%
Region 6	\$9,250	+20.0%
Region 7	\$9,000	+13.8%
Region 8		
Region 9		
Region 10		
All Regions	\$8,400	



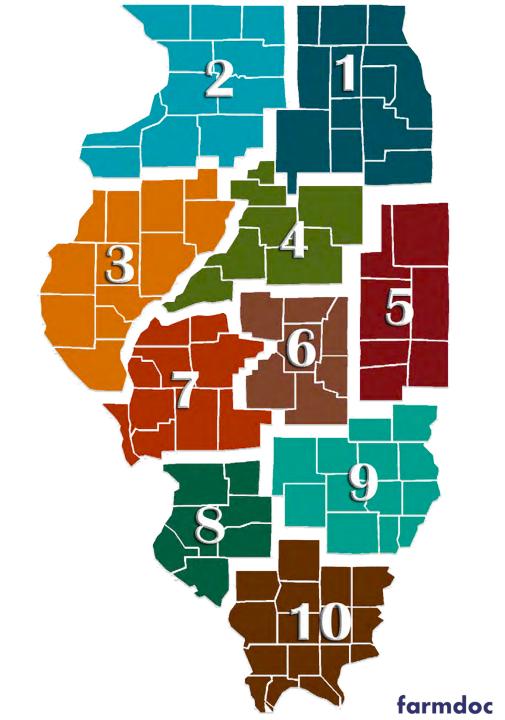
## **Average Quality Farmland**

	Farmland Price Jan 1, 2021	Mid-Year % change
Region 1	\$6,055	+15.0%
Region 2	\$5,680	+19.6%
Region 3	\$4,450	+35.0%
Region 4	\$5,925	+32.3%
Region 5	\$6,150	+20.5%
Region 6	\$7,025	+23.9%
Region 7	\$7,050	+13.0%
Region 8	\$8,530	+15.0%
Region 9	\$7,040	+24.0%
Region 10		
All Regions	\$6,055	

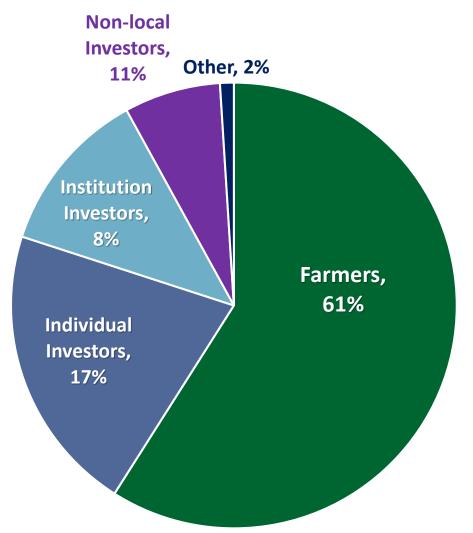


## **Fair Quality Farmland**

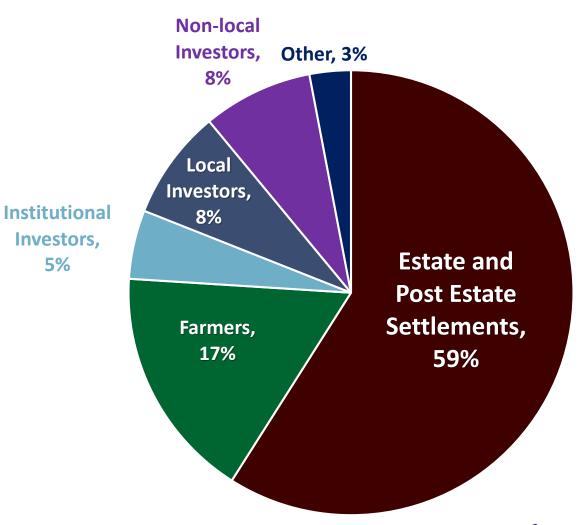
	Farmland Price Jan 1, 2021	Mid-Year % change
Region 1		
Region 2	\$4,785	+23.1%
Region 3		
Region 4	\$6,945	+16.6%
Region 5		
Region 6	\$6,000	+22.8%
Region 7		
Region 8	\$6,893	+6.0%
Region 9	\$4,870	+17.4%
Region 10		
All Regions	\$5,000	



