

Corn & Soybean Outlook Update...Following USDA's January WASDE Report
January 13, 2023

James Mintert, Director, Center for Commercial Agriculture

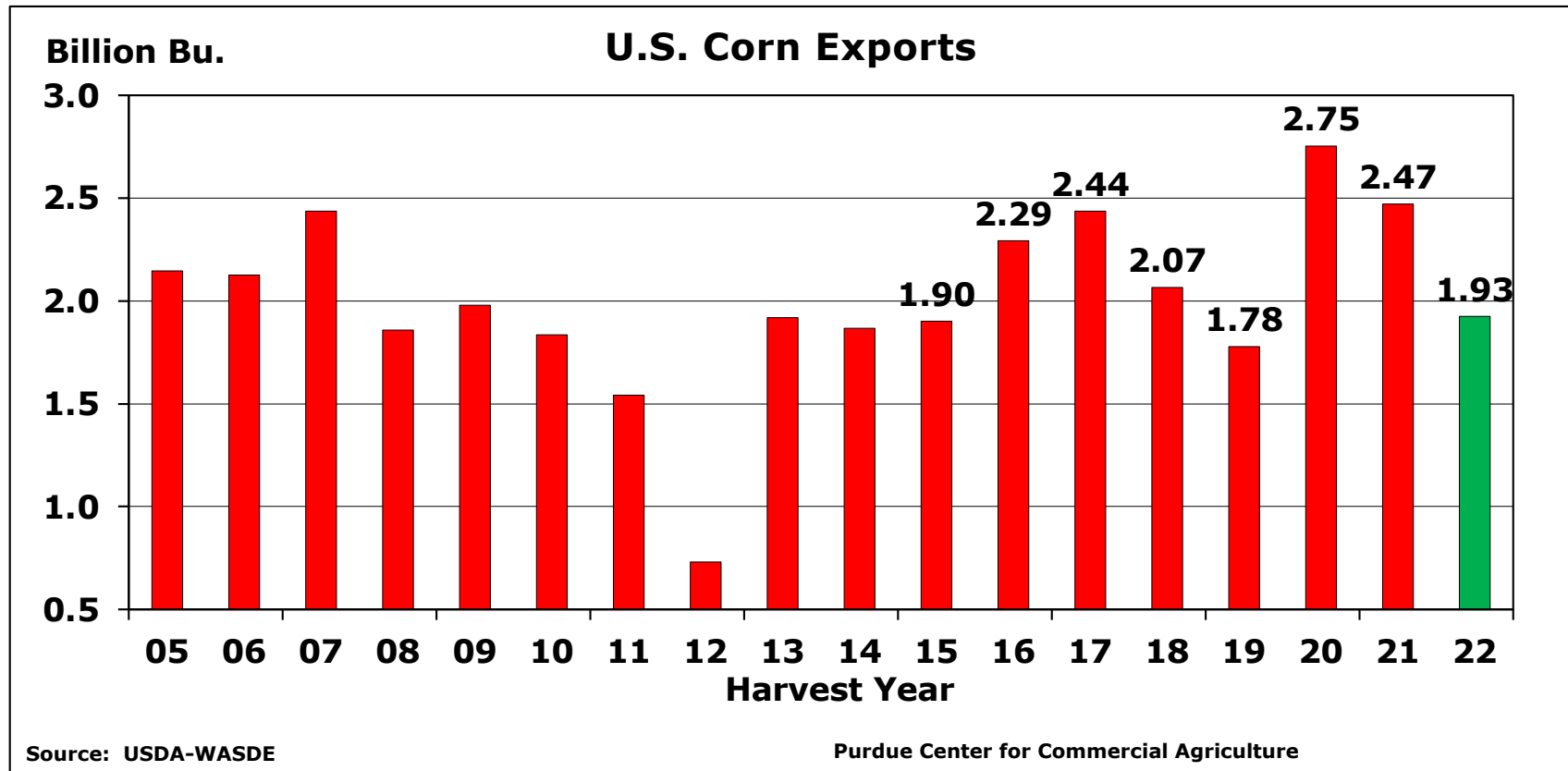
Nathan Thompson, Professor of Agricultural Economics

Michael Langemeier, Associate Director, Center for Commercial Agriculture



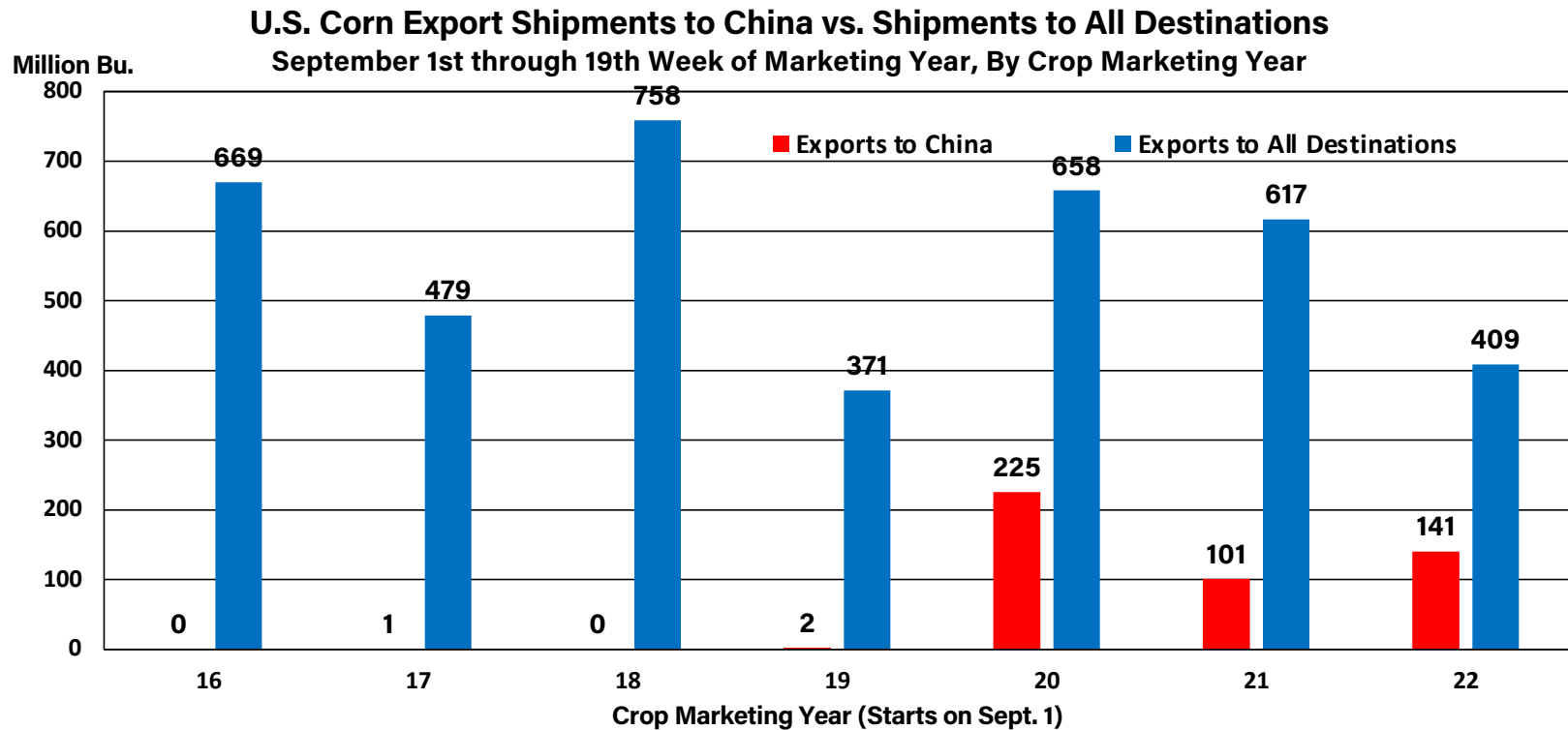
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USDA's Export Forecast is 2nd Lowest of the Last 6 Years...Lowest Since 2019



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YTD Corn Export Shipments Down 34% vs. Last Year



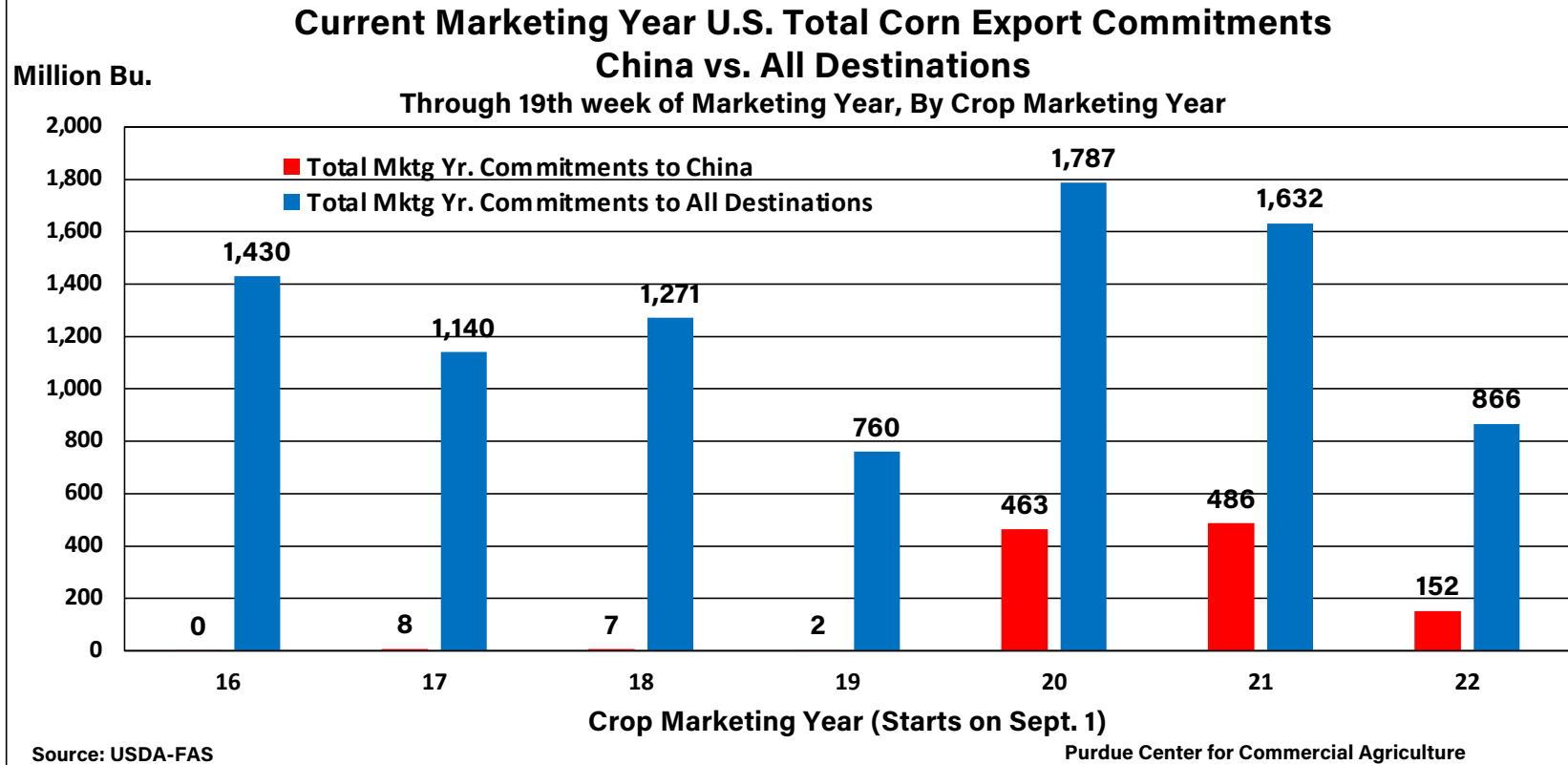
Source: USDA-FAS

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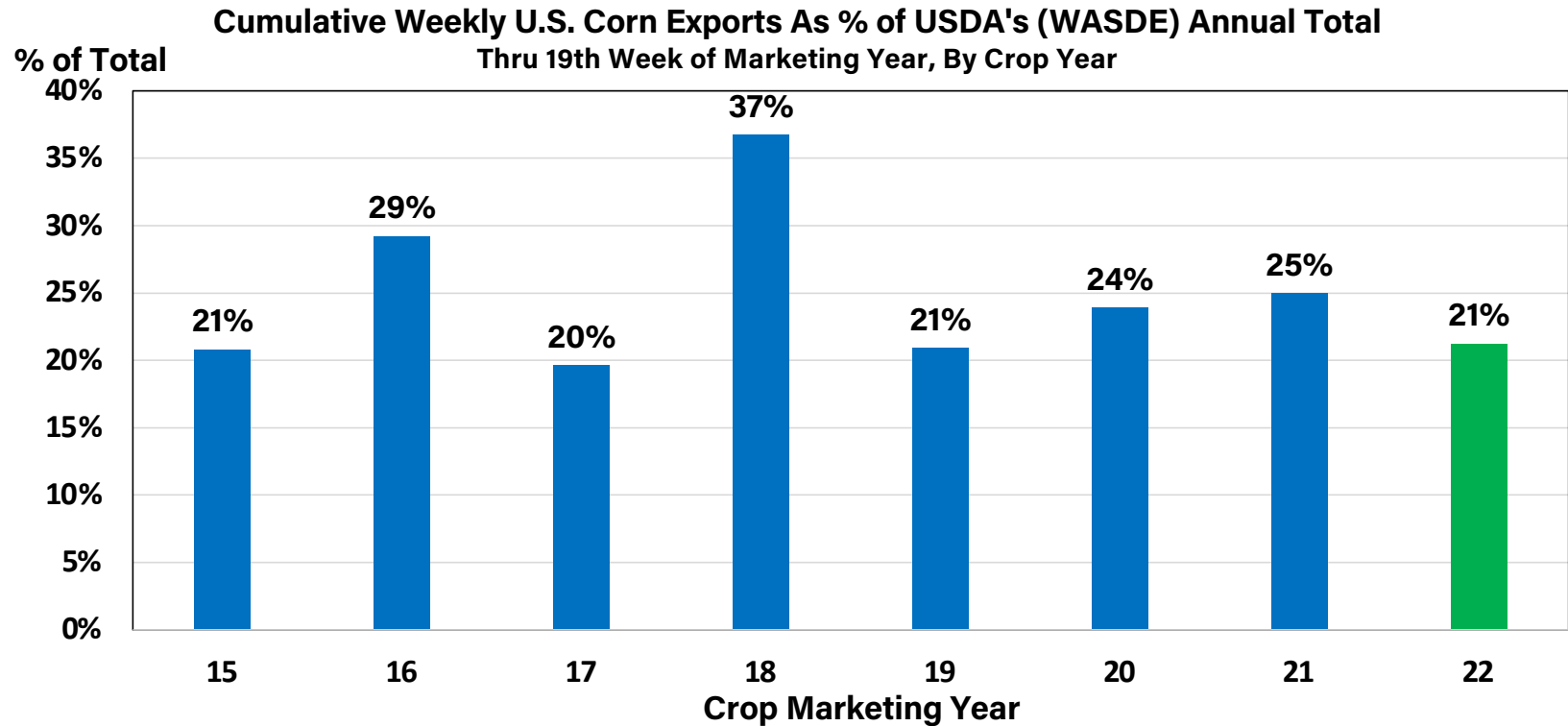


