

# Corn and Soybean Outlook

November 16, 2022

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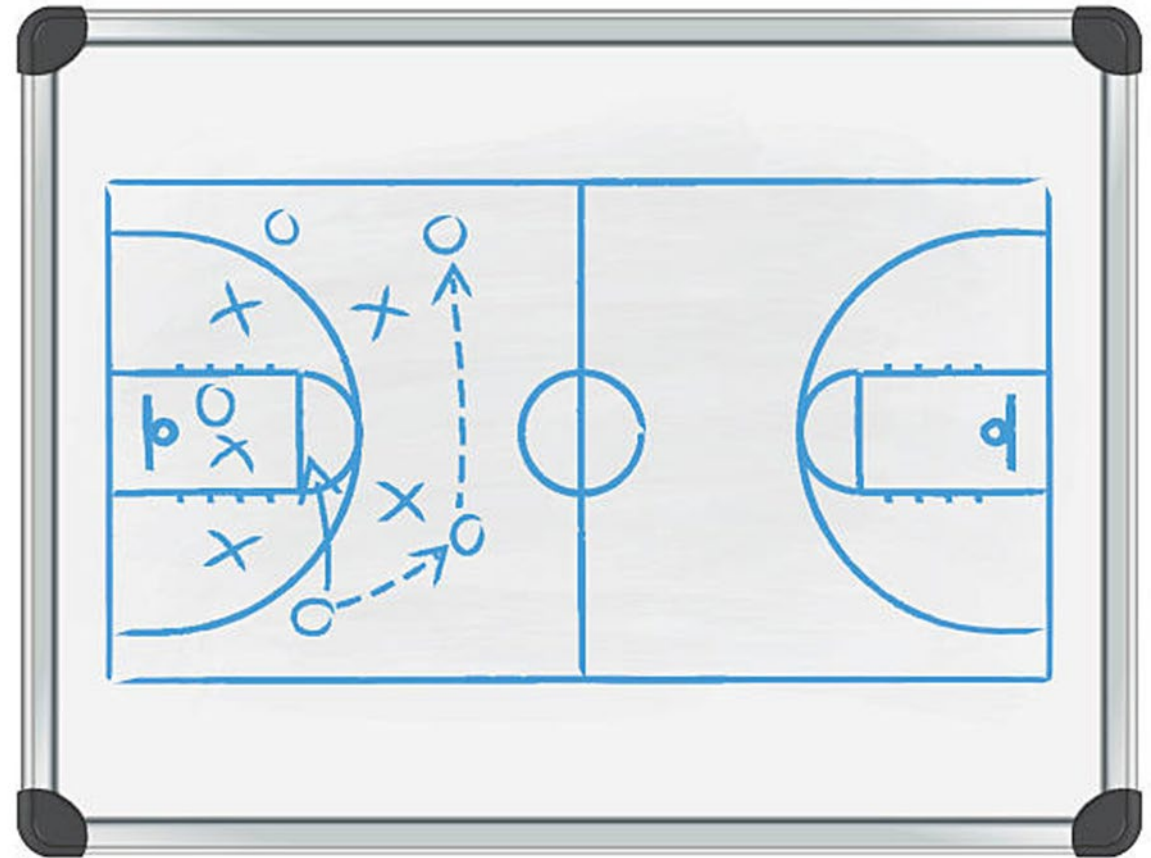
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# Overview

- Old crop
- Supply and Demand
- Inflation and Input Costs
- Bridging the price risk gap



