Hertz®
Farm Management, Inc.

Caring for You and Your Farm®

Professional Services for Farmland Owners and Investors:

- **Professional Farm Management**
- **Farmland Sales & Acquisitions**
- **Farmland Auctions**
- **Trusted Farmland Appraisals**

Hertz®
Farm Management, Inc.

Caring for You and Your Farm®

Landowner Educational Seminar
Summer 2024

Grain Markets

Marketing Decisions

- Today's Markets
- Weather
- Supply/Demand
- Corn
- Soybeans
- Brazil
- China
- Outlook

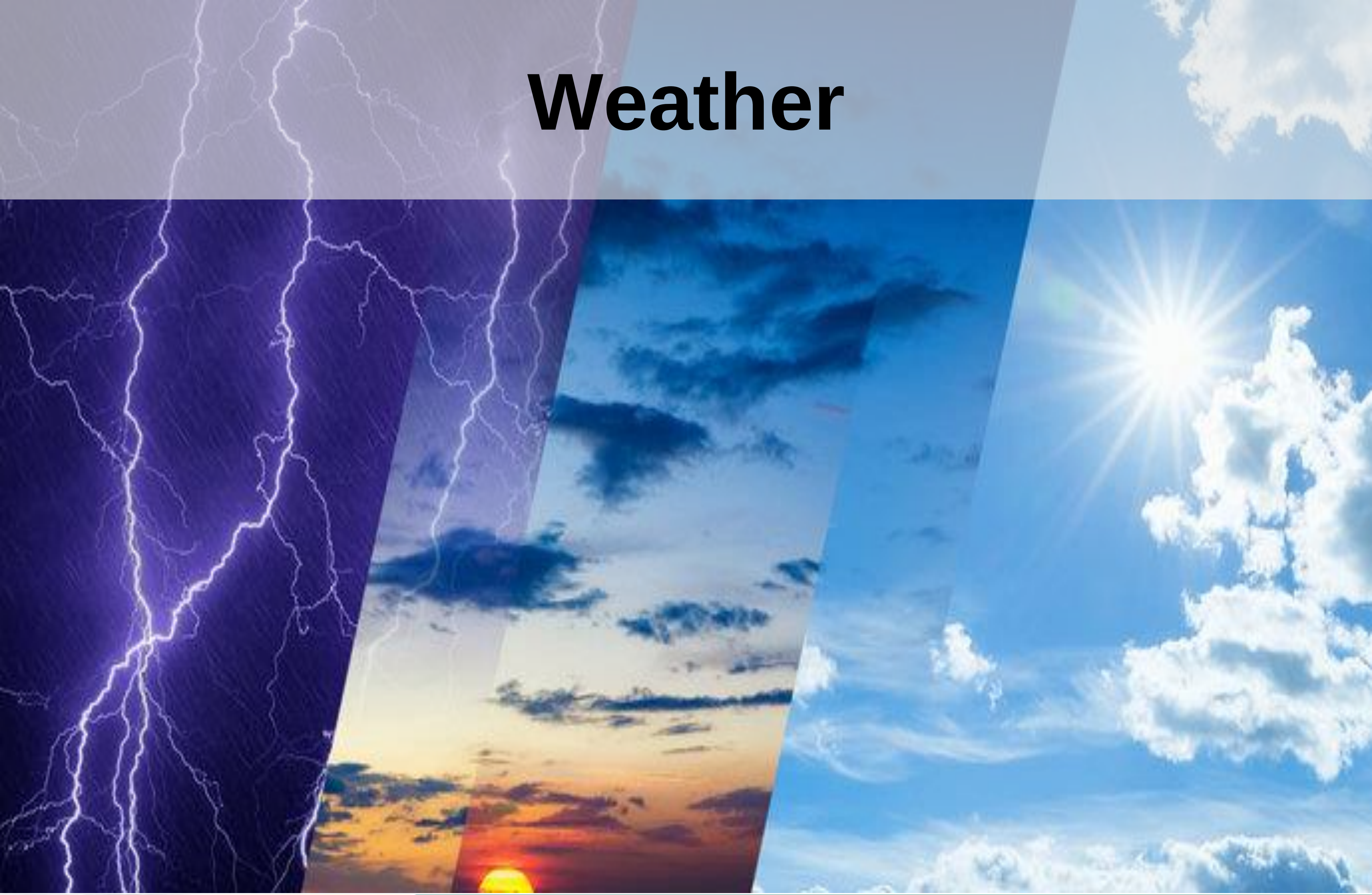
Today’s Price

Corn		Soybeans	
	2024		2024
Cash		Cash	
October		October	
December		December	

Incredibly Interesting Times

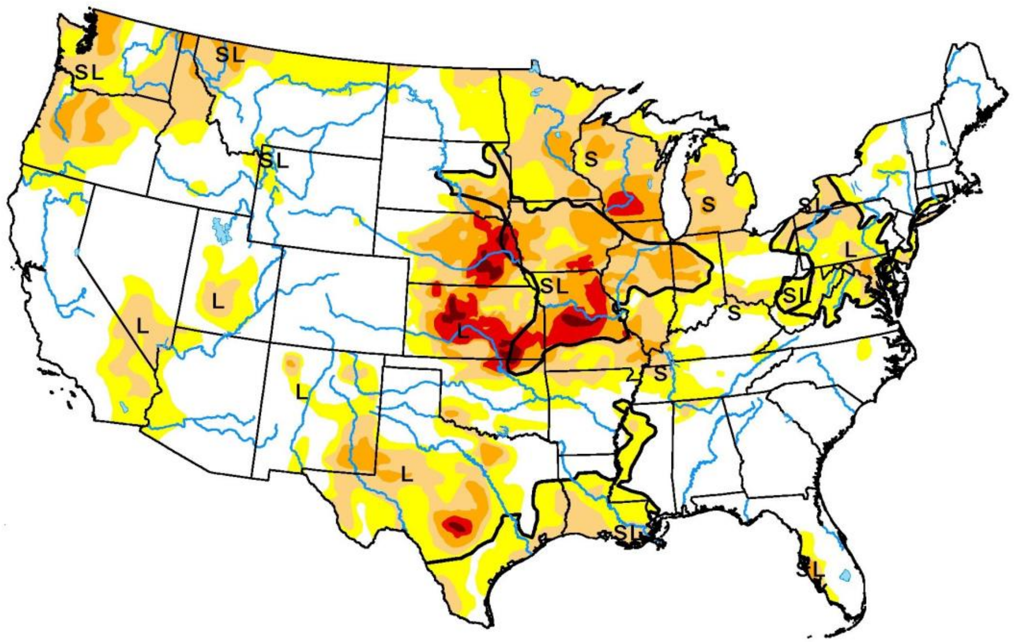
- Farm Wealth is at an All-Time New High
- Debt to Asset Ratio Near the Lowest in History
- Farm Size is Accelerating at an Unprecedented Rate
- New Technology is a Strong Market Driver