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YTD Export Total Commitments Down 47% vs. Last Year



Exports Are Running Slightly Behind USDA's Current Projection...But That Understates the Shortfall



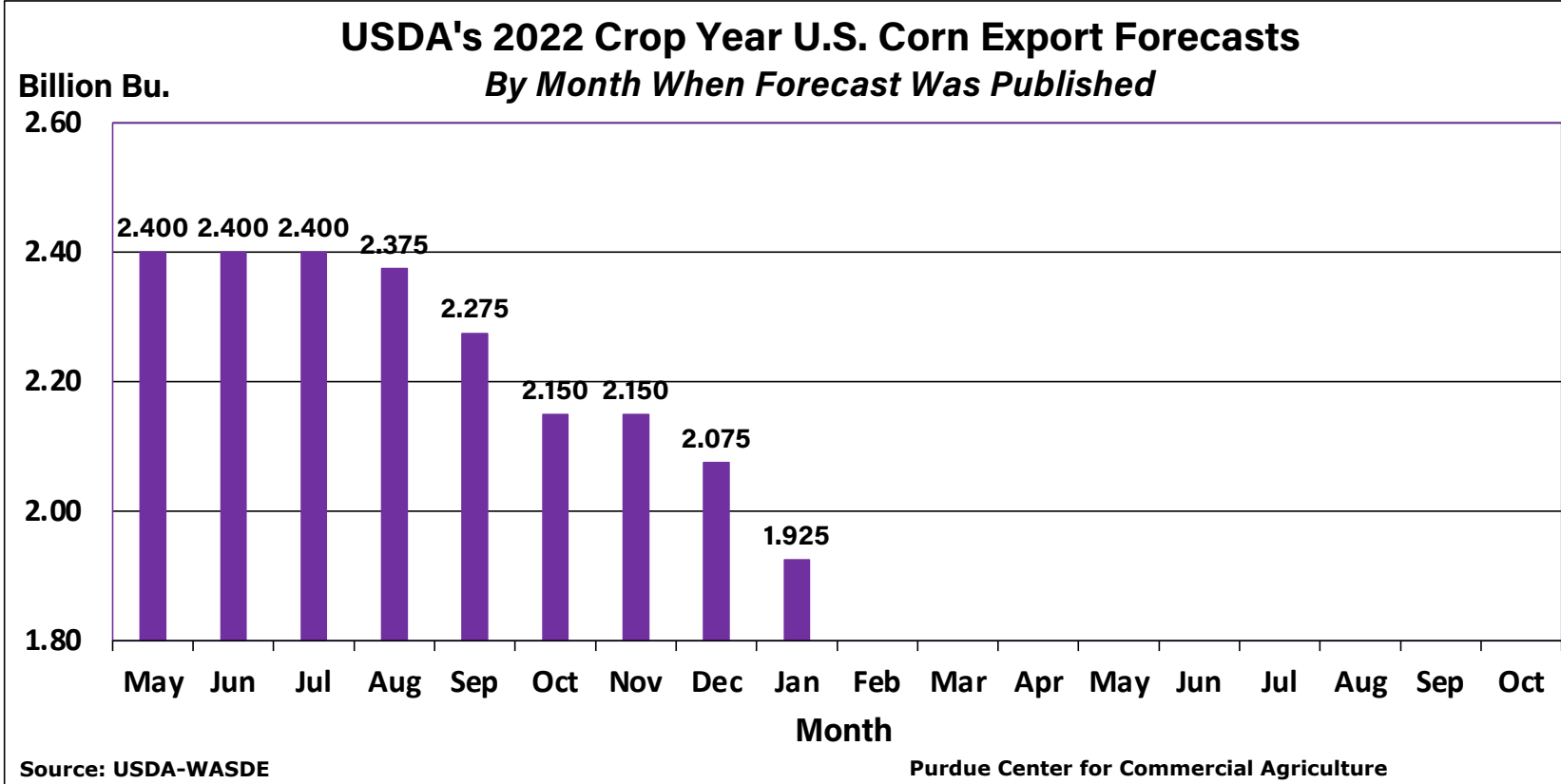
Source: USDA-FAS & USDA-ERS, 2022 based on January 2023 WASDE export forecast

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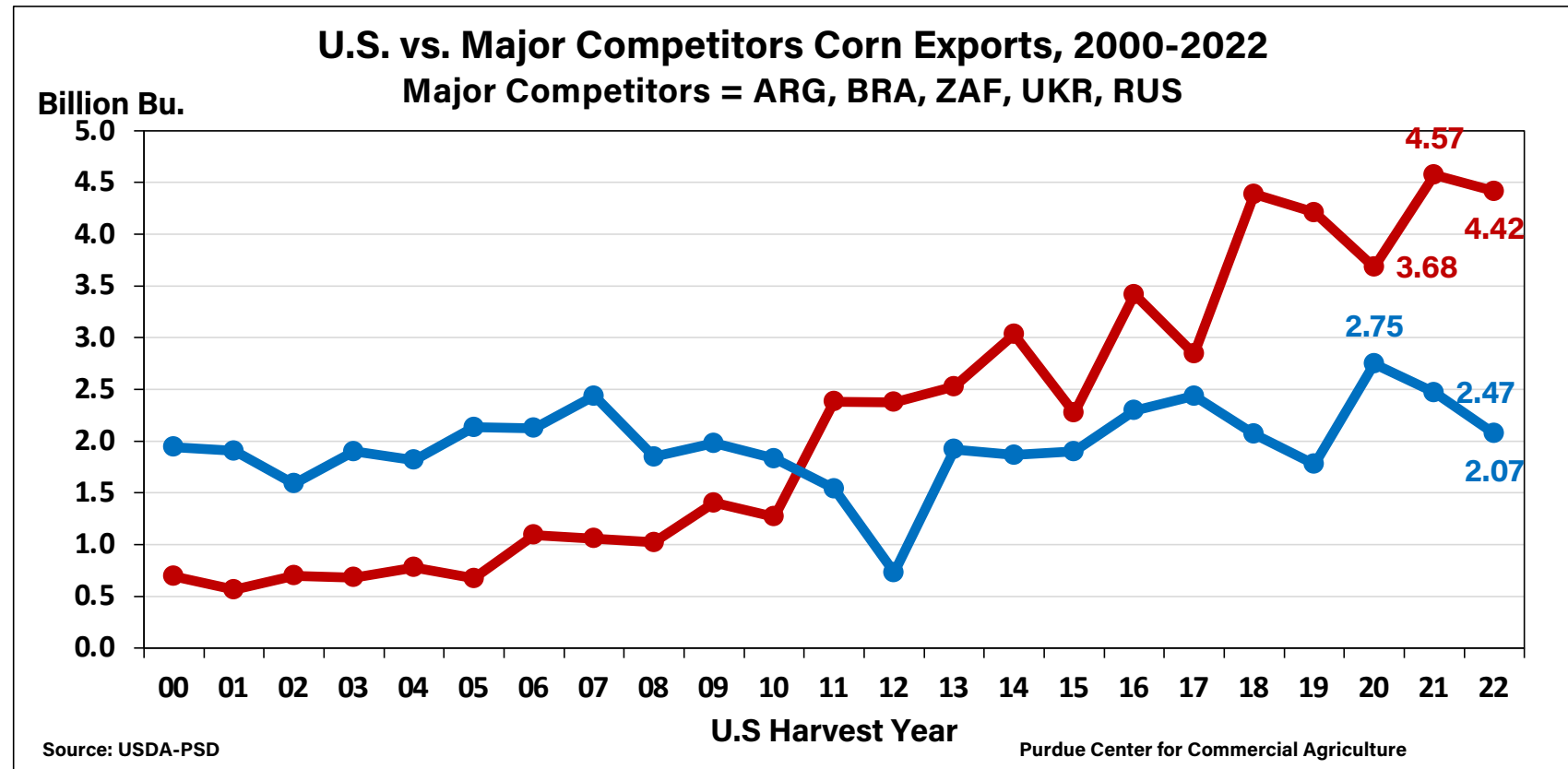
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Because USDA Has Ratcheted Their Corn Export Forecast Down Sharply Since July

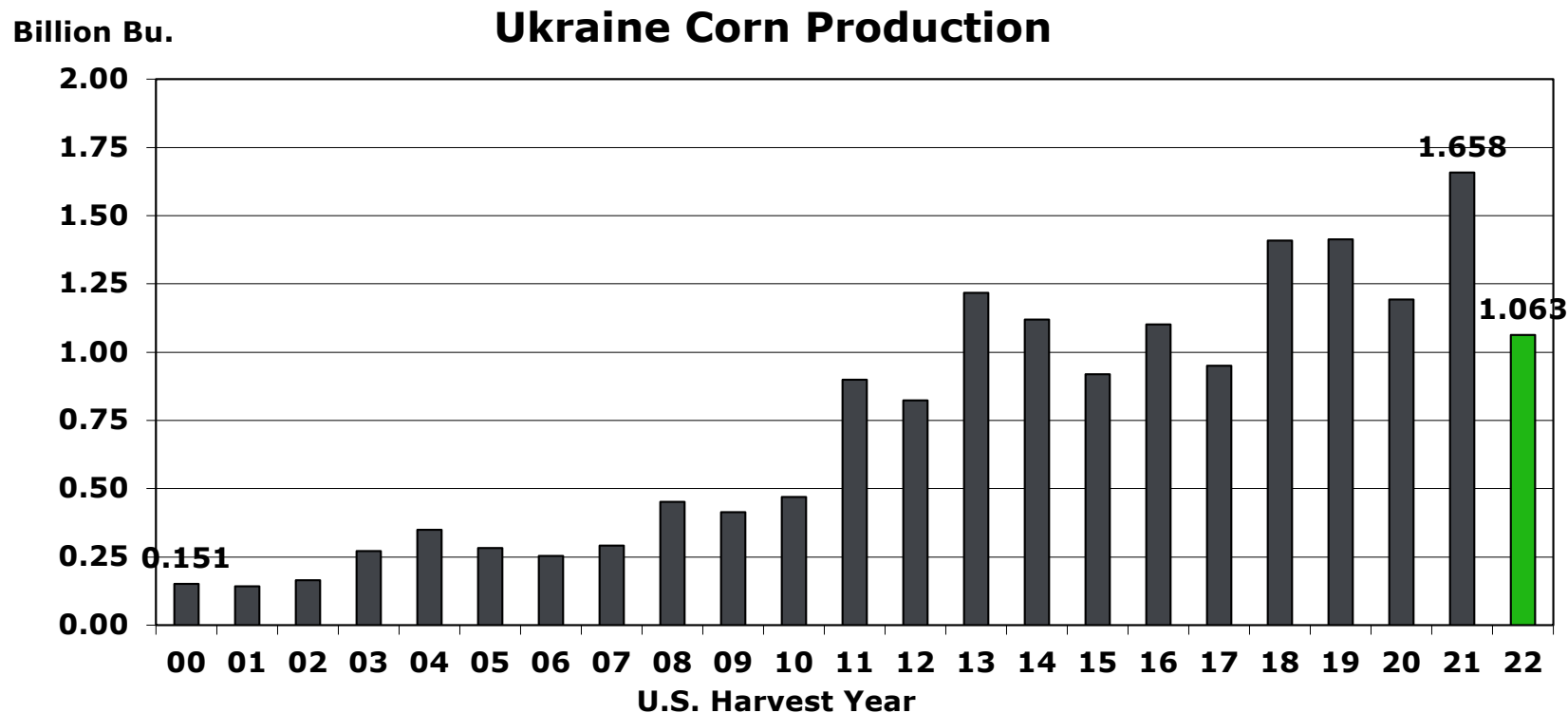


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U.S. Export Projection Is Weaker Than For Key Competitors



Ukraine's '22 Crop Estimate Down Over 600 Million Bushels...Black Sea Region Continues to Be a Wild Card In Corn Outlook