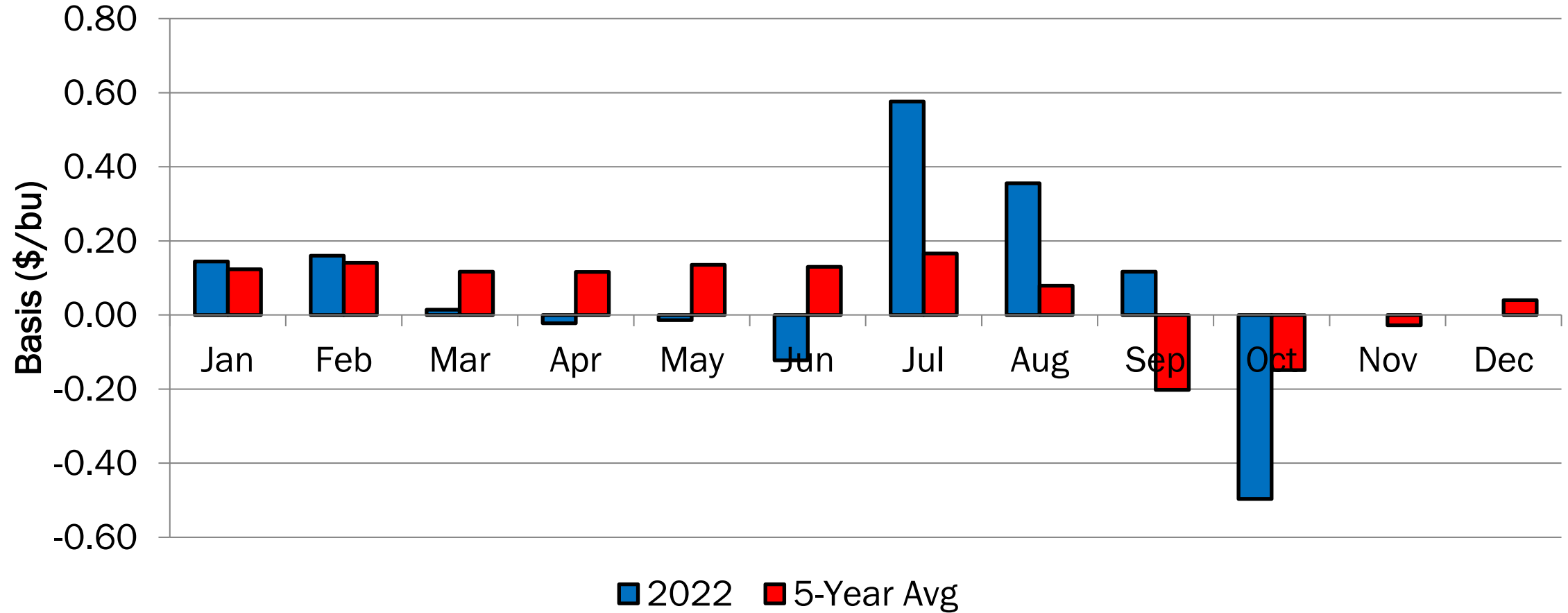
# Old crop

- Storage is a powerful marketing tool
- Futures prices

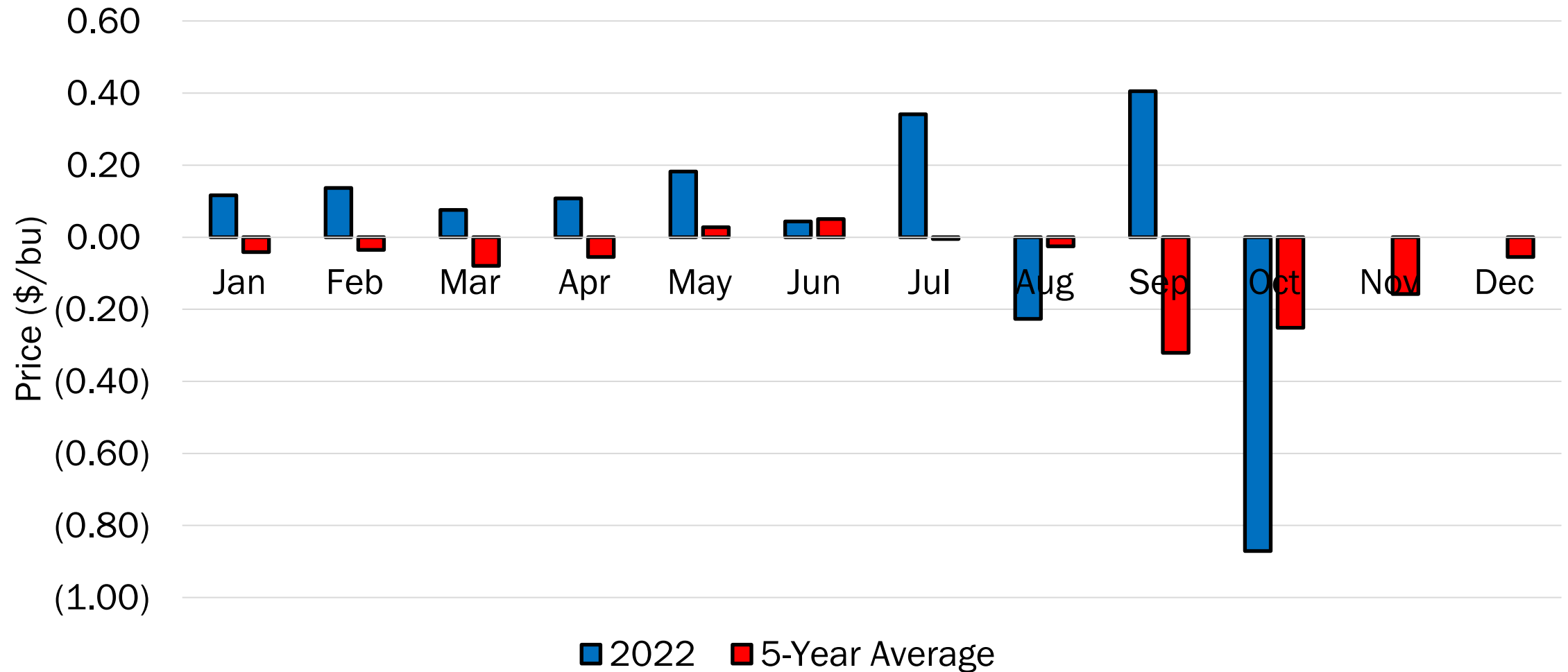
Contract	Last	Change
+ ZSY00 (Cash)	1413-0s	+12-0
+ ZSF23 (Jan '23)	1457-2	+16-6
+ ZSH23 (Mar '23)	1461-6	+17-0
+ ZSK23 (May '23)	1467-0s	+16-0
+ ZSN23 (Jul '23)	1468-2	+16-0
+ ZSQ23 (Aug '23)	1450-4s	+14-4