Weather

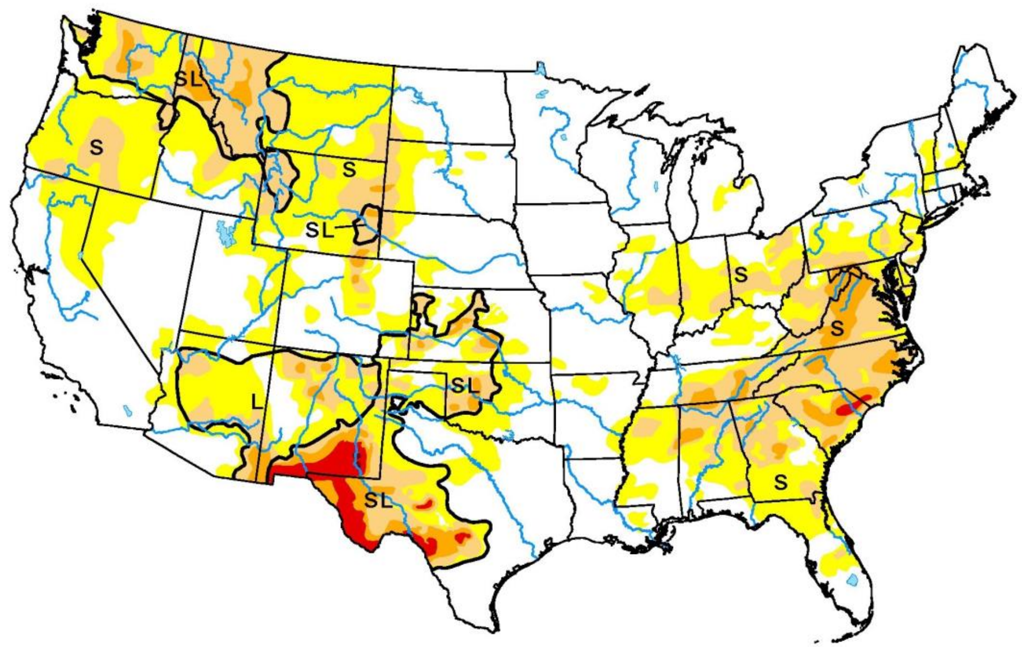


U.S. Drought Monitor

July 11, 2023



July 9, 2024



Drought Impact Types:

Delineates dominant impacts

S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

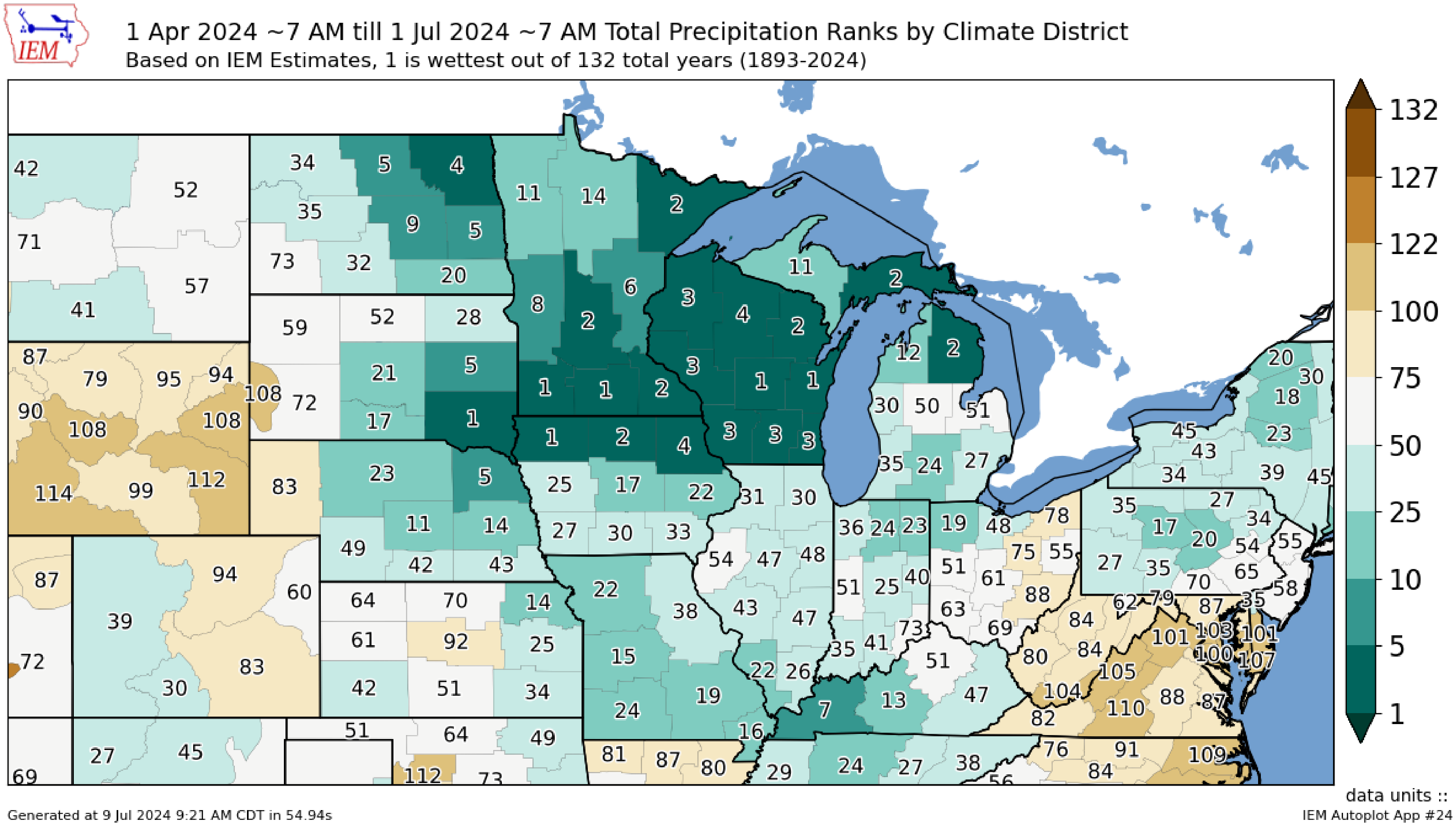
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Total Precipitation Ranks by Climate District