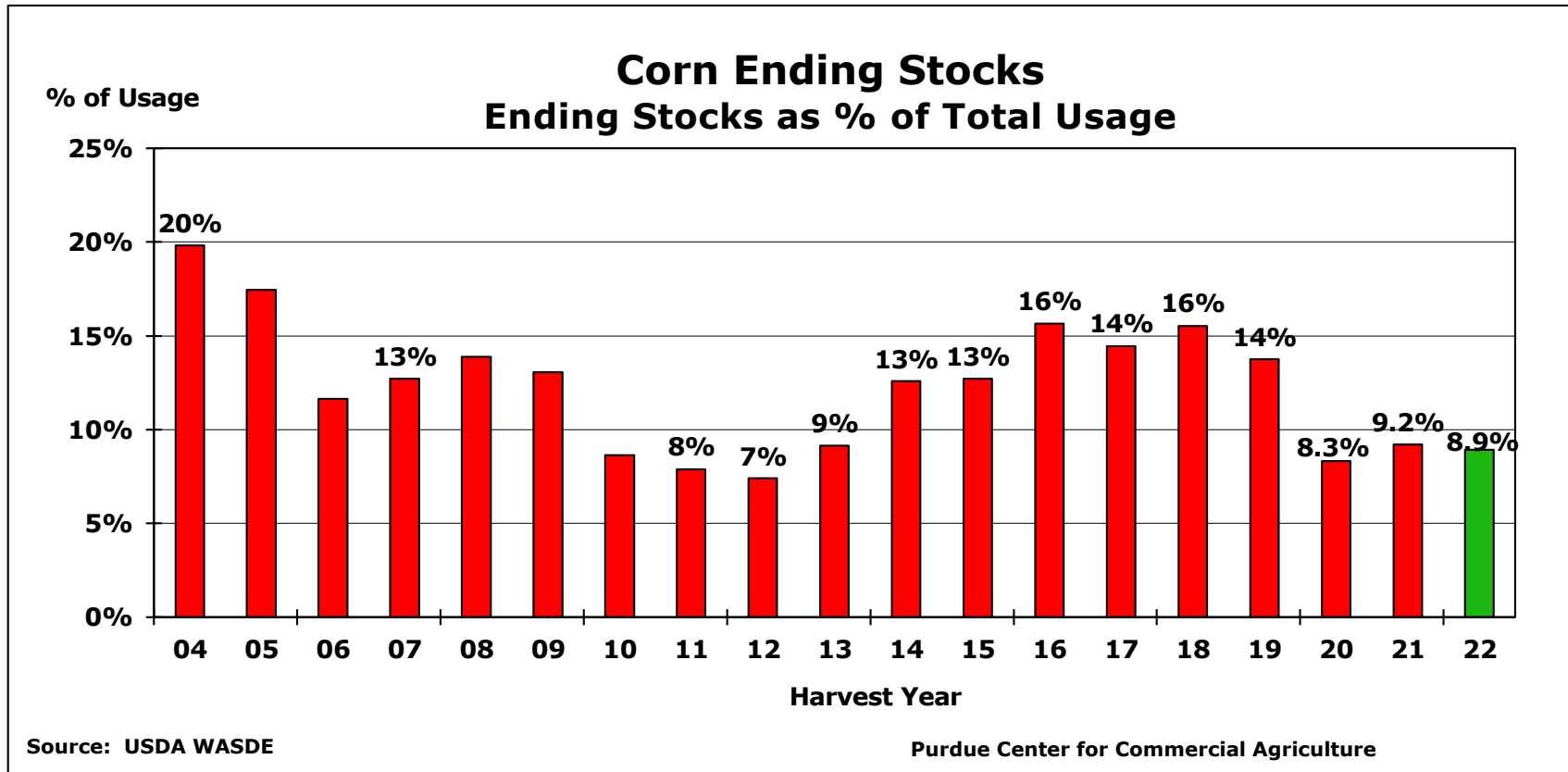
Source: USDA-FAS

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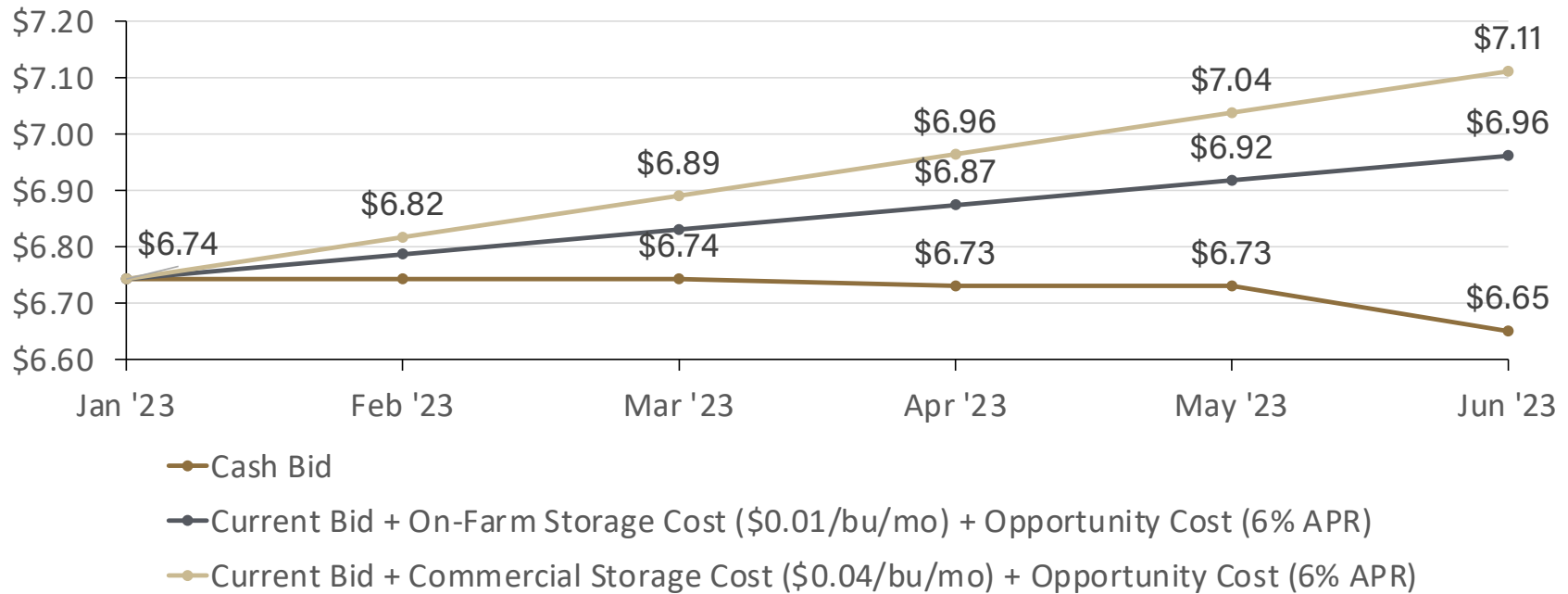
Ending Stocks Still Projected to Fall Below 9% of Total Usage...



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Storage opportunities for corn?

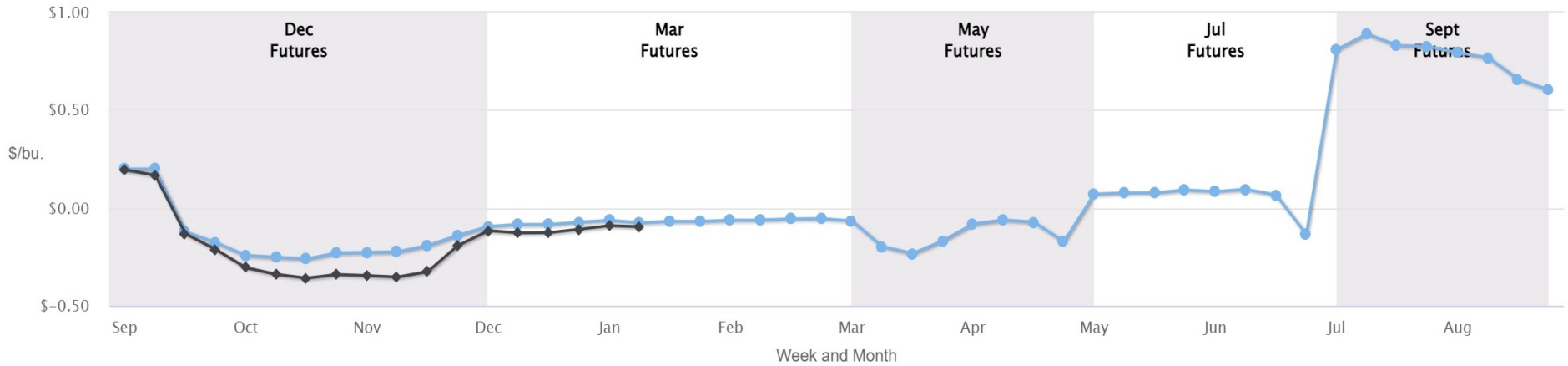
Cash Forward Contract Corn Bids East Central Indiana



Corn basis - Central Indiana - 3 year average

Purdue Center for Commercial Agriculture Crop Basis Tool

Corn: IN CENTRAL Region, Nearby Basis, Weekly
 Avg. of Selected Historical Crop Years [2020-2021, 2021-2022, 2022-2023]
 vs. Current Crop Year



● Historical Nearby Basis, Avg of Selected Crop Years
 ◆ 2022-2023 Regional Nearby Basis
<https://www.purdue.edu/commercialag>

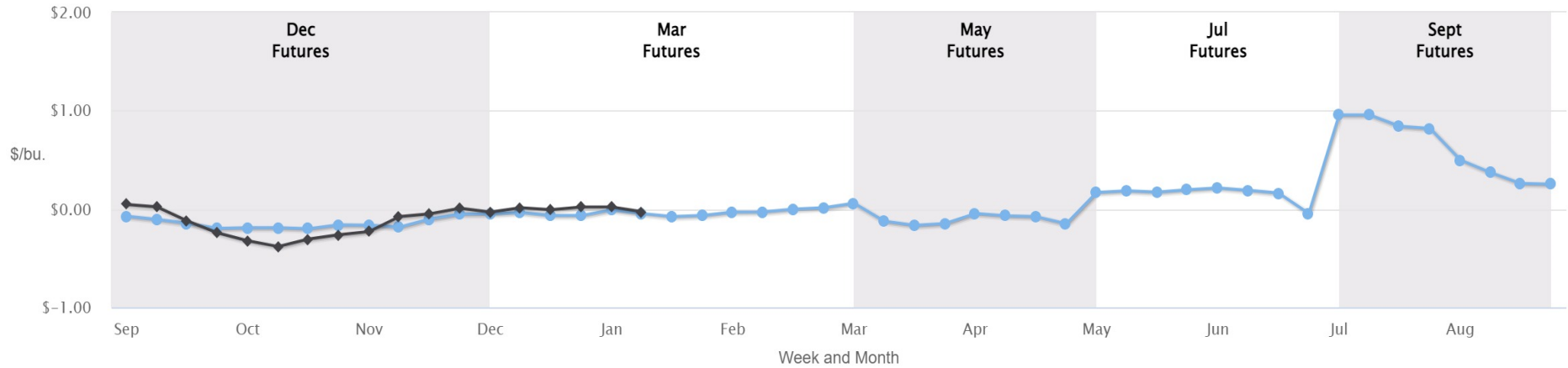


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Corn basis - Southwest Indiana - 3 year average

Purdue Center for Commercial Agriculture Crop Basis Tool

Corn: IN SW Region, Nearby Basis, Weekly
 Avg. of Selected Historical Crop Years [2020-2021, 2021-2022, 2022-2023]
 vs. Current Crop Year