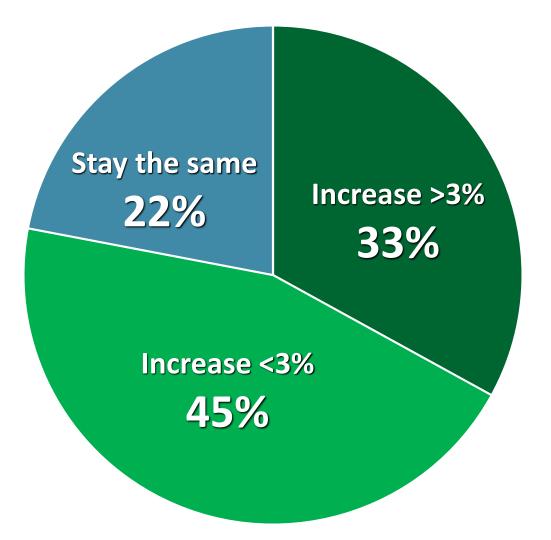
## Buyers of Farmland



## Sellers of Farmland



## **Expectations of Farmland Prices** in Remainder of the Year



Expectations are for rising farmland prices throughout the remainder of the year

<b>Farmland Prices</b>	<b>Expectations</b>	
Increase more than 3%	33%	
Increase less than 3%	45%	
Stay the same	22%	
Decrease less than 3%	0%	
Decrease more than 3%	0%	

# What do you think happens to cash rents in 2022?

- O Increase more than \$15 per acre
- O Increase between \$1 and \$15 per acre
- O Stay the same
- O Decrease between \$1 and \$15 per acre
- O Decrease more than \$15 per acre



## **Cash Rent Projections**

Cash Rents on Professionally Managed Farmland (\$ per acre)



Year	Excellent	Good	Average	Fair
2017	300	260	225	175
2018	298	260	225	186
2019	303	263	215	169
2020	305	270	224	173
2021	315	270	226	188
2022P	350	299	249	210