Contract	Last	Change
+ ZCY00 (Cash)	642-2s	+4-0
+ ZCZ22 (Dec '22)	666-6	+9-4
+ ZCH23 (Mar '23)	669-2	+10-0
+ ZCK23 (May '23)	667-6	+9-2
+ ZCN23 (Jul '23)	661-4	+7-6

# Tennessee Monthly Average Corn Basis At Elevators and Barge Points

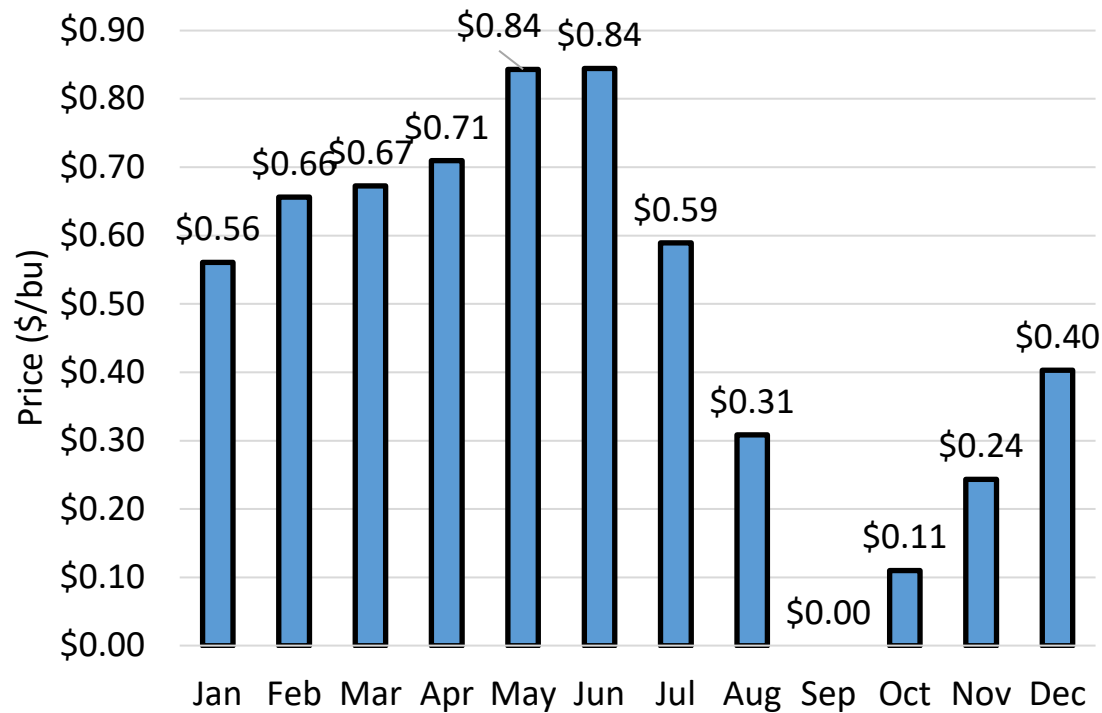


# Tennessee Monthly Average Soybean Basis At Elevators and Barge Points

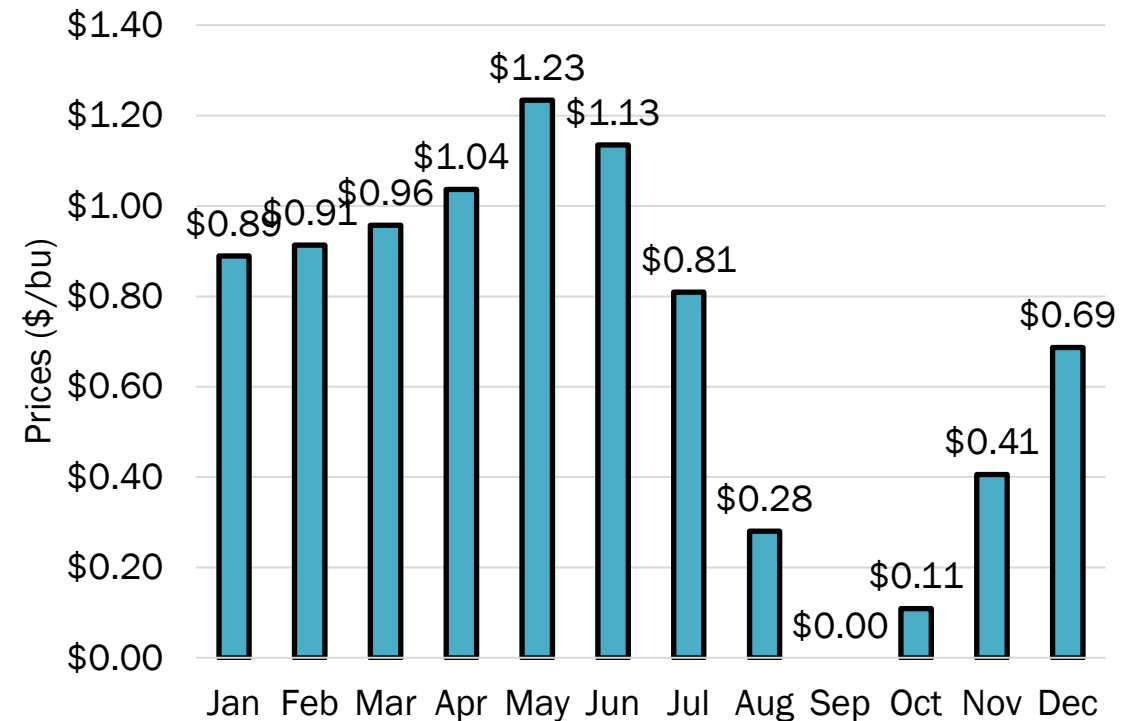


# Tennessee Corn and Soybean Cash Price Increases

Tennessee Corn Average Price Improvement from September by Month, 2013/14 to 2020/21 Marketing Years



Tennessee Soybean Average Price Improvement from September by Month, 2013/14 to 2020/21 Marketing Years



# World Corn Production, Consumption, Ending Stocks, Days-on-hand, and MYA Price, 2013/14- 2022/23

Billion Bushels

	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023
Production	40.44	41.65	39.95	44.43	42.59	44.44	44.20	44.46	47.93	<b>46.00</b>
Use	37.43	38.39	39.45	41.92	43.12	44.54	44.62	45.13	46.64	<b>46.07</b>
Ending Stocks	8.45	11.01	12.27	13.85	13.44	12.70	12.10	11.53	12.11	<b>11.84</b>
<b>Days on Hand</b>	<b>82.4</b>	<b>104.7</b>	<b>113.5</b>	<b>120.6</b>	<b>113.8</b>	<b>104.1</b>	<b>99.0</b>	<b>93.2</b>	<b>94.8</b>	<b>93.8</b>
US MYA Price	\$4.46	\$3.70	\$3.61	\$3.36	\$3.36	\$3.61	\$3.56	\$4.53	\$6.00	<b>\$6.80</b>

- Global corn supplies are susceptible to continued developments in Ukraine-Russia, South American second crop corn production (speed of soybean harvest), and Northern hemisphere planted acreage estimates.

# U.S. Corn Production, Consumption, Ending Stocks, Days-on-hand, and MYA Price, 2013/14- 2022/23

Billion Bushels