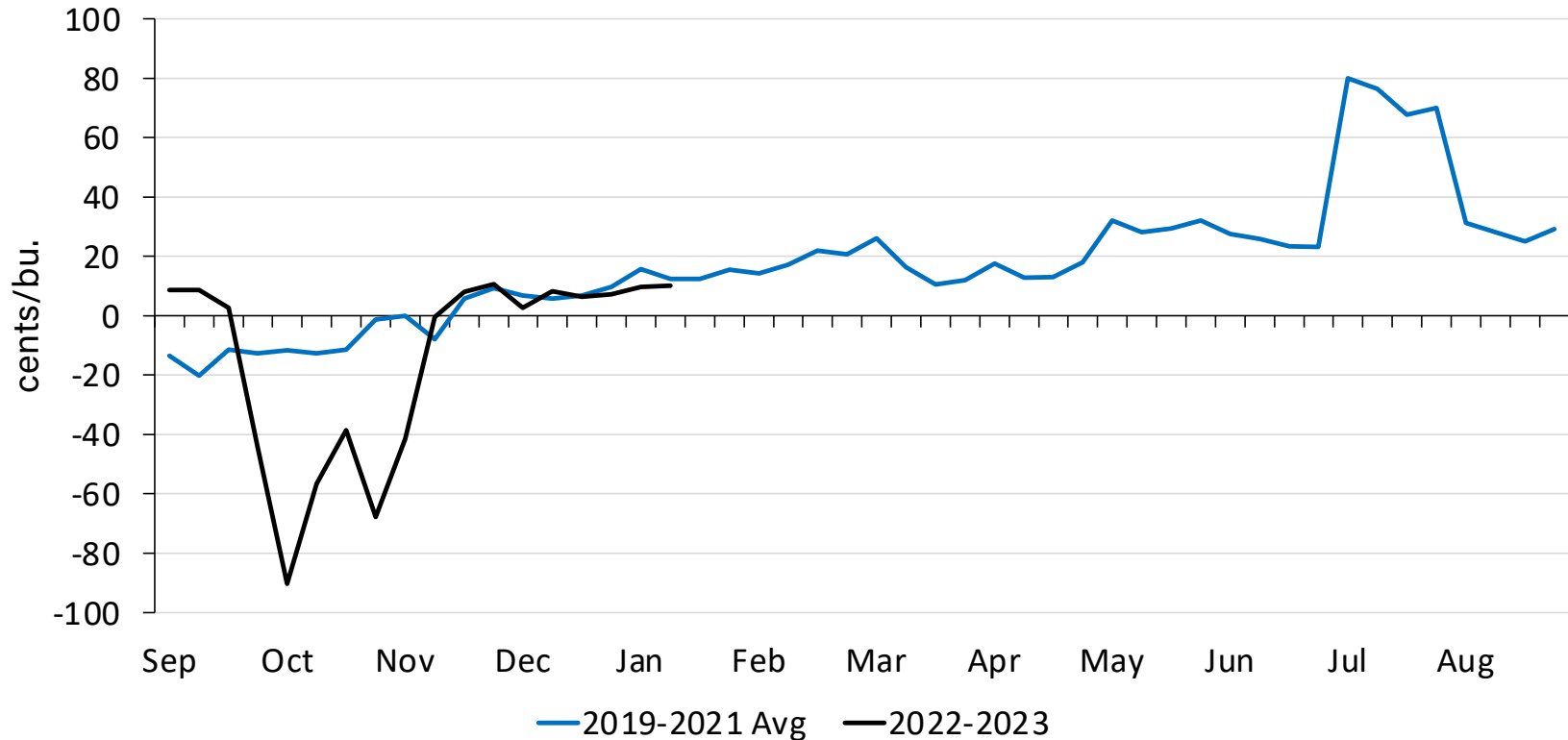


● Historical Nearby Basis, Avg of Selected Crop Years
 ◆ 2022-2023 Regional Nearby Basis
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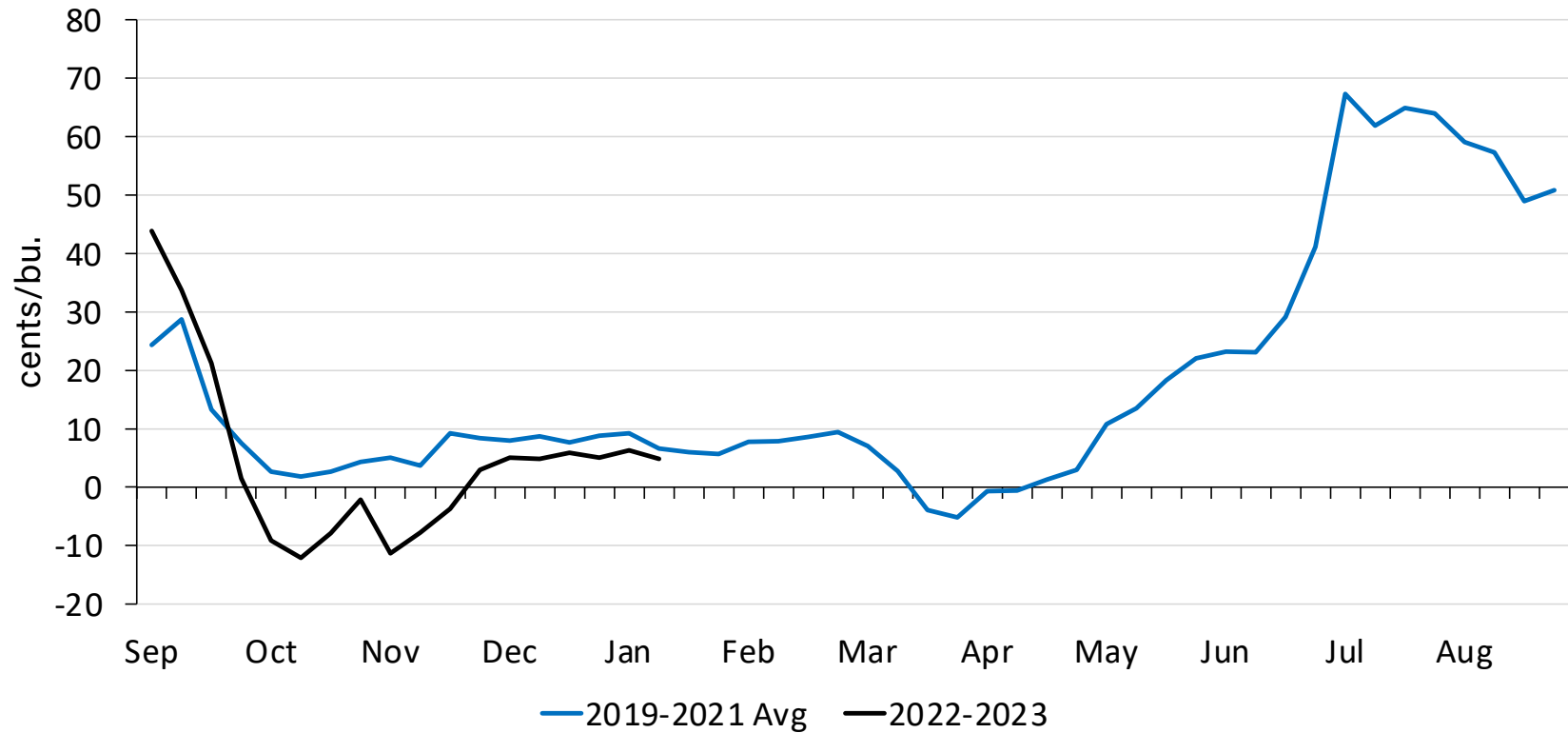


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Nearby Corn River Basis-Southern Indiana and Southern Illinois River Terminals



Nearby Indiana ethanol plant basis



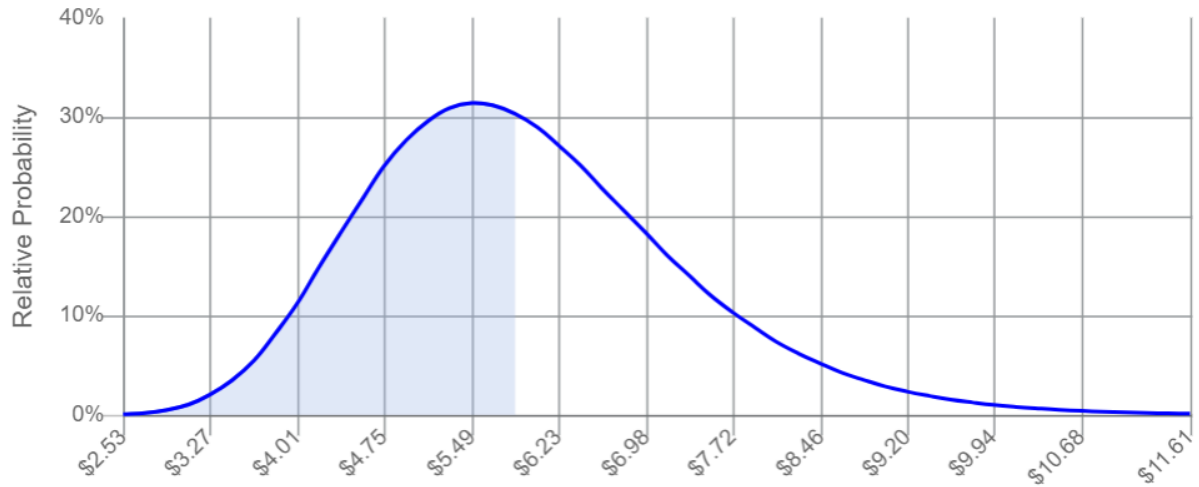
New crop corn opportunities?

CBOT Dec. '23 Corn futures	\$5.98
<u>Expected corn basis Oct. '23 in Central IN</u>	<u>-\$0.25</u>
Expected Oct. cash price	\$5.73/bu.

- Think in terms of risk management
- How can you protect favorable price opportunities while leaving open upside potential?

farmdoc Price Distribution for Dec. '23 Corn Futures

Probability of Prices at Expiration



Enter Price to Evaluate: \$ 5.98

The implied distribution indicates that there is a 55.11% probability that the price will be below \$5.98 at expiration.

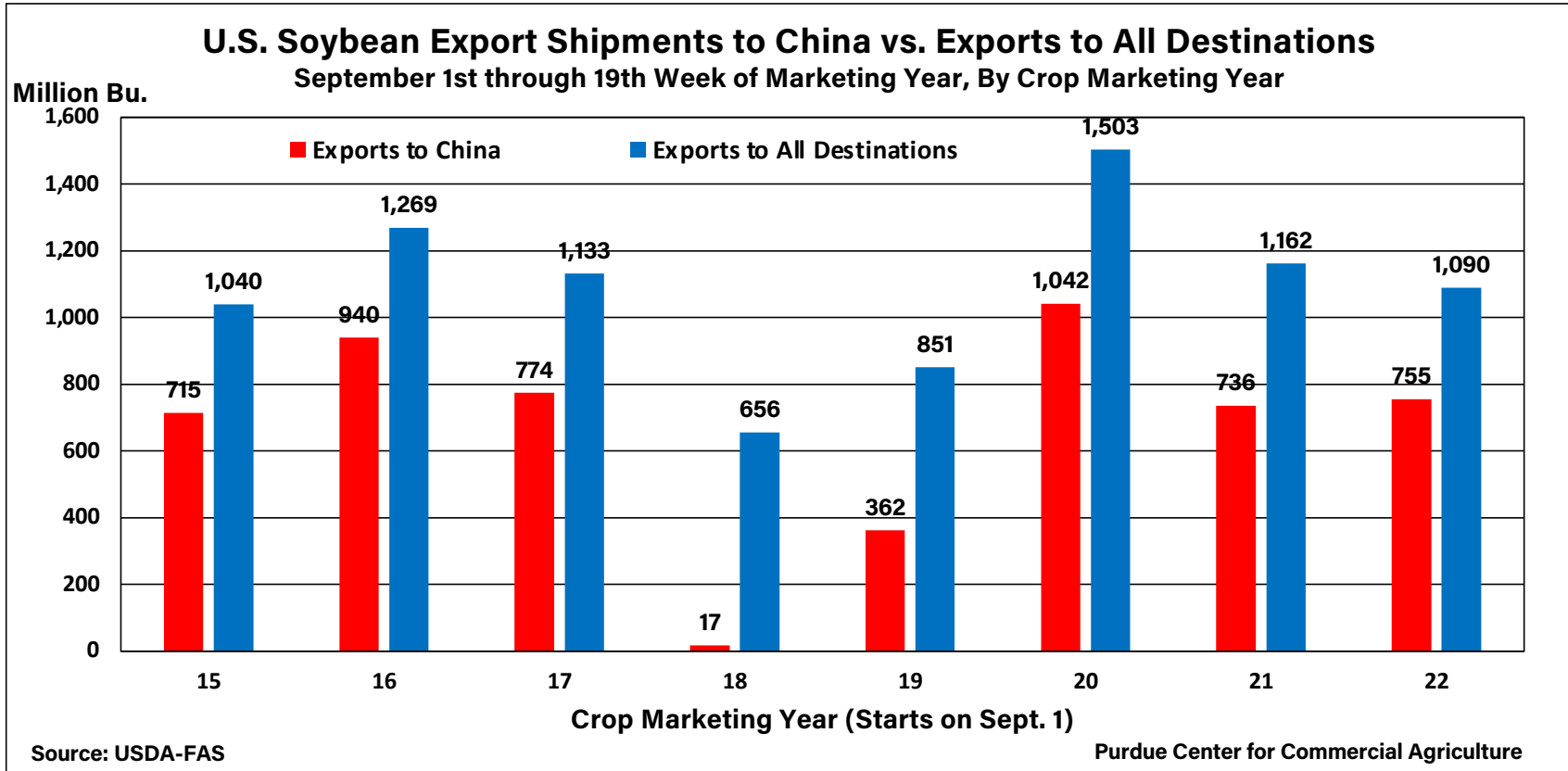
Probability Below ▲	Price at Expiration ▲
5%	\$4.02
15%	\$4.61
25%	\$5.00
35%	\$5.33
45%	\$5.65
50%	\$5.81
55%	\$5.98
65%	\$6.33
75%	\$6.76
85%	\$7.33
95%	\$8.40

USDA Reduced Yield & Acreage, Pushing Production Lower...But Also Reduced Exports: Result...Small Decrease in Ending Stocks

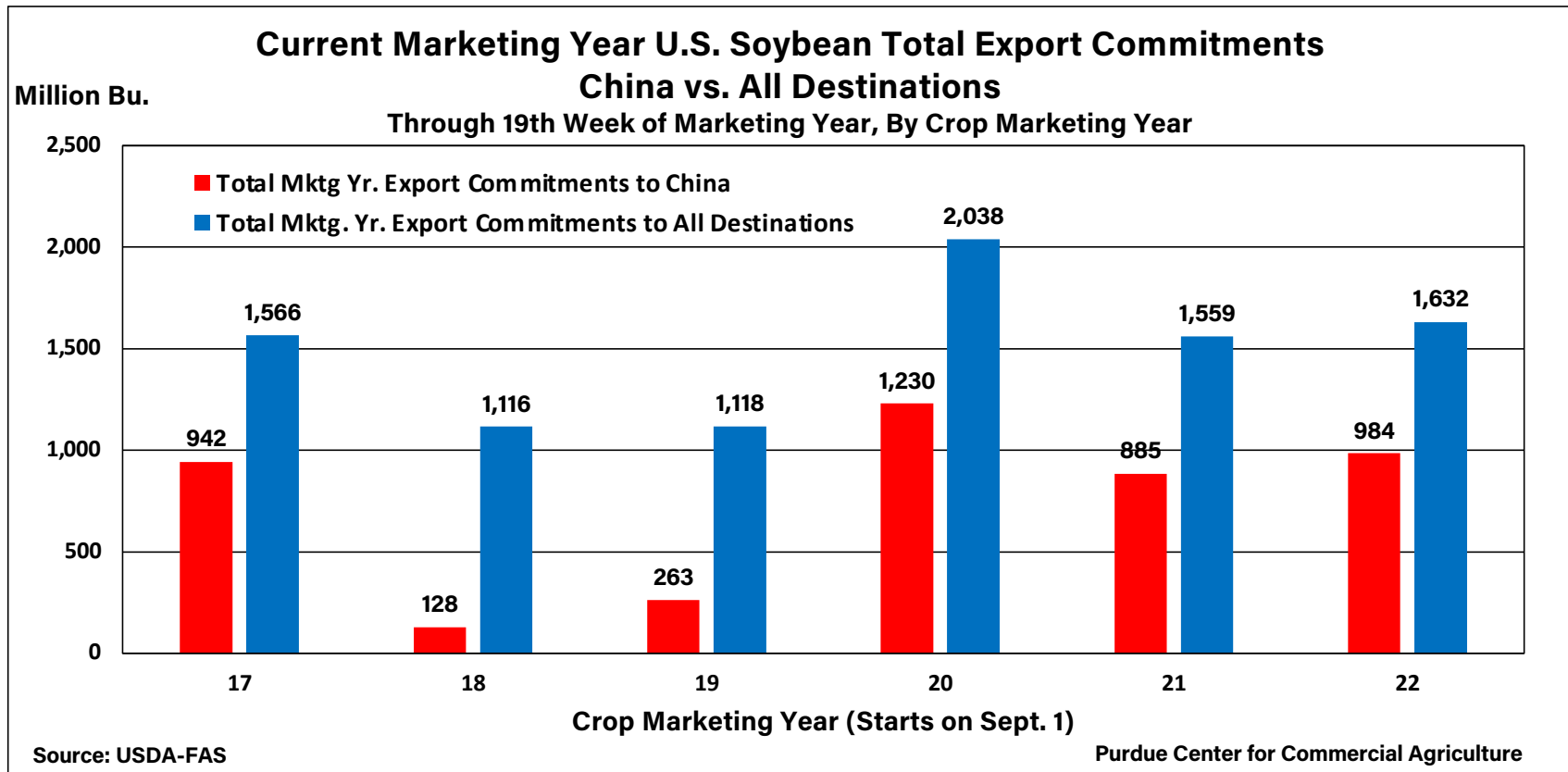
USDA's January 2023 Soybean Balance Sheet

Soybeans	20/21	21/22	Dec. Proj. 22/23	Jan. Proj. 22/23
		<i>Million Acres</i>		
Area Planted	83.4	87.2	87.5	87.5
Area Harvested	82.6	86.3	86.6	<u>86.3</u>
		<i>Bushels</i>		
Yield per Harvested Acre	51.0	51.7	50.2	<u>49.5</u>
		<i>Million Bushels</i>		
Beginning Stocks	525	257	274	274
Production	4,216	4,465	4,346	<u>4,276</u>
Imports	20	16	15	15
Supply, Total	4,761	4,738	4,634	4,566 ←
Crushings	2,141	2,204	2,245	2,245
Exports	2,266	2,158	2,045	1,990 ←
Seed	101	102	102	102
Residual	-4	1	22	18
Use, Total	4,504	4,464	4,414	4,355 ←
Ending Stocks	257	274	220	210
Avg. Farm Price (\$/bu) 2/	10.80	13.30	14.00	<u>14.20</u>