Survey results indicate expected increase of

11%

for 2021

## **Expectations for 2022**

**Expected Soybean Price** 

\$12.52

**Expected Corn Price** 

\$4.86

- Low amounts of inflation
- Modest increases in interest rates

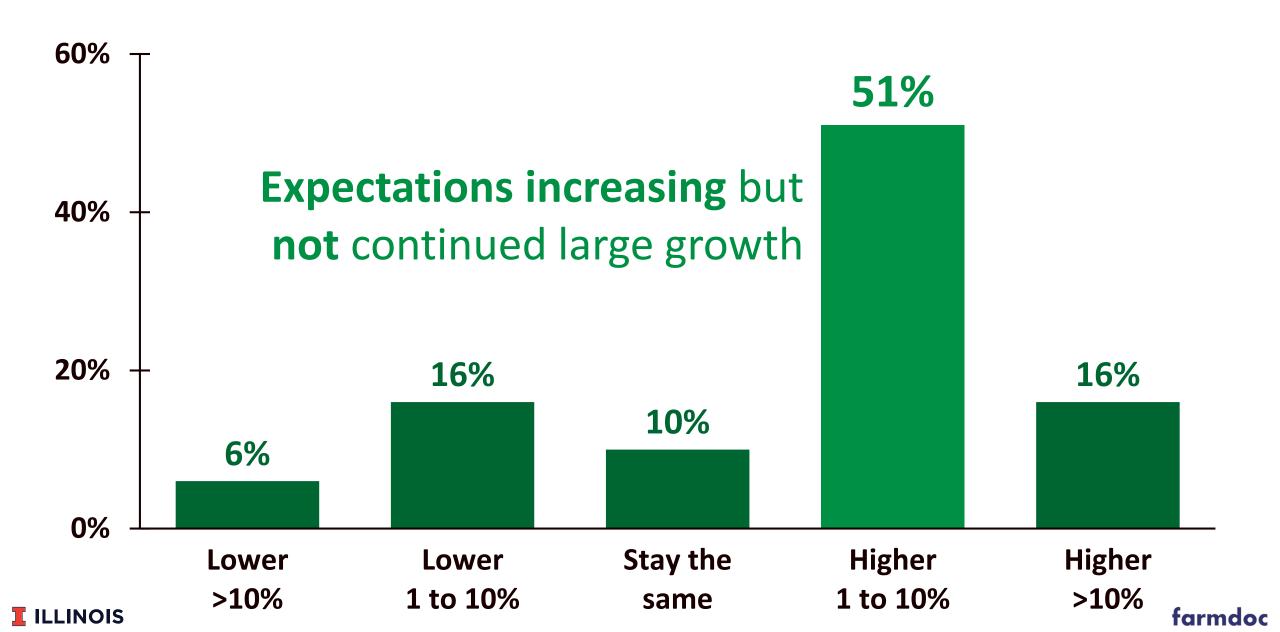
**I**ILLINOIS

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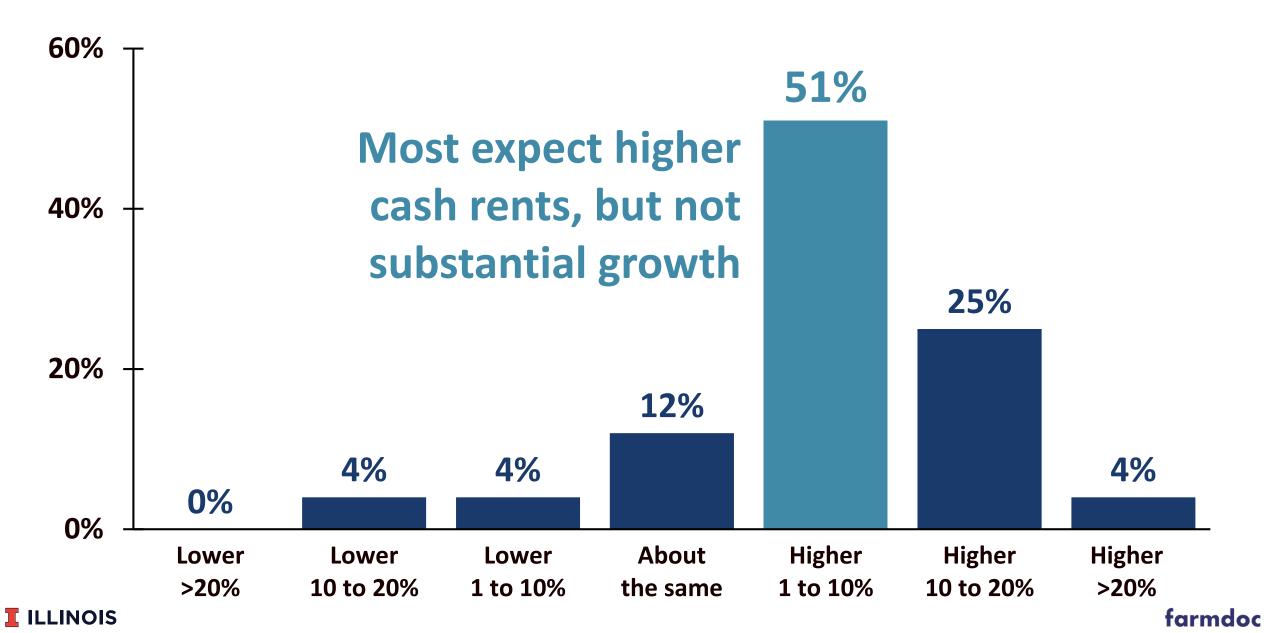
# Five-Years from Now