	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023
Production	13.83	14.22	13.60	15.15	14.61	14.34	13.62	14.11	15.07	<b>13.93</b>
Use	11.53	11.88	11.76	12.35	12.36	12.22	12.18	12.07	12.48	<b>12.02</b>
Exports	1.92	1.87	1.90	2.30	2.44	2.07	1.78	2.75	2.47	<b>2.15</b>
Ending Stocks	1.23	1.73	1.74	2.29	2.14	2.22	1.92	1.23	1.38	<b>1.18</b>
<b>Days on Hand</b>	<b>33.4</b>	<b>46.0</b>	<b>46.4</b>	<b>57.1</b>	<b>52.8</b>	<b>56.7</b>	<b>50.2</b>	<b>30.4</b>	<b>33.6</b>	<b>30.4</b>
US MYA Price	\$4.46	\$3.70	\$3.61	\$3.36	\$3.36	\$3.61	\$3.56	\$4.53	\$6.00	<b>\$6.80</b>

- U.S. Export sales will be key for projected ending stocks and price direction.
- In Tennessee, the state corn deficit will be amplified until the new crop is harvested (higher basis increased out of state purchases).



# World Soybean Production, Consumption, Ending Stocks, Days-on-hand, and MYA Price, 2013/14-2022/23

Billion Bushels

	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023
Production	10.39	11.81	11.60	12.88	12.63	13.32	12.51	13.54	13.06	<b>14.35</b>
Use	10.21	11.17	11.64	12.19	12.49	12.68	13.21	13.36	13.34	<b>13.97</b>
Ending Stocks	2.35	2.92	2.91	3.50	3.67	4.20	3.48	3.68	3.48	<b>3.75</b>
<b>Days on Hand</b>	<b>84</b>	<b>95</b>	<b>91</b>	<b>105</b>	<b>107</b>	<b>121</b>	<b>96</b>	<b>100</b>	<b>95</b>	<b>98</b>
US MYA Price	\$13.00	\$10.10	\$8.95	\$9.47	\$9.33	\$8.48	\$8.57	\$10.80	\$13.30	<b>\$14.00</b>

- Global soybean prices will be heavily influenced by South American weather and cop progress.
- China soybean imports from the US and potential geopolitical escalation remains a wild card.
- Strong global demand is projected.