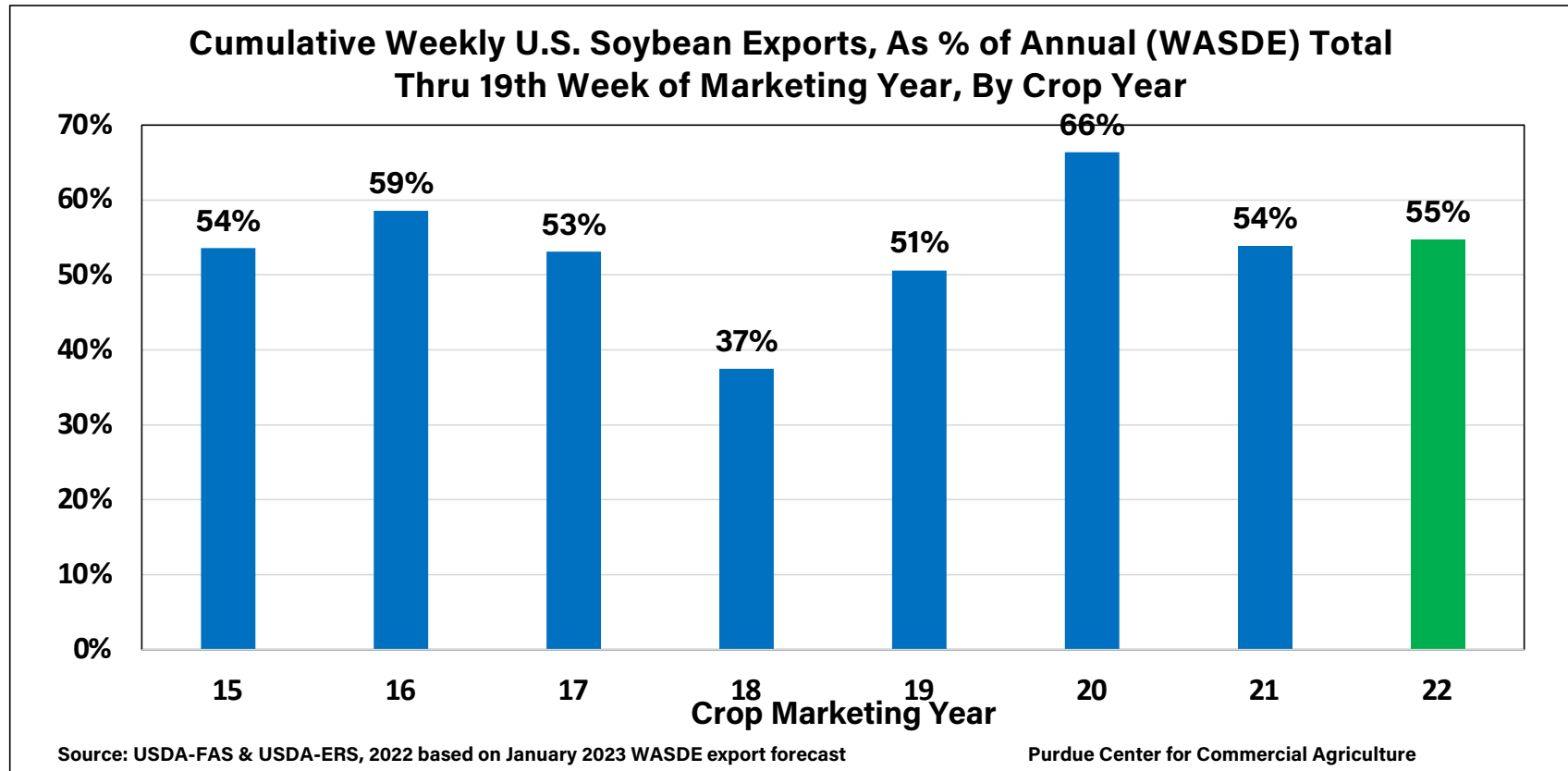
Soybean Export Picture Is Much Better Than for Corn



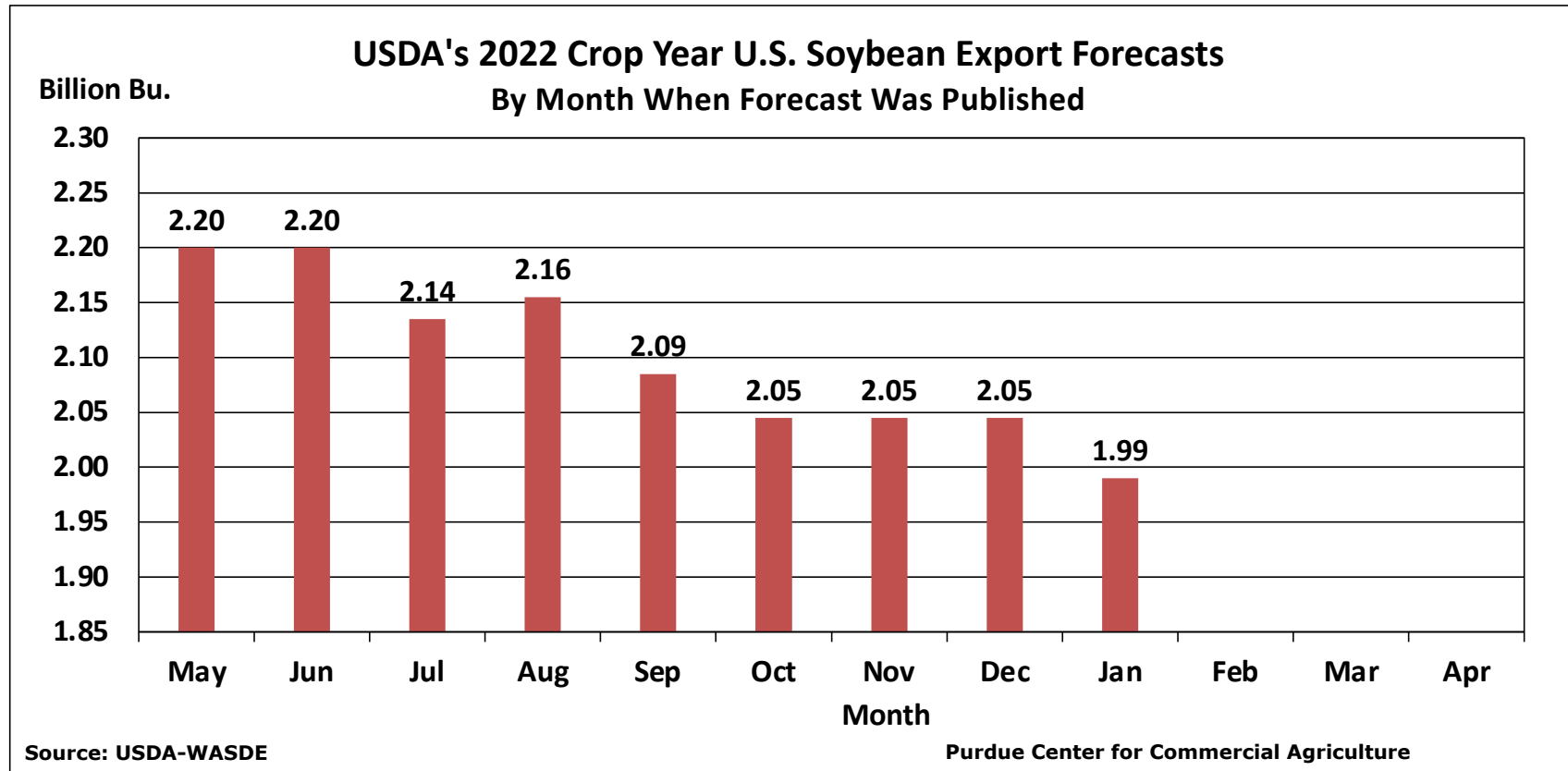
YTD Export Commitments Running Slightly Ahead of Last Year



Soybean Exports vs. USDA Forecast Look Good...But USDA Reduced Export Forecast

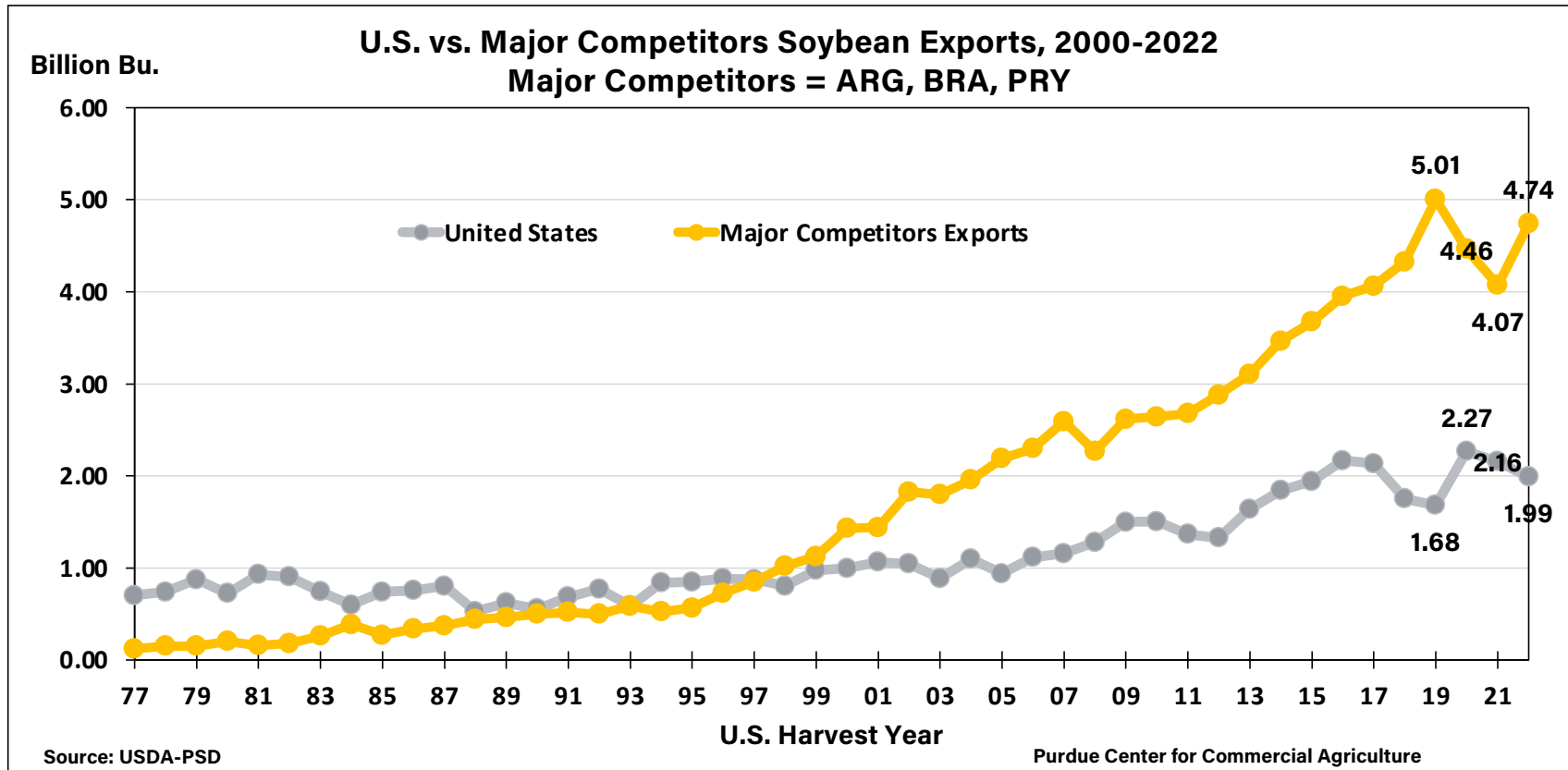


USDA Has Reduced Export Forecast By 230 Million Bushels Since June



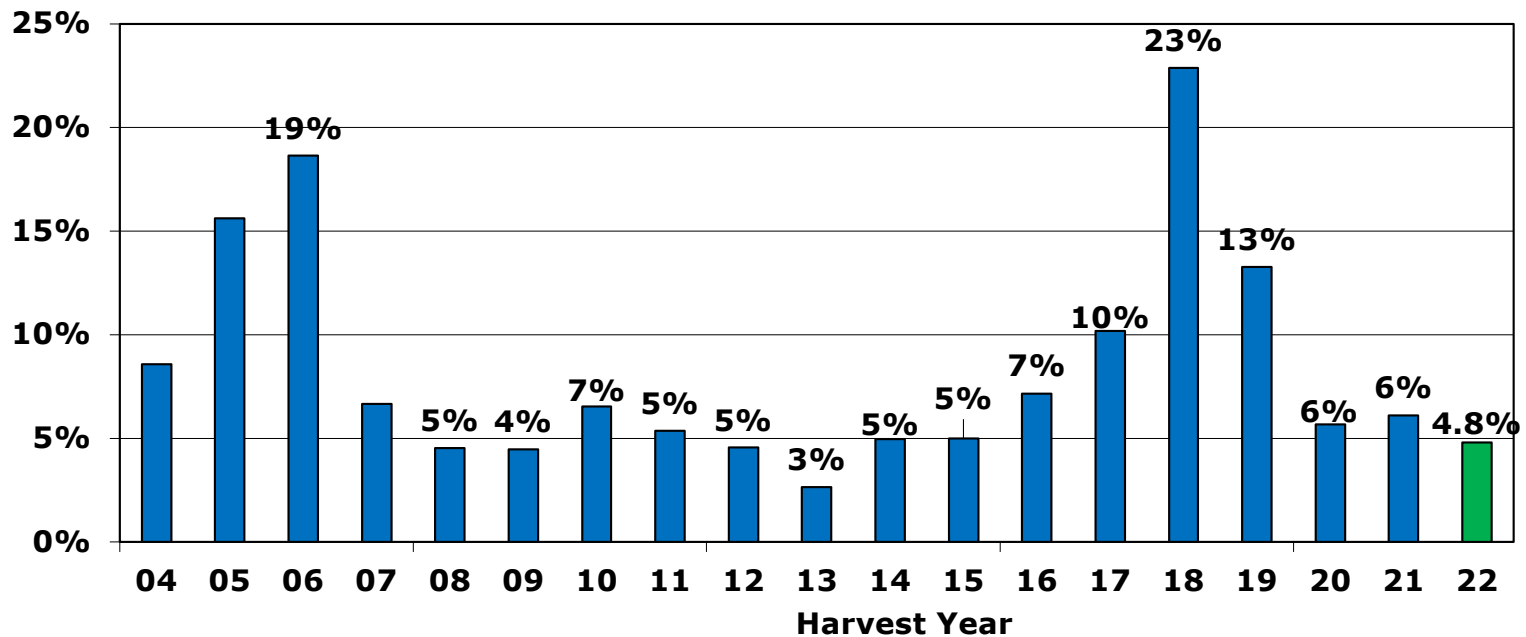
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Forecast is For Stronger Exports Out of South America... Weaker from the U.S.