#### Farmland Prices: Five-Years from Now



#### **Cash Rents: Five-Years from Now**



## **Expectations in 5 Years**

**Expected Soybean Price** 

\$11.58

**↓0.94 from 2022 Expectations** 

Expected

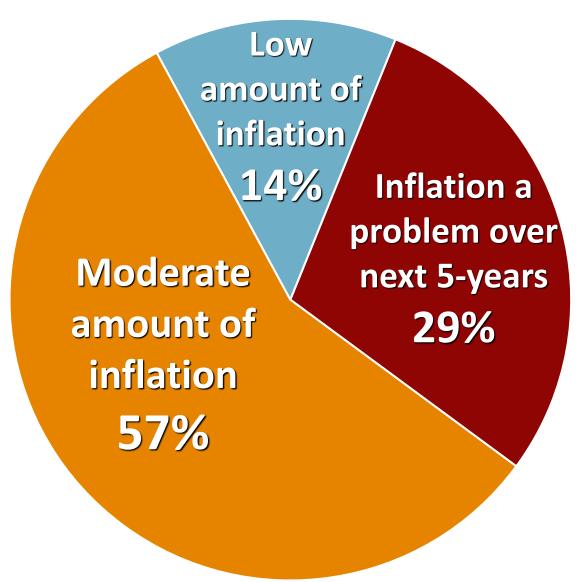
**Corn Price** 

\$4.52

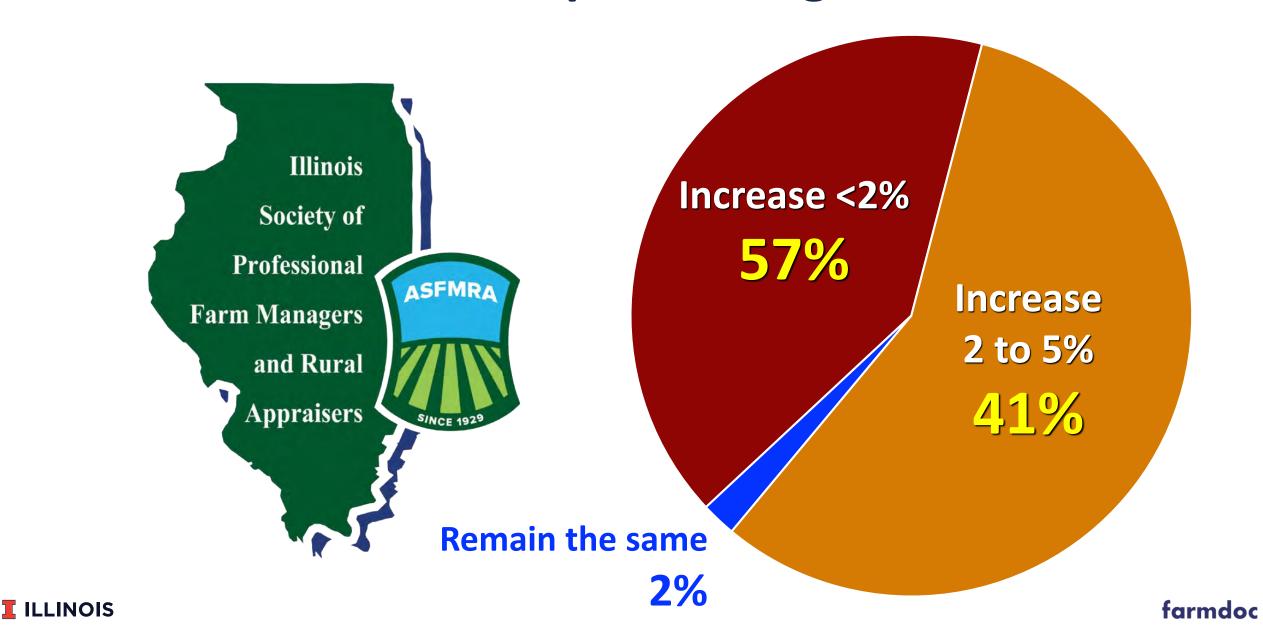
**↓0.34 from 2022 Expectations** 

## **ISPFMRA Members Expect Inflation**





## **ISPFMRA Members Expect Rising Interest Rates**



## What is you expectation for the U.S. economy in 5-years

- O Robust, strong growth
- O Moderate growth
- O No growth, stagnant
- One contraction (like 2008) and then growth)
- O Crash and low