# U.S. Soybean Production, Consumption, Ending Stocks, Days-on-hand, and MYA Price, 2013/14- 2022/23

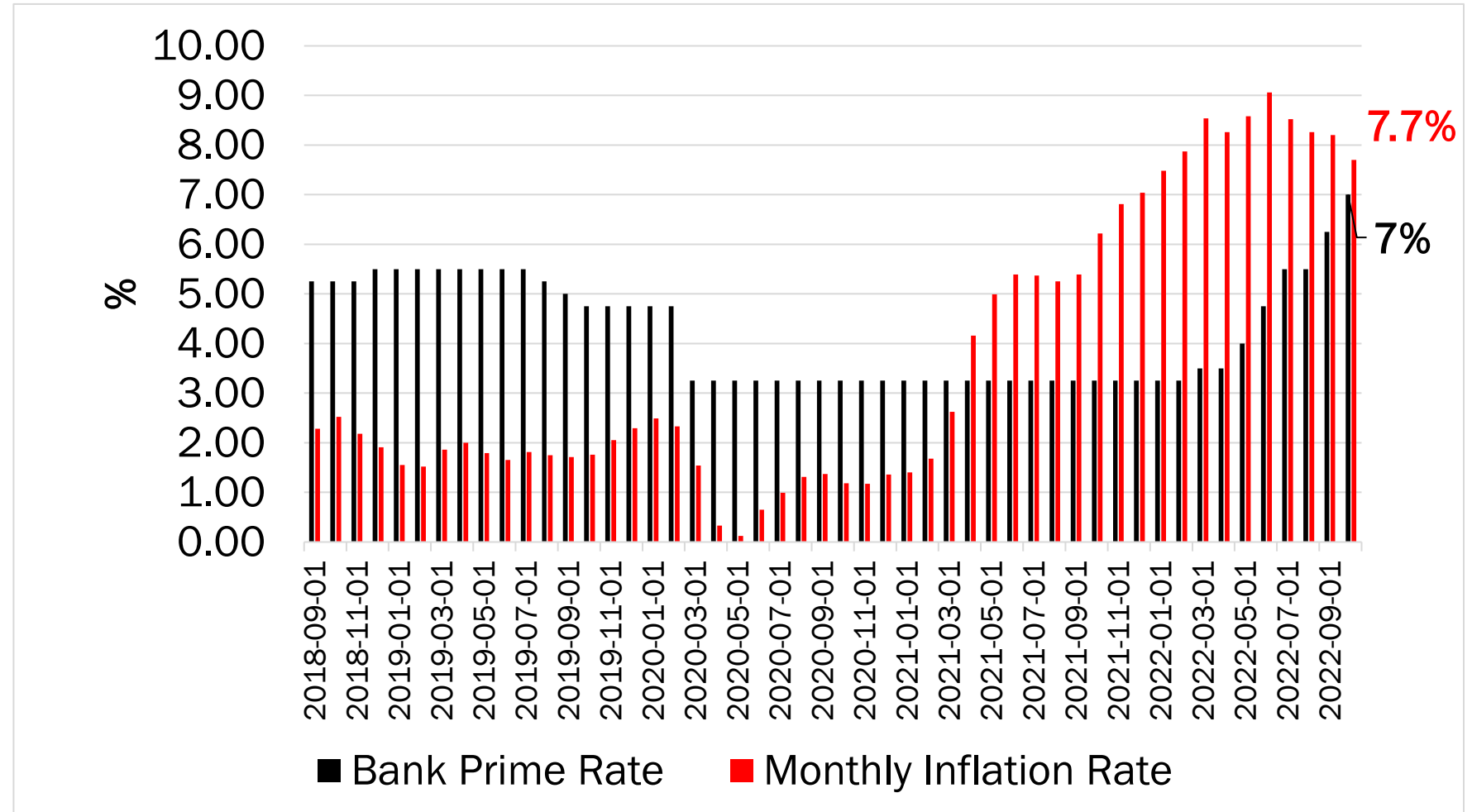
Billion Bushels

	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	<b>2022/2023</b>
Production	3.36	3.93	3.93	4.30	4.41	4.43	3.55	4.22	4.46	<b>4.35</b>
Use	1.84	2.02	2.00	2.05	2.16	2.22	2.27	2.24	2.31	<b>2.37</b>
Exports	1.64	1.84	1.94	2.17	2.13	1.75	1.68	2.27	2.16	<b>2.04</b>
Ending Stocks	0.09	0.19	0.20	0.30	0.44	0.91	0.52	0.26	0.27	<b>0.22</b>
<b>Days on Hand</b>	<b>10</b>	<b>18</b>	<b>18</b>	<b>26</b>	<b>37</b>	<b>84</b>	<b>48</b>	<b>21</b>	<b>22</b>	<b>18</b>
US MYA Price	\$13.00	\$10.10	\$8.95	\$9.47	\$9.33	\$8.48	\$8.57	\$10.80	\$13.30	<b>\$14.00</b>

- U.S. stocks are projected to be tight, but a lot will depend on competition for export markets with Brazil.
- Increased domestic crush has the potential to provide substantial changes to soybean markets.