Ending Stocks Projection Remains Very Tight

U.S. Soybean Ending Stocks Ending Stock as % of Total Usage



Source: USDA-WASDE

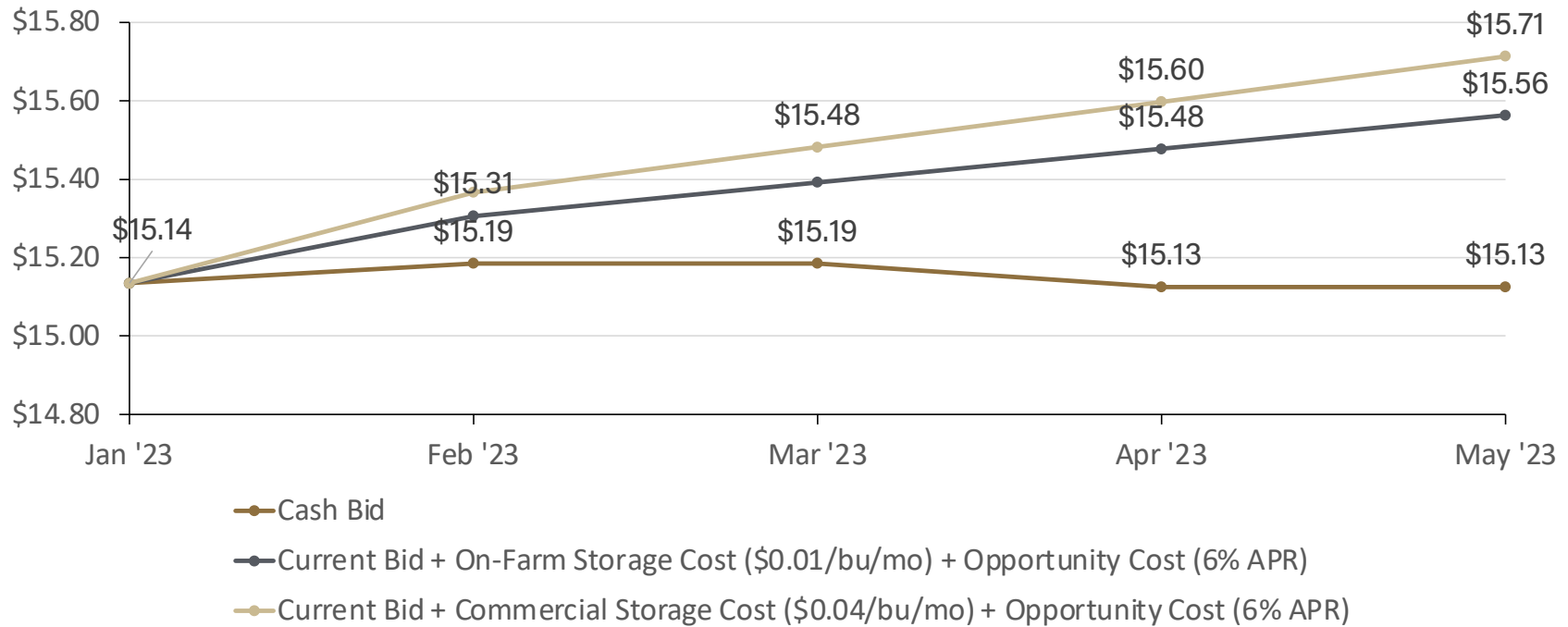
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Storage opportunities for soybeans?

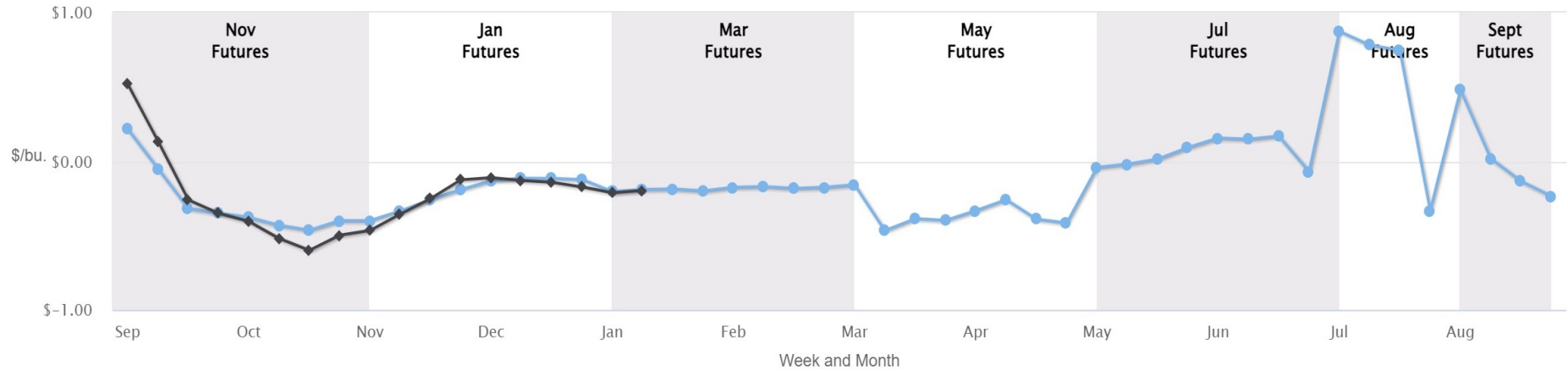
Cash Forward Contract Soybean Bids
Central Indiana



Soybean basis - Central Indiana - 2 year average

Purdue Center for Commercial Agriculture Crop Basis Tool

Soybeans: IN CENTRAL Region, Nearby Basis, Weekly
 Avg. of Selected Historical Crop Years [2021-2022, 2022-2023]
 vs. Current Crop Year



● Historical Nearby Basis, Avg of Selected Crop Years ◆ 2022-2023 Regional Nearby Basis

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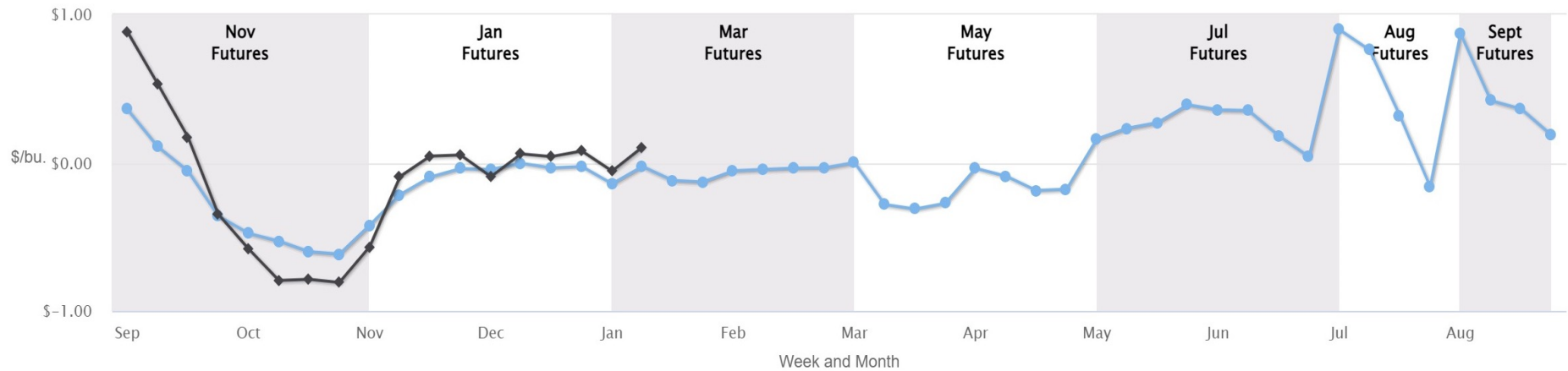


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Soybean basis - Southwest Indiana - 2 year average

Purdue Center for Commercial Agriculture Crop Basis Tool

Soybeans: IN SW Region, Nearby Basis, Weekly
 Avg. of Selected Historical Crop Years [2021-2022, 2022-2023]
 vs. Current Crop Year



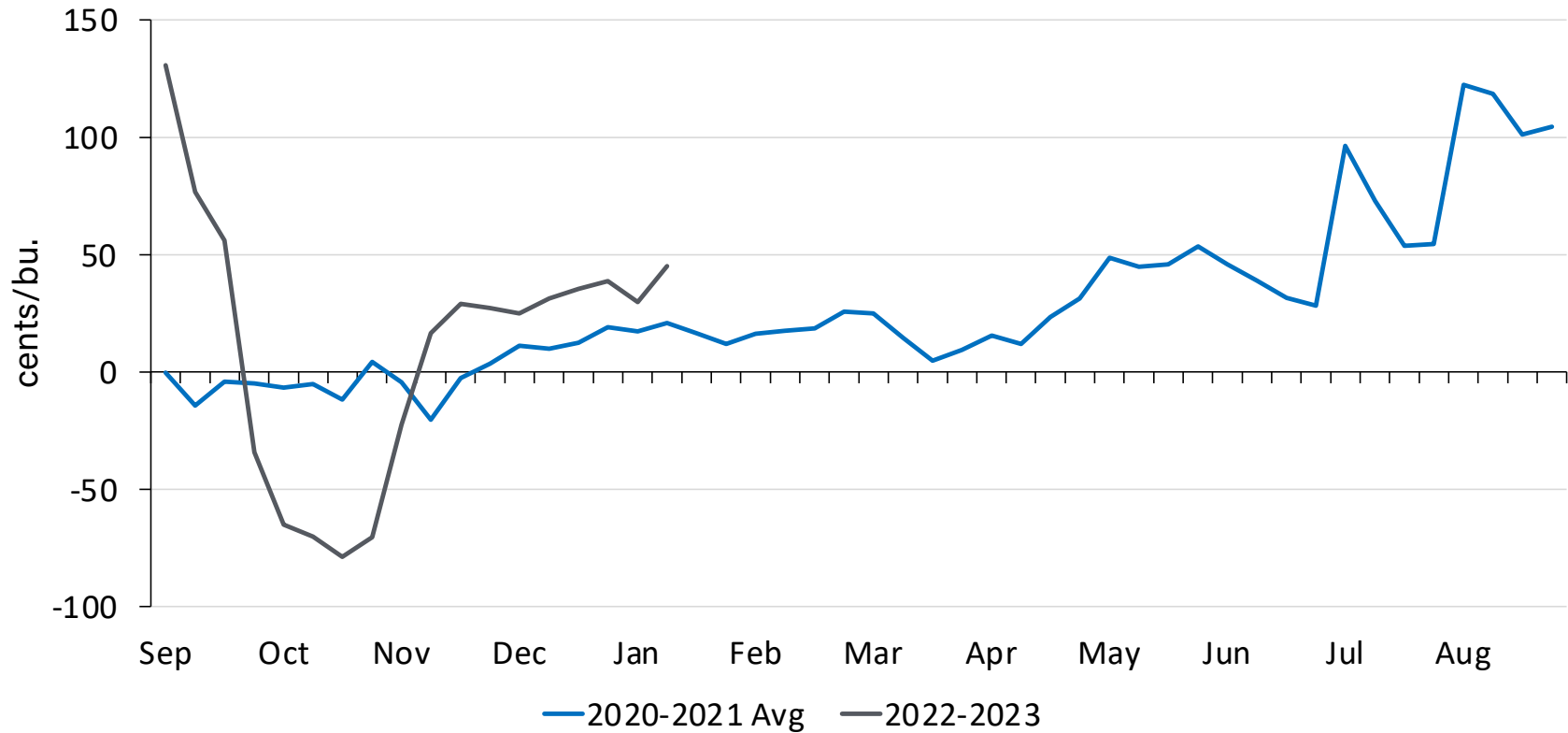
● Historical Nearby Basis, Avg of Selected Crop Years
 ◆ 2022-2023 Regional Nearby Basis

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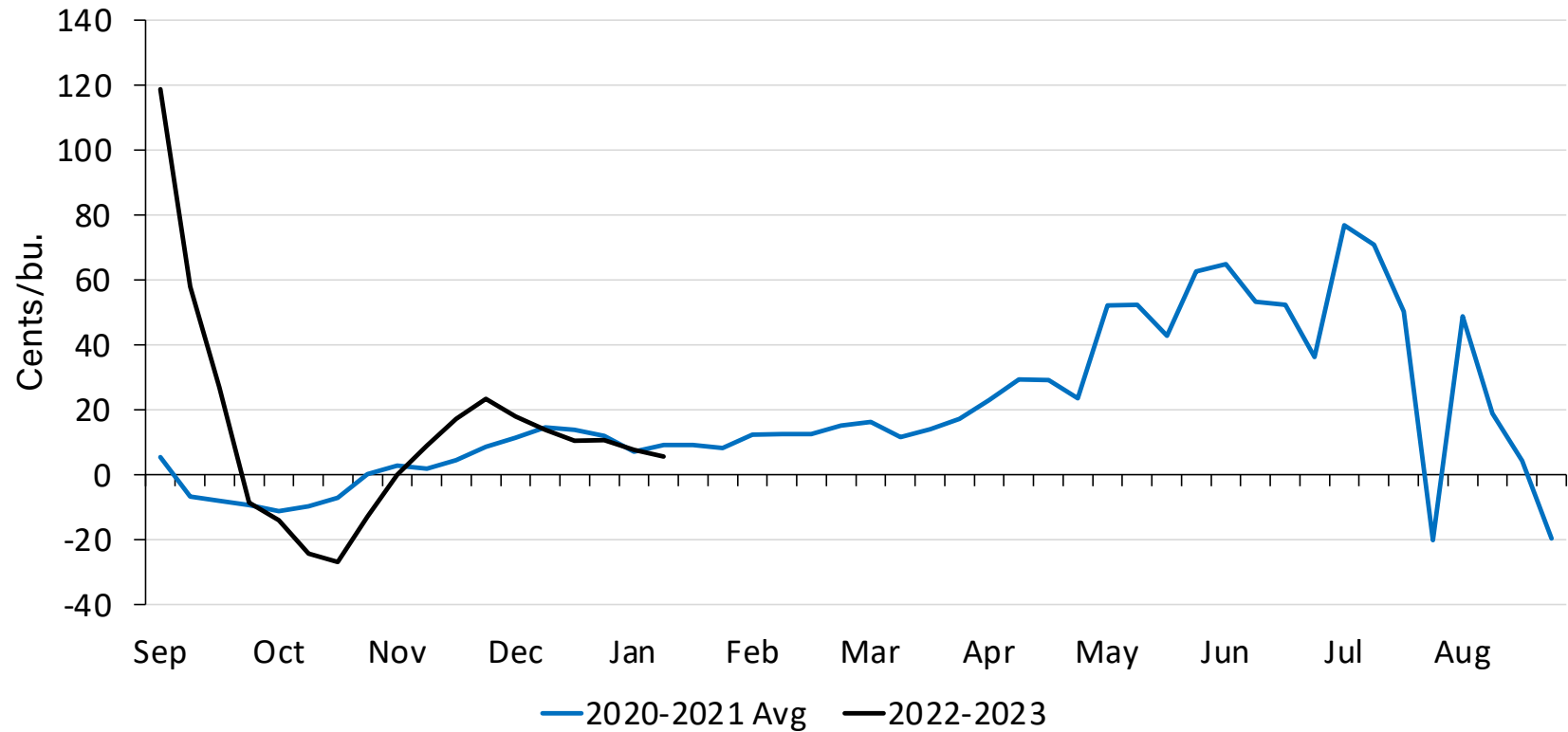