# Can It Last?





#### Factors – Can it Last

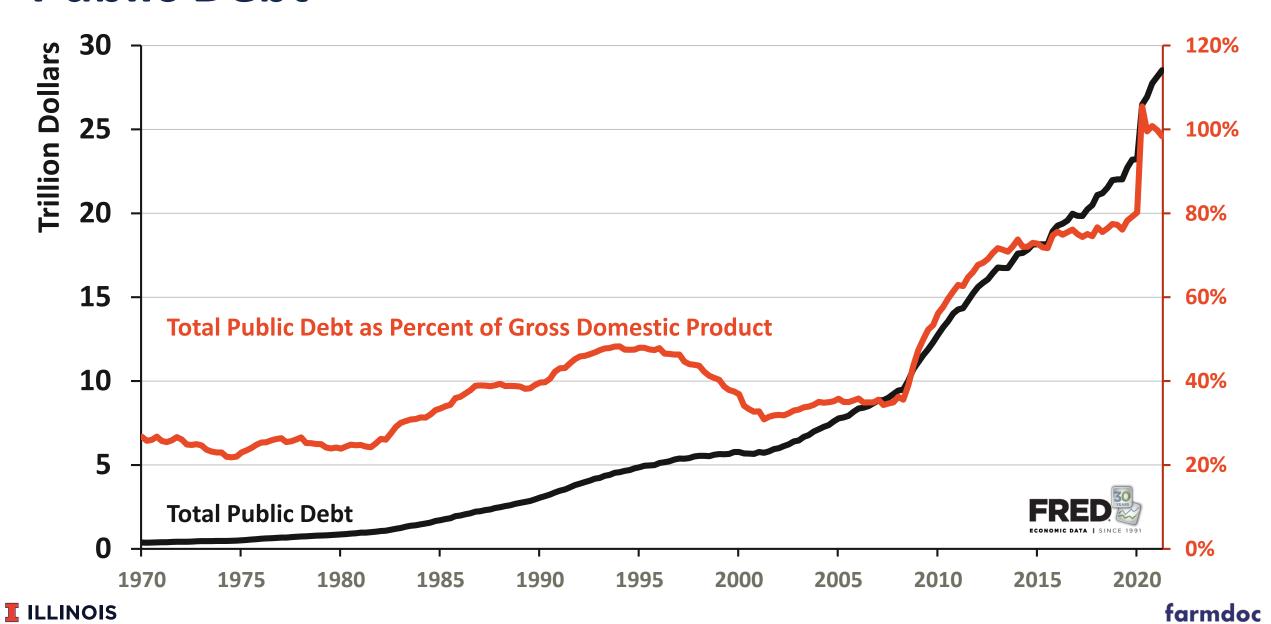
- Potential tax changes
- Commodity demand (\$4.52 corn, \$11.48 soybeans)
  - China
  - Brazil and other countries with acreage response)
- Fiscal/monetary policy
  - Inflation
- Rising nominal interest rates

## **Ten-year Constant Maturity Treasury Rate**





### **Public Debt**



## Interest as Percent of Gross Domestic Product Percent of GDP



## **Capitalized Value**

A very simple (and reasonably accurate) capitalization formula

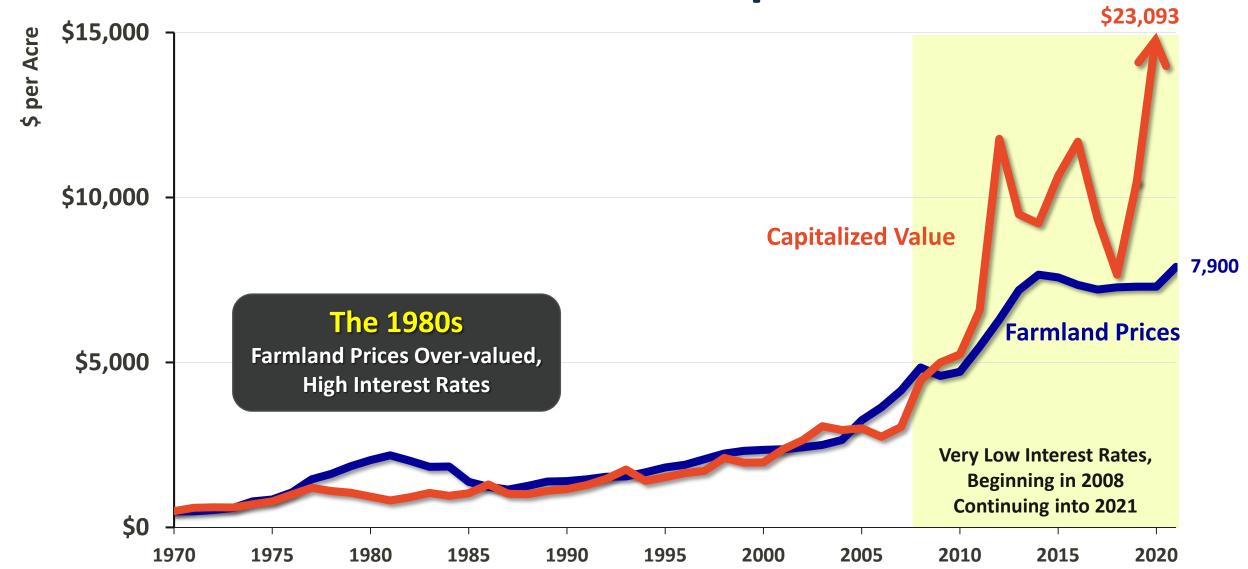
Capitalized Value = 
$$\frac{Cash \ Rent}{10x - Year \ CMT \ Rate}$$