April 1– July 1, 2024



Source: IEM

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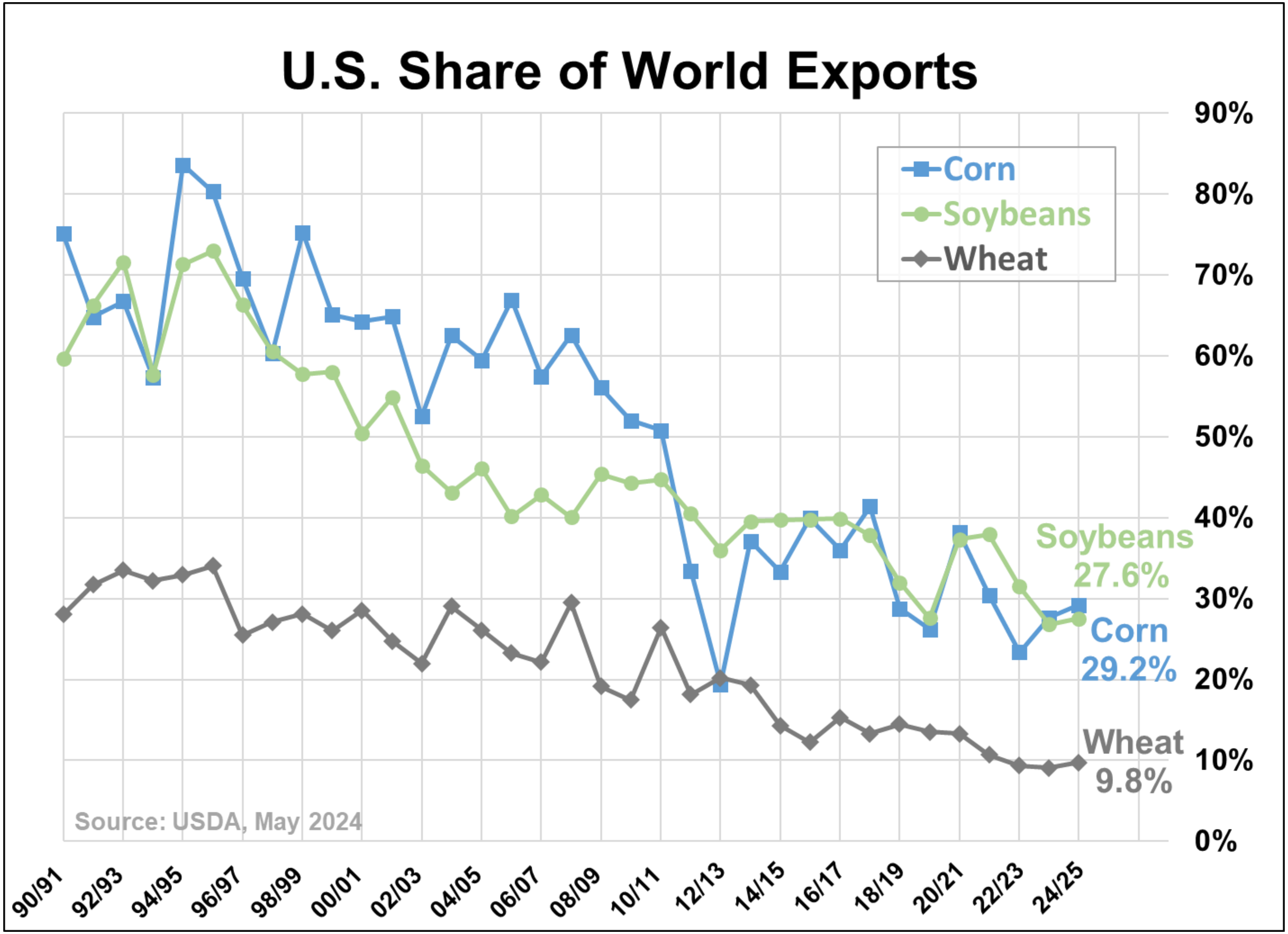