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Nearby Soybean River Basis-Southern Indiana and Southern Illinois River Terminals



Nearby Indiana soybean processor basis



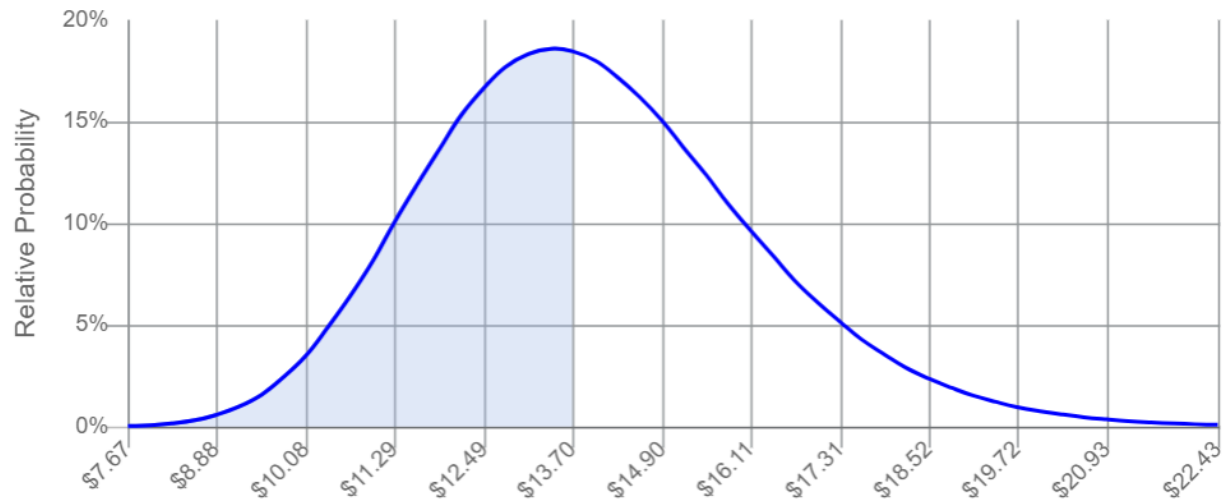
New crop soybean opportunities?

CBOT Nov. '23 Soybean futures	\$13.91
<u>Expected soybean basis Oct. '23 in Central IN</u>	<u>-\$0.40</u>
Expected Oct. cash price	\$13.51/bu.

- Think in terms of risk management
- How can you protect favorable price opportunities while leaving open upside potential?

farmdoc Price Distribution for Nov. '23 Soybean Futures

Probability of Prices at Expiration



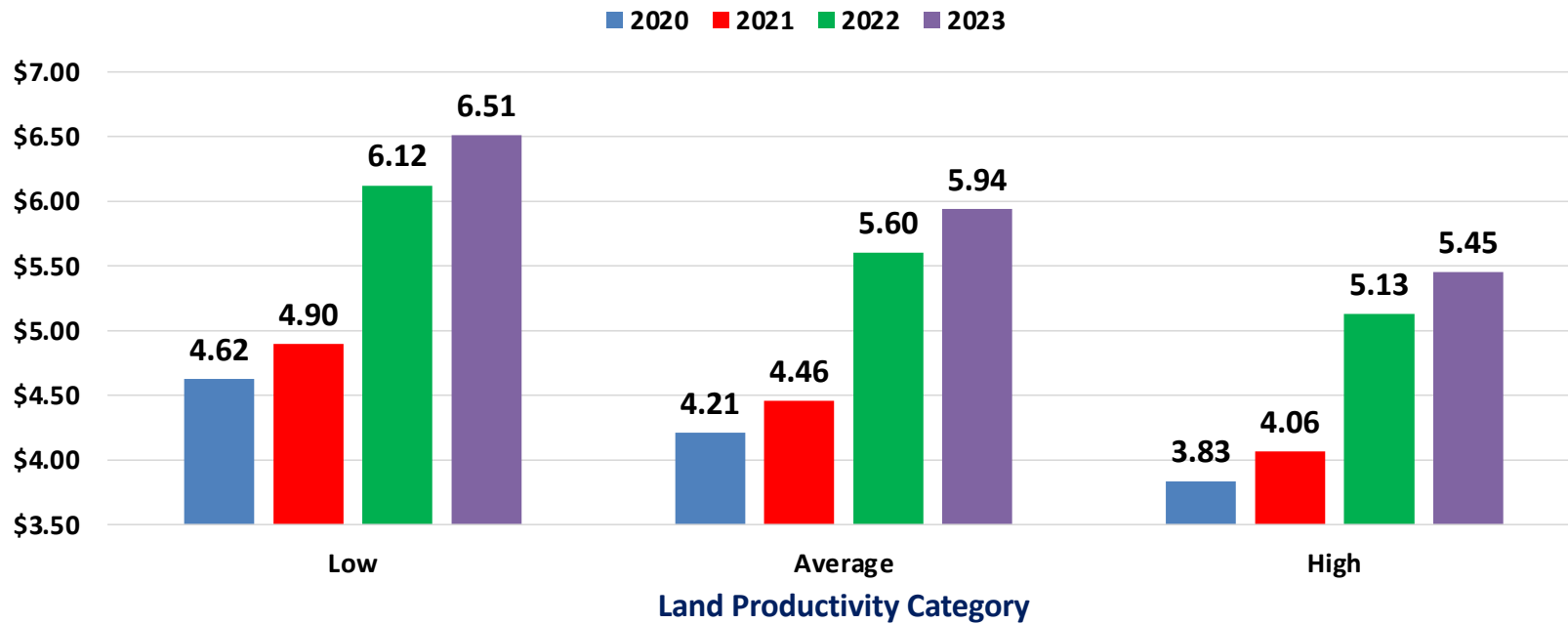
Enter Price to Evaluate: \$ 13.91

The implied distribution indicates that there is a 52.23% probability that the price will be below \$13.91 at expiration.

Probability Below ▲	Price at Expiration ▲
5%	\$10.64
15%	\$11.71
25%	\$12.40
35%	\$12.98
45%	\$13.52
50%	\$13.79
55%	\$14.06
65%	\$14.65
75%	\$15.33
85%	\$16.23
95%	\$17.86

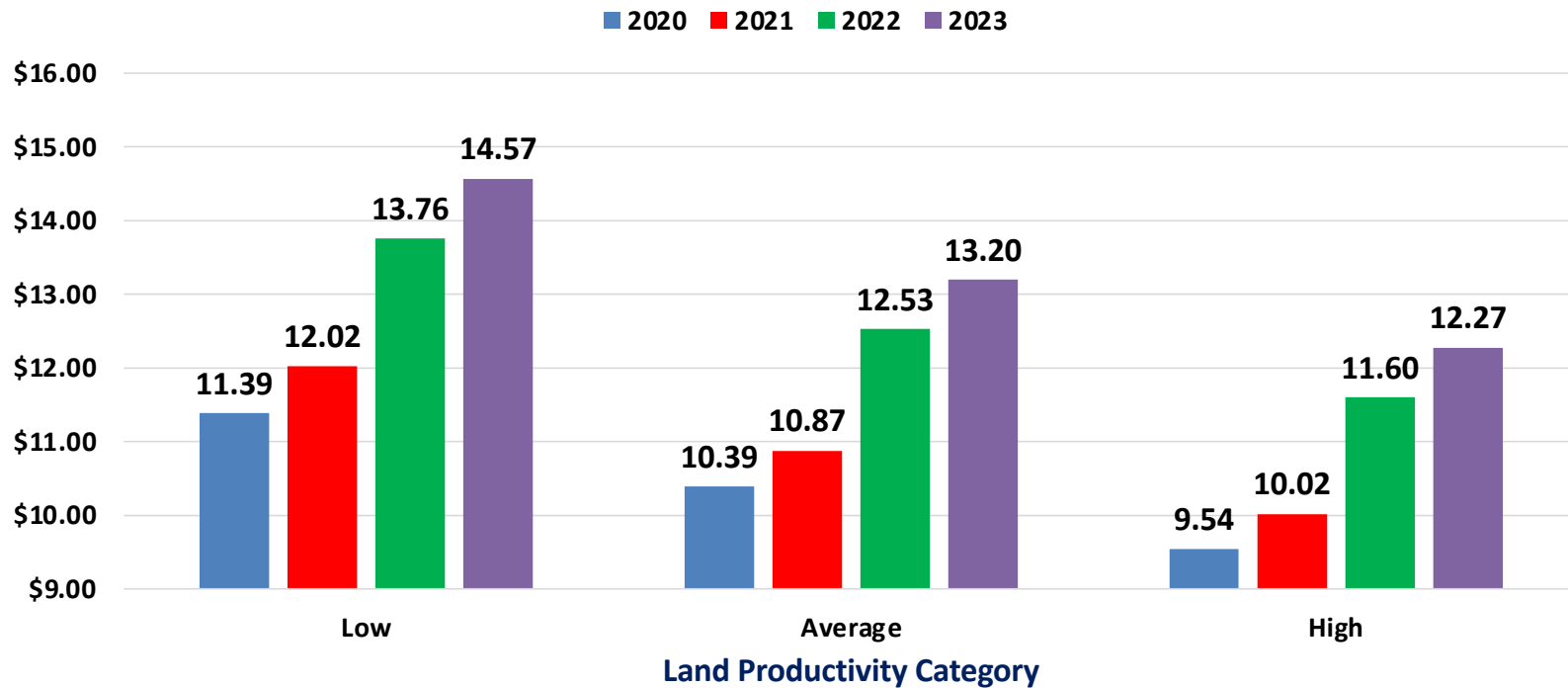
Large Increase in Breakeven Prices Since 2021

Breakeven Prices for Rotation Corn in Indiana



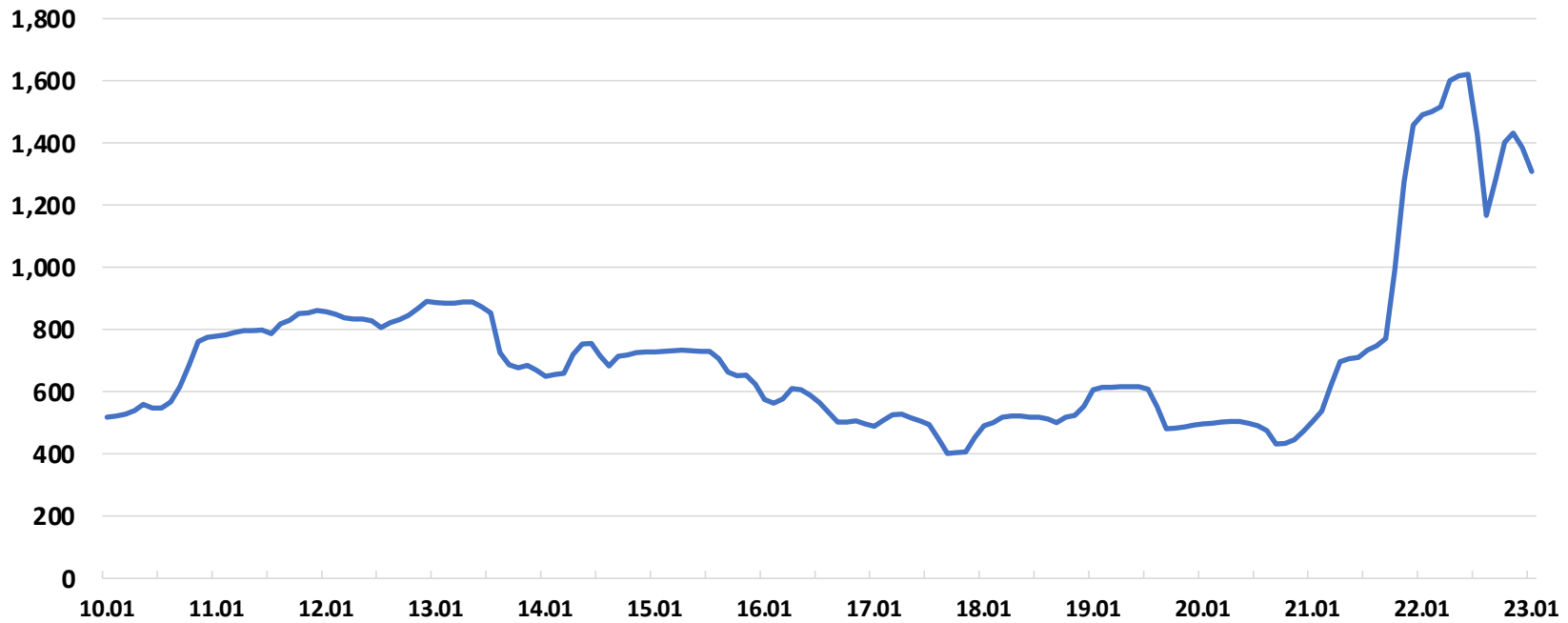
Large Increase in Breakeven Prices Since 2021