Cash rent = \$225 per acre 10-Year Rate = 3%

**Capitalized value** = \$7,500 = \$225 / .03



### Illinois Farmland Prices and Capitalized Values



# What do you expect soybean prices to be in five-years

- OBelow \$9.00 per bushel
- OBetween \$9 and \$10 per bushel
- OBetween \$10 and \$11 per bushel
- Over \$11 per bushel



## Leasing Arrangement

**I** ILLINOIS

#### Illinois Cash Farm Lease

To use this lease form: Complete two identical copies - one for the Lessor (Landowner) and one for the Lessee (Tenant). Cross out any provisions that are not to become a part of the contract and add any additional provisions that are desired. If preparing the lease manually, use ink or typewriter; however, the web-based lease form can be filled in on-line before printing. This lease form is available on the farmdoc website at <a href="http://www.farmdoc.uiuc.edu/legal/farm">http://www.farmdoc.uiuc.edu/legal/farm</a> lease forms abs.html>. Additional leasing information can be found in the Leasing University of Illinois Farm Business Management Edu

Lesser(s) (Insert Landowner's exact name):    Lesser(s) (Insert Landowner's exact name):    Lesser(s) (Insert Landowner's exact name):    Common	University of Illino	doc.uiuc.edu/legal/farm_lease_forms_abs.html>. Additional leasing infor ois Farm Business Management Educators located at <a href="https://www.farmd">https://www.farmd</a> legal rights; thus, Landowners and Tenants may want to discuss specif	loc.uiuc.edu/manage/leasing_fact_sheets.html>. Note: A lease
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KED CASH RENT

#### Illinois Crop-Share Cash Farm Lease

To use this lease form: Complete two identical copies – one for the Lessor (Landowner) and one for the Lessee (Tenant). Cross out any pr that are not to become a part of the contract and add any additional provisions that are desired. If preparing the lease manually, use ink or typew mat are not to become a part of the contract and add any additional provisions that are desired. If preparing the tease manually, thousand the formal provisions is a distributed by the farmation of the farmation website at however, the web-based lease form can be filled in on-line before printing. This lease form is available on the farmation website at nowever, the web-basea tease form can be fitted in on-time before printing. This tease form is available on the Jarmaoc website at 

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creates and alters legal rights; thus, Landowners and Tenants may want to discuss specific lease provisions with their respective legal advisors.

creates and alters legal rights; thus, 2	, 20, 00111011
Date and names of parties. This lease is entered into on	
Date and names of parties. This same	
Lessor(s) (Insert Landowner's exact name):	
whose mailing address is	and,
Wilder	
Lessee(s) (Insert Tenant's exact name):	
whose mailing address is	
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The parties to this lease agree to the following provisions.

#### Section 1. Description of Rented Land and Length of Tenure

### **Leasing Basics**

Written lease is **best** (although many leases are not)

If not a written lease and landowner wants to terminate lease, must provide notice by **October 31**, specification in written lease will supersede the October 31 deadline (Illinois)

Most leases are one-year leases, or year-to-year leases, do not have many leases that are of longer term. Rare to have a lease over 2 or 3 years.

#### **Lease types**

- 1. Cash rent: farmer pays landowner for right to farmland, farmer receives all revenue and pays all expenses, except land costs (property tax)
- 2. Share rent: share in revenue (crop revenue and government programs) and direct costs (seed, fertilizer, pesticides, drying, storage, crop insurance)
- 3. Variable cash rent: cash rent varies with crop revenue
- **4. Custom farming:** landowner pays for for field operations, bears all costs, receives all revenue