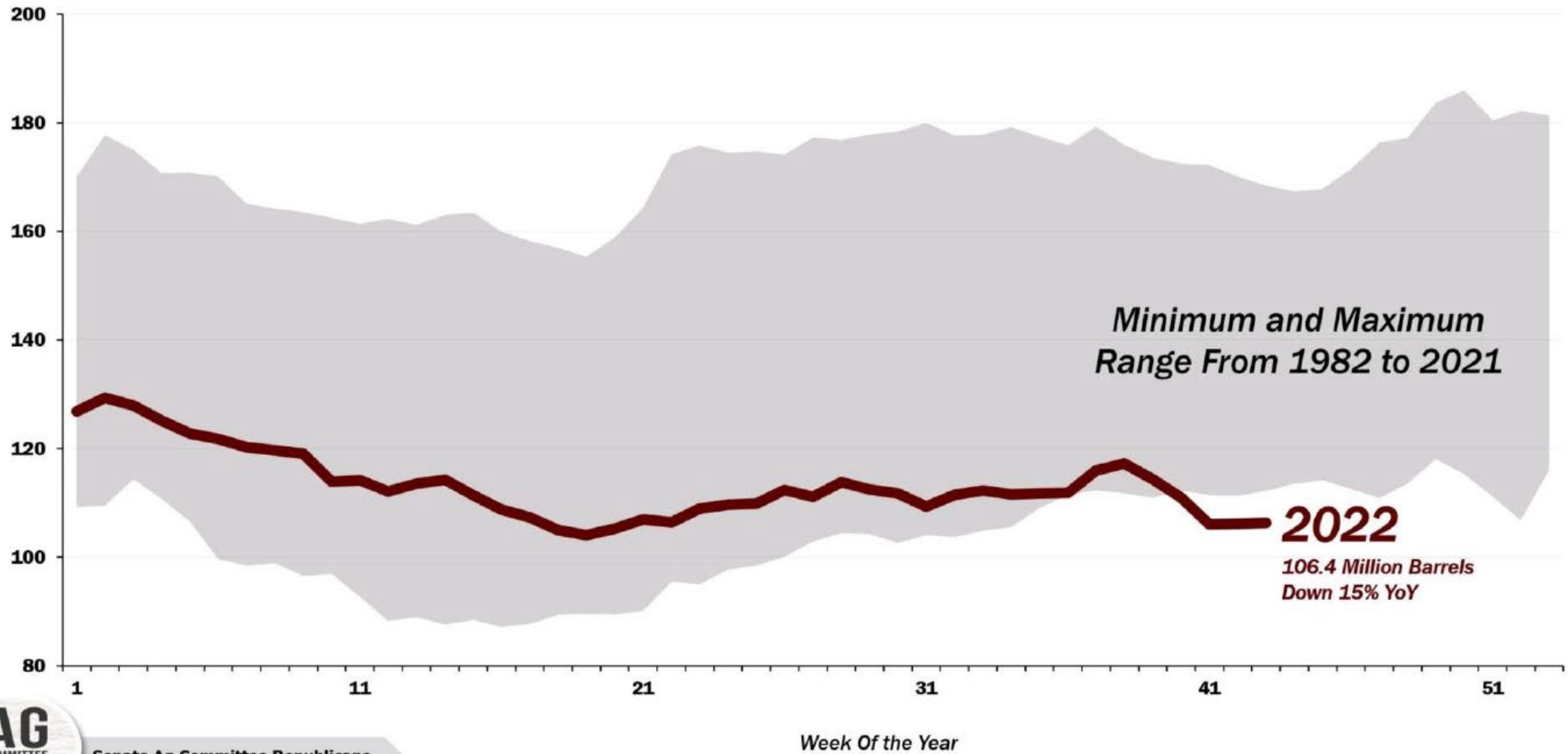
# Inflation and Interest Rates

- Government Spending
  - Infrastructure & IRA
- Energy Prices
- Supply Chain Disruptions
- Increased Production Costs
- Increased Capital Costs