Breakeven Prices for Rotation Soybeans in Indiana



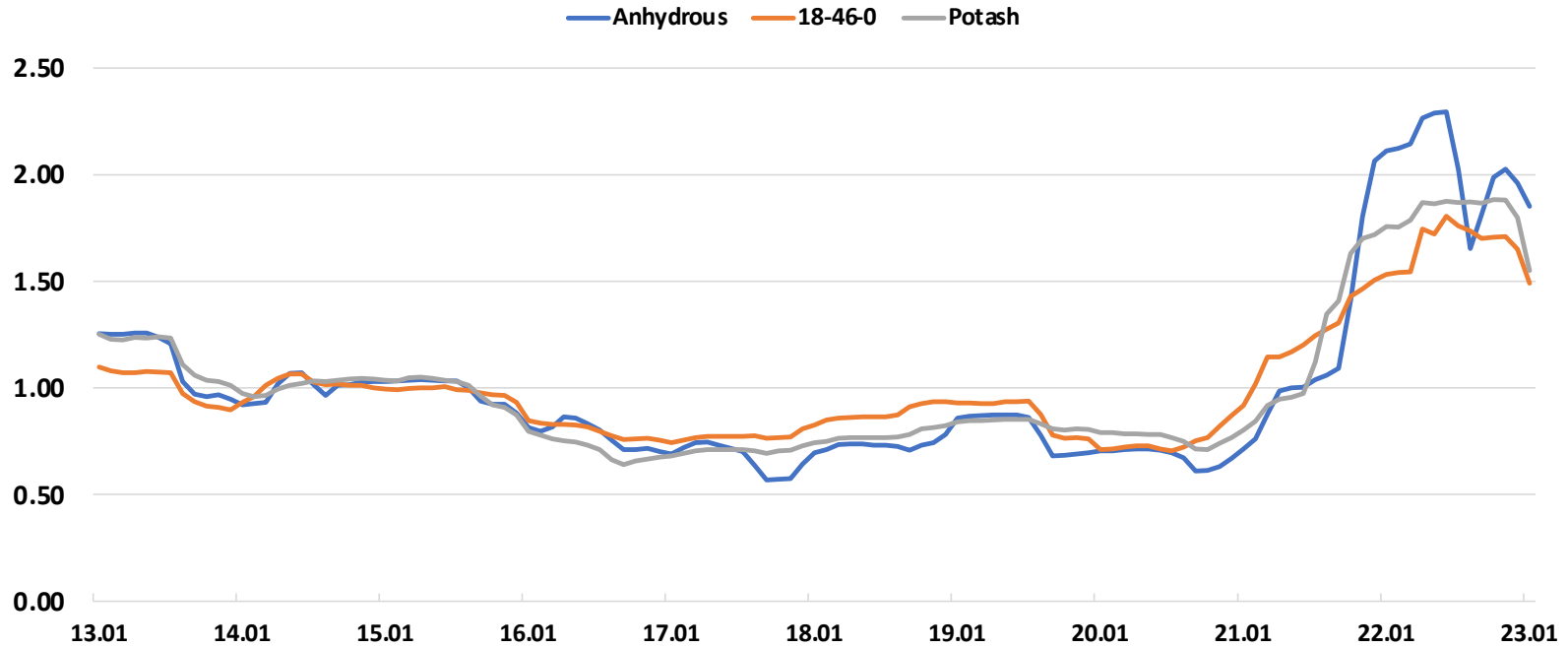
Trend in Anhydrous Prices

Anhydrous Ammonia Prices per Ton in Illinois, 2010 to 2023
Source: USDA-AMS, Illinois Production Cost Report



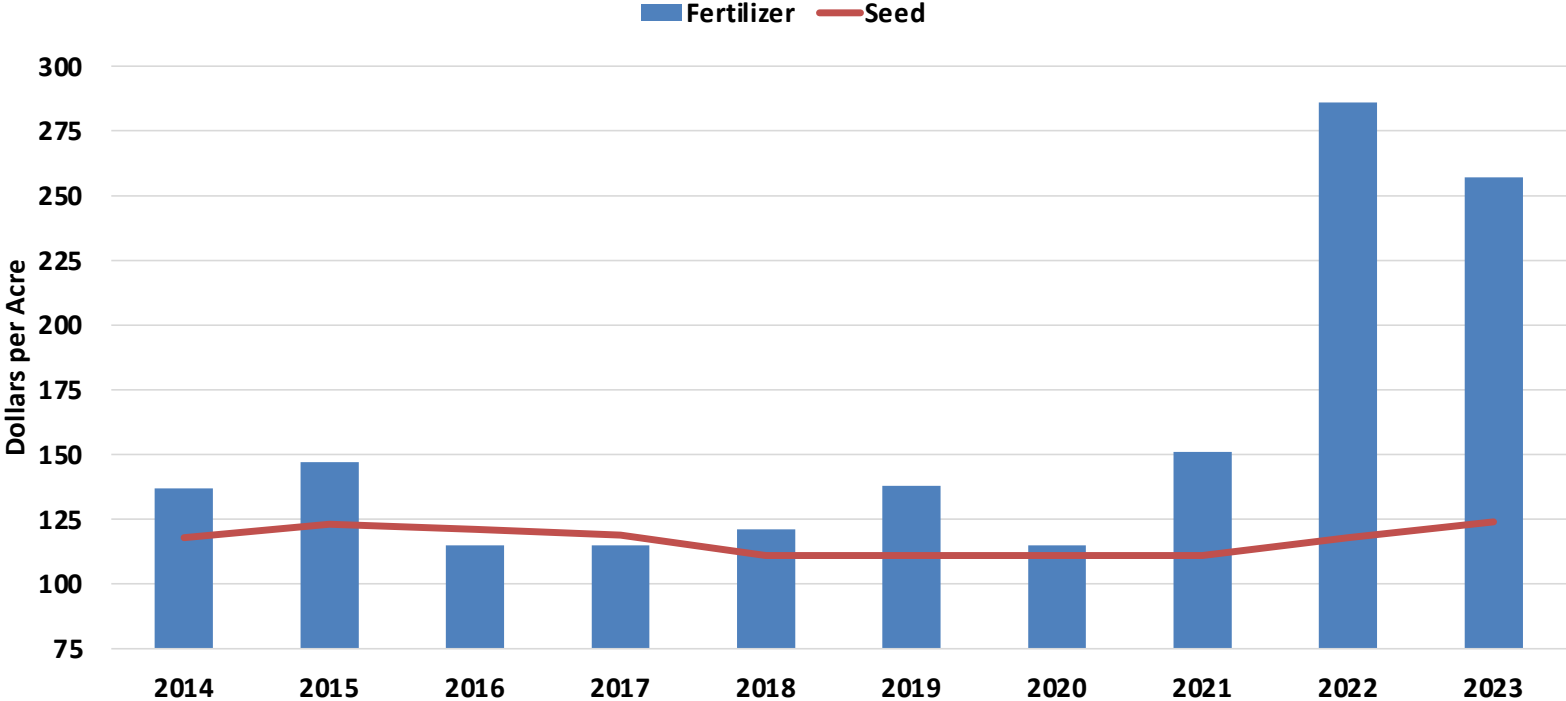
Trend in Fertilizer Price Indices

Fertilizer Price Indices for Illinois, 2013 to 2023
Note: Index = 1.00; Ten-Year Average (2013 to 2022)



Budgeted Fertilizer and Seed Cost per Acre

Fertilizer and Seed Costs for Rotation Corn (Average Productivity Soil)



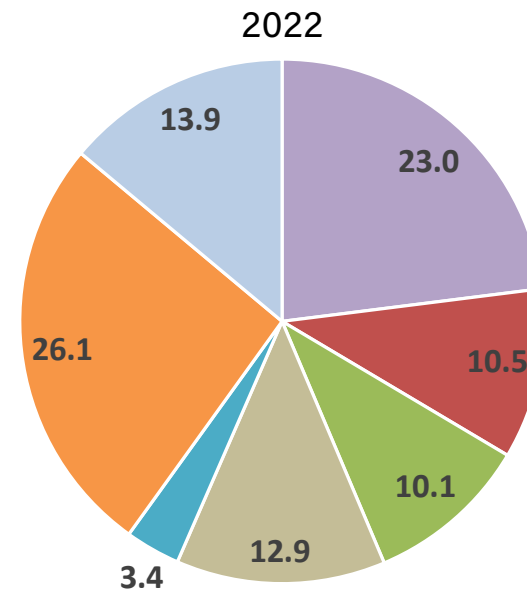
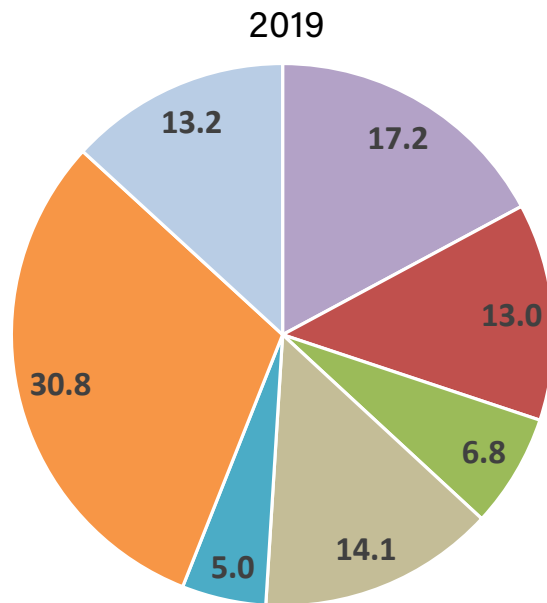
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Budgeted Cost Shares in 2019
Total Cost per Acre = \$857

Budgeted Cost Shares in 2022
Total Cost per Acre = \$1,178

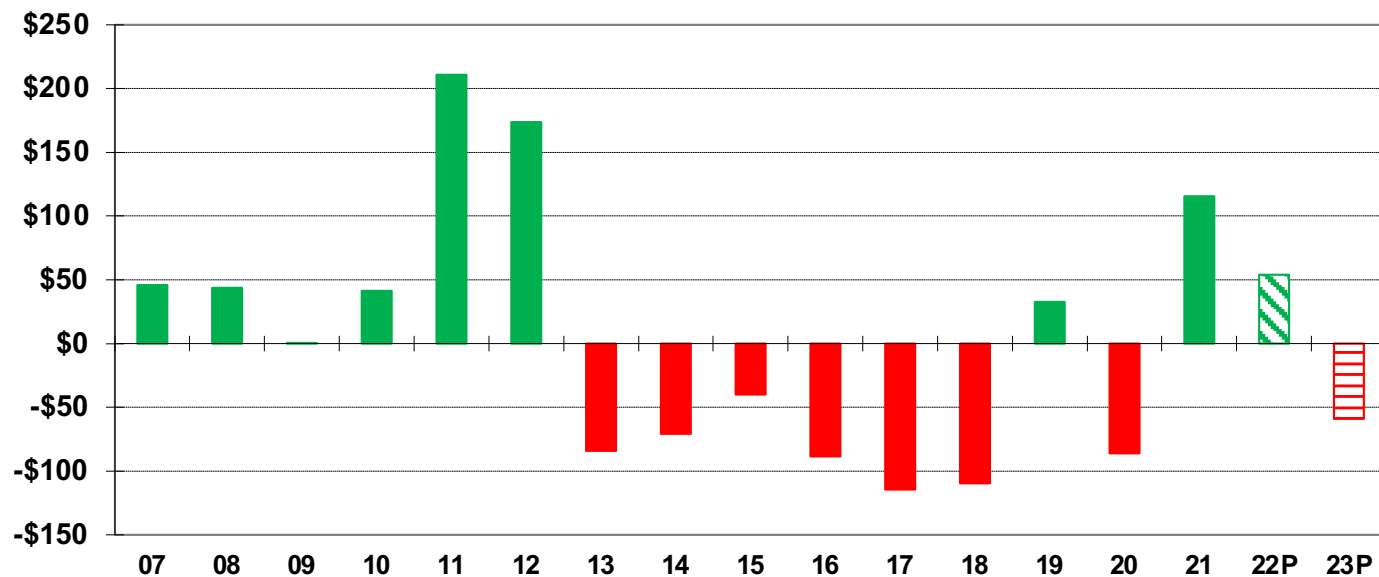
Cost Shares for Rotation Corn on High Productivity Land in Indiana

■ Fertilizer ■ Seed ■ Pesticides ■ Machinery ■ Labor ■ Cash Rent ■ Other



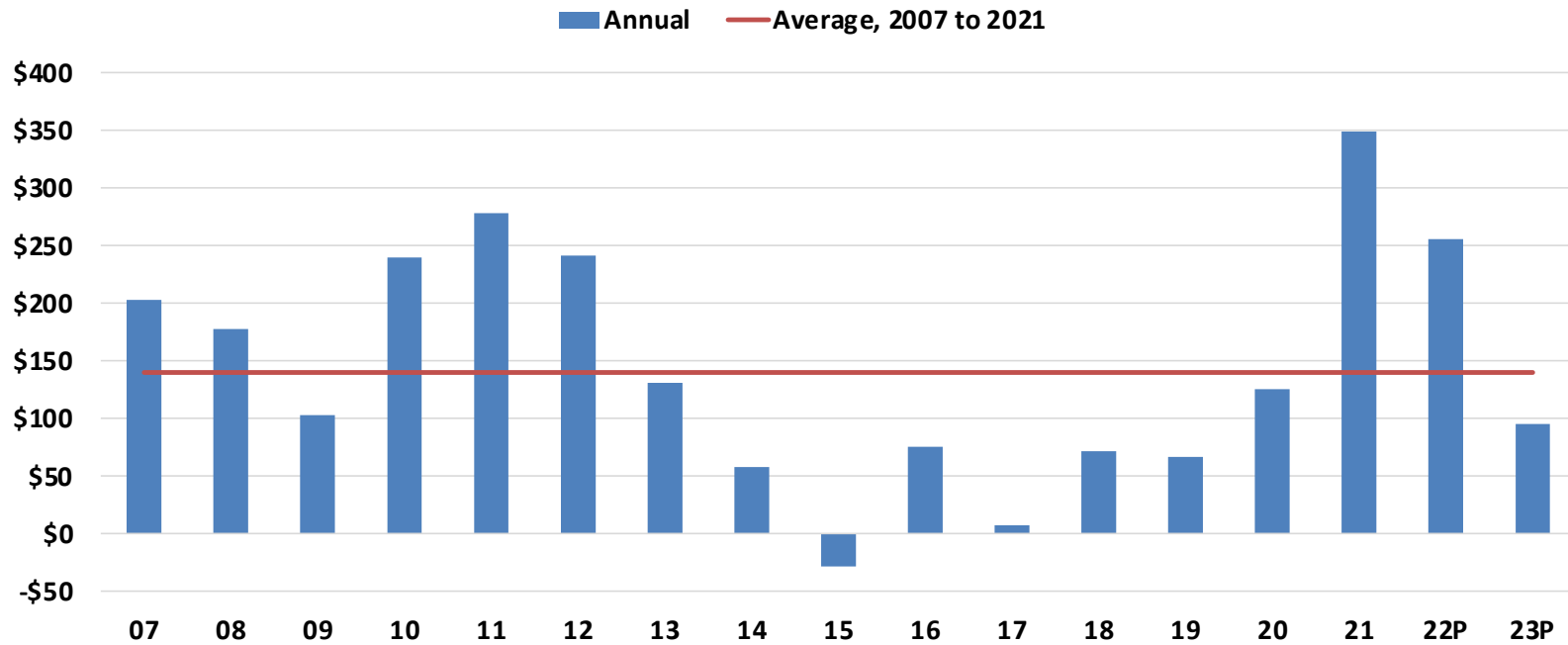
Current Economic Projections Favor Soybeans

**Difference in Earnings per Acre
West Central Indiana (Corn Minus Soybeans)**



Net Farm Income Prospects for 2023

Net Farm Income, Corn/Soybean Rotation (\$ per Acre)
West Central Indiana Case Farm



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Next webinar will be on Feb. 10, 2023 following USDA's Feb. WASDE

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