Cash rent 42%

Share rent 23%

Variable Cash Rent 19%

Share rent (with modifications)
10%

**Custom farming, 6%** 



### **Share rent arrangements**

In northern and central Illinois, 50-50 prevail

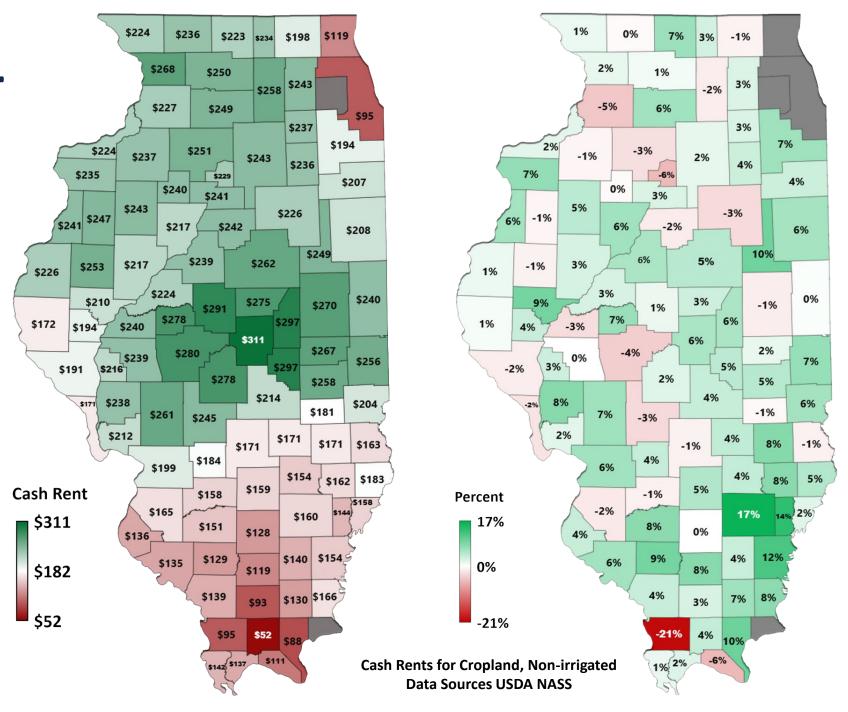
Sometimes have a supplemental rent of \$20 to \$30 per acre paid by farmer to landowner

Farmer bears all the labor and machinery expenses

#### Land Owned and Rented, Grain Farms in Illinois FBFM, 2019

	Northern	Central	Southern
Owned	19%	14%	22%
Share-rent	21%	42%	36%
Cash-rent	60%	44%	42%

## 2021 Cash Rent

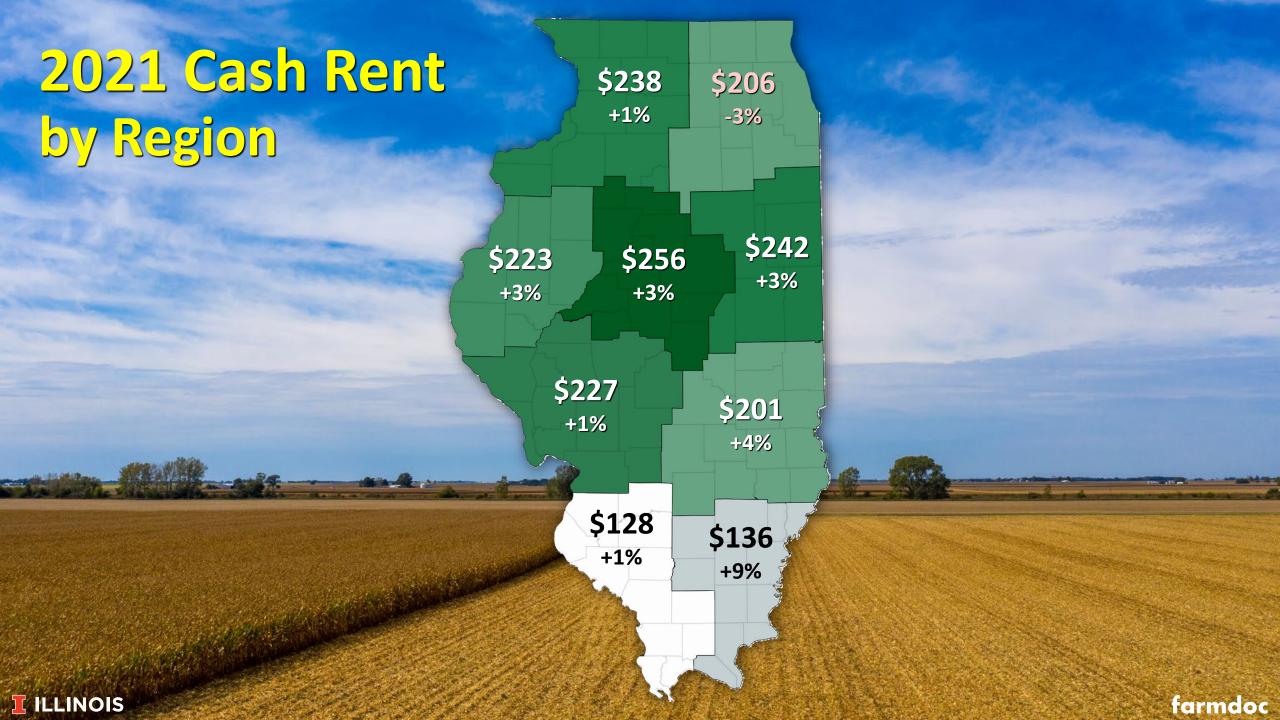


2020 to 2021

Cash Rent Increased

2.9%

\$5.33/acre



# Variable Leasing farmdocDAILY



Agricultural, Consumer & Environmental Sciences | University of Illinois Urbana-Champaign