# 40 Years Of Diesel Fuel Inventory

Million Barrels

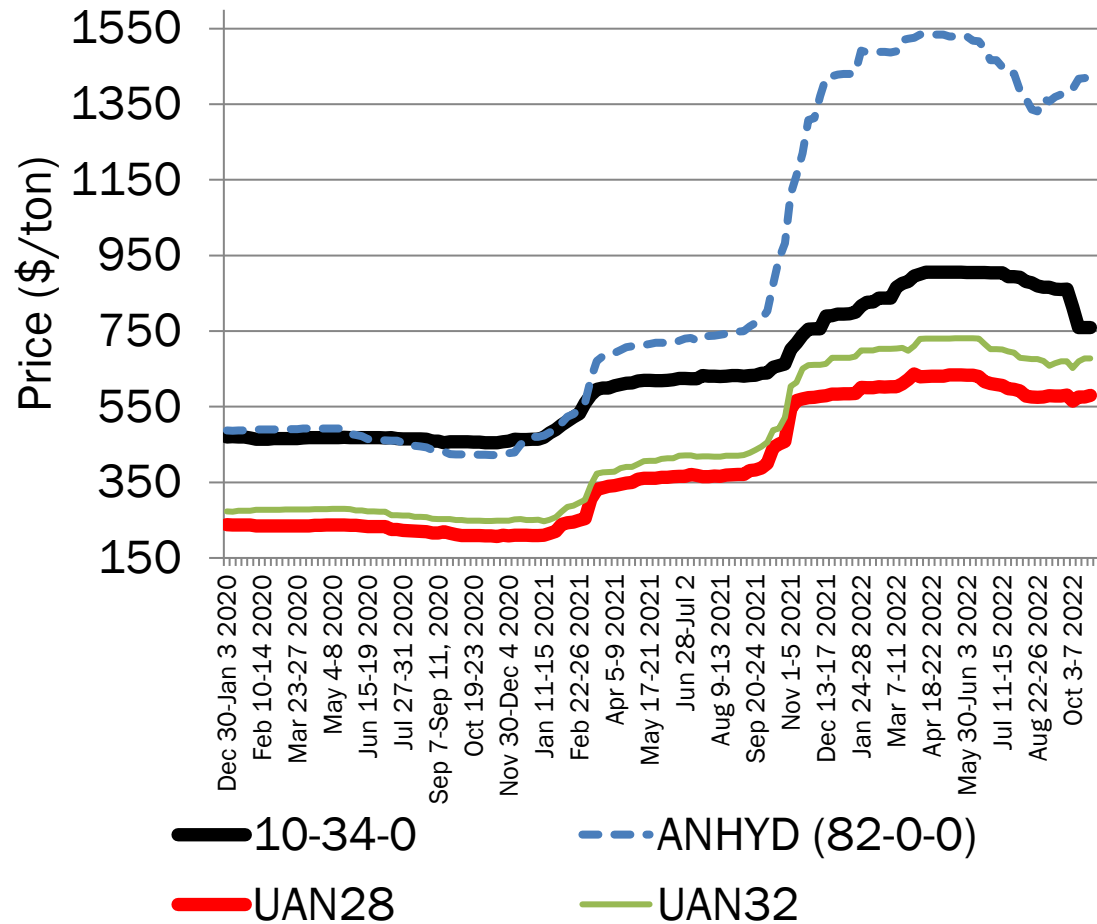


Senate Ag Committee Republicans

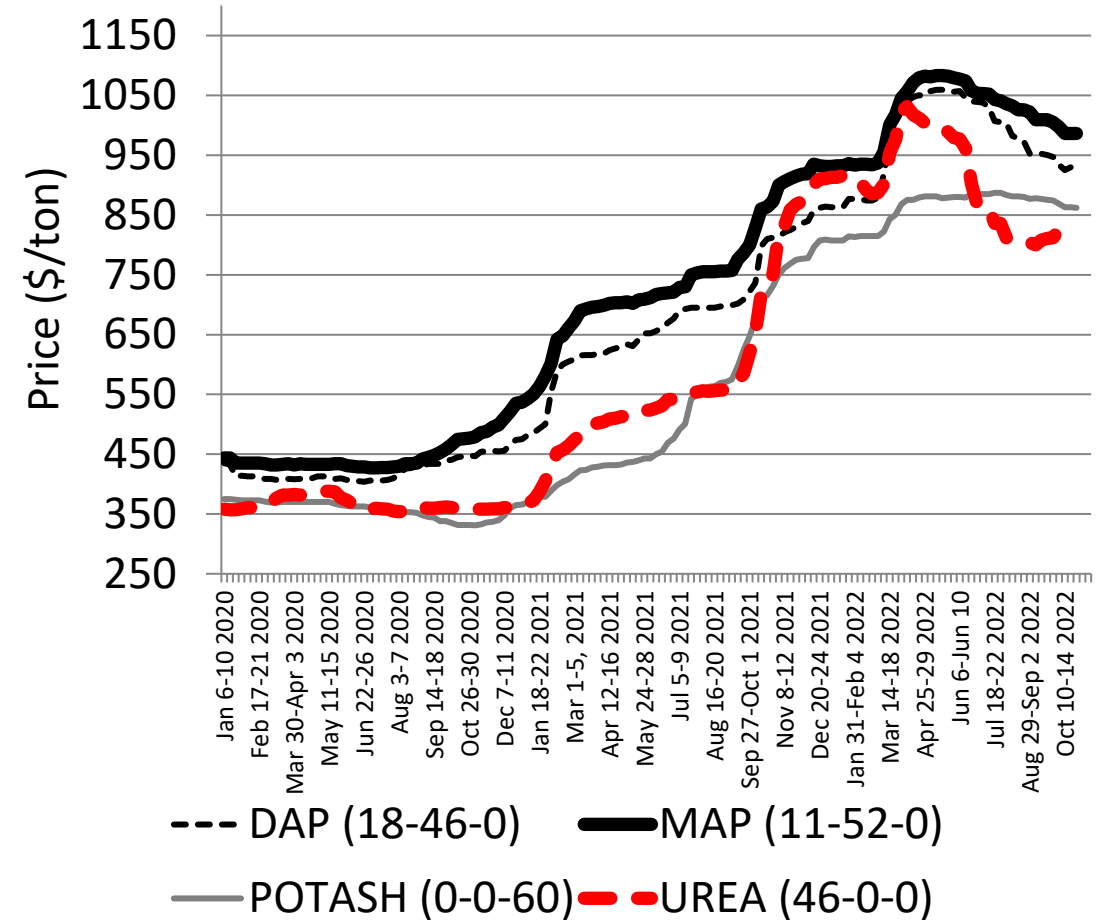
Senate Ag GOP Analysis, Energy Information Administration

# Fertilizer Price

## Liquid Fertilizer Price, 2020-2022



## Dry Fertilizer Price, 2020-2022



# Rising interest rates will cost you money

## \$1,250,000 Operating Utilization

Interest Rate	3.25%	5.5%	7.5%
Interest	\$22,114	\$37,552	\$51,361
Change	-	\$15,438	\$29,247
Cost (\$/acre)*	\$11.06	\$18.77	\$25.68

\* Assumes 2000 acres

# What will it cost to produce a crop in 2023?

- Input purchase timing / availability
- Finance charges
- Land costs
- Variable depending on location and yield target
  - 175 bu corn ~ \$750 -\$1,000
  - 50 bu soybeans ~ \$400-\$700

# Bridging the Price Risk Gap

- New crop futures price offerings
  - Corn \$6.26/bu
  - Soybeans \$13.97/bu
- Target yield
  - Corn 175 bu/acre
  - Soybeans 50 bu/acre
- Projected revenue
  - Corn \$1,095/acre
  - Soybeans \$699/acre
- Projected cost of production
  - Corn \$1,000/acre
  - Soybeans \$650/acre
- Breakeven price
  - Corn \$5.71
  - Soybean \$13.00
- 2023 Dec or Nov Put
  - Corn
    - Strike \$5.70
    - Premium \$0.35
    - Floor \$5.35
  - Soybean
    - Strike \$13.00
    - Premium \$0.54
    - Floor \$12.46
- Can you make up 35 and 54 cents through storage/basis/other marketing?



# Corn: Bridging the Price Risk Gap

- On March 1,
  - If Dec Corn  $> \$5.70$ 
    - Option is out-of-the money = exit and recover a portion of the \$0.35 cent premium.
  - If  $\$5.35 < \text{Dec Corn} < \$5.70$ 
    - Recover a portion of the premium or maintain position
  - If Dec Corn  $< \$5.35$ 
    - Option is in-the-money ( $\$5.35 - \text{Dec Corn}$ ) maintain the option position.
- Provides low-cost price protection until crop insurance is determined February 1-28.

# Soybean: Bridging the Price Risk Gap

- On March 1,
  - If Nov Soybean > \$13.00
    - Option is out-of-the money = exit and recover a portion of the \$0.54 cent premium.
  - If  $\$12.46 < \text{Nov Soybean} < \$13.00$ 
    - Recover a portion of the premium or maintain position
  - If Nov Soybean < \$12.46
    - Option is in-the-money ( $\$12.46 - \text{Nov Soybean}$ ) maintain the option position.
- Provides low-cost price protection until crop insurance is determined February 1-28.

# Bridging the Price Risk Gap Summary

- Options can protect against downside price risk in the futures market until crop insurance prices are determined March 1.
- If the Put Option is out of the money recoup a portion of the premium (part of 35 or 54 cents).
- If the Put Option is in the money maintain the position as added protection until sales are made.

# Take Home Message

- Input prices are high and are likely to remain high in 2023.
- Remove some of the financial risk between now and when crop insurance guarantees are established.
- Substantial volatility exists in commodity markets.
- Volatility in prices are outside of producer control, managing your price risk is not.

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# THANK YOU