#### Weekly Farm Economics: A Straight-Forward Structure for a Variable Cash Rent

Gary Schnitkey, Krista Swanson, and Nick Paulson

Department of Agricultural and Consumer Economics
University of Illinois

#### **Carl Zulauf**

Department of Agricultural, Environmental and Development Economics
Ohio State University

August 10, 2021

farmdoc daily (11): 117

Recommended citation format: Schnitkey, G., C. Zulauf, K. Swanson, and N. Paulson. "A Straight-Forward Structure for a Variable Cash Rent." *farmdoc daily* (11): 117, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, August 10, 2021.

Permalink: https://farmdocdaily.illinois.edu/2021/08/a-straight-forward-structure-for-a-variable-cash-rent.html

#### **Example parameters:**

Base rent of \$200 per acre

Rent factor

• Corn: 32%

Soybeans: 43%



#### Variable Leasing

#### farmdocDAILY



Agricultural, Consumer & Environmental Sciences | University of Illinois Urbana-Champaign

Weekly Farm Economics: A Straight-Forward Structure for a Variable Cash Rent

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#### Panel A. Factors Agreed on in Rental Arrangment<sup>1</sup>

Minimum Rent	\$200
Rent Factor - Corn	32%
Rent Factor - Soybeans	43%
Percent Acres in Corn	50%
Percent Acres in Soybeans	50%

#### Panel B. Calculation of Rent After Yields and Prices are Known<sup>2</sup>

	Farm Yield		Market Price		Crop Revenue		Rent Factor		Percent of Acres		Rent
Corn	220	Χ	\$4.50	=	\$990	X	32%	х	50%_	=	\$158
Soybeans	69	X	\$12.35	=	\$852	X	43%	X	50%	=	\$183

Rent Calculation (sum of corn and soybeans) \$

Cash Rent (higher of Minimum or Rent Calculation) \$341



<sup>&</sup>lt;sup>1</sup> These facotrs need to be agreed upon when a variable cash rent is entered.

<sup>&</sup>lt;sup>2</sup> Farm yields and market prices allow the calculation of the cash rent.

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#### **Upcoming Webinars**

#### **Carbon Markets**

11:00 to noon CT, Thursday September 9<sup>th</sup> by Sarah Sellars, Krista Swanson, and Gary Schnitkey

With growing concerns about climate change, policy markers are looking for solutions to reduce greenhouse gas emissions. One solution is a market for carbon credits. Here we will describe the latest on carbon markets, with an emphasis on definitions of carbon markets and an analysis of current carbon markets.

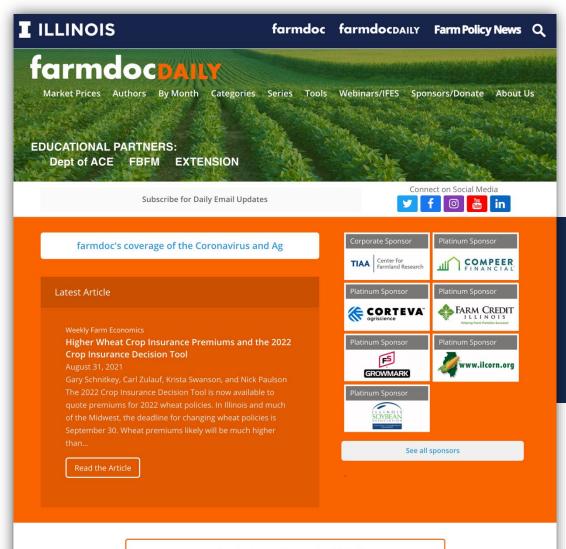
#### **Grain Outlook**

11:00 to noon CT, Thursday September 16<sup>th</sup> by Scott Irwin and Joe Janzen

After several years of trade difficult, grain markets have boomed. We will discuss the factors impacting grain markets and provide some projections for the future.

## Thank You for joining us! Please submit your questions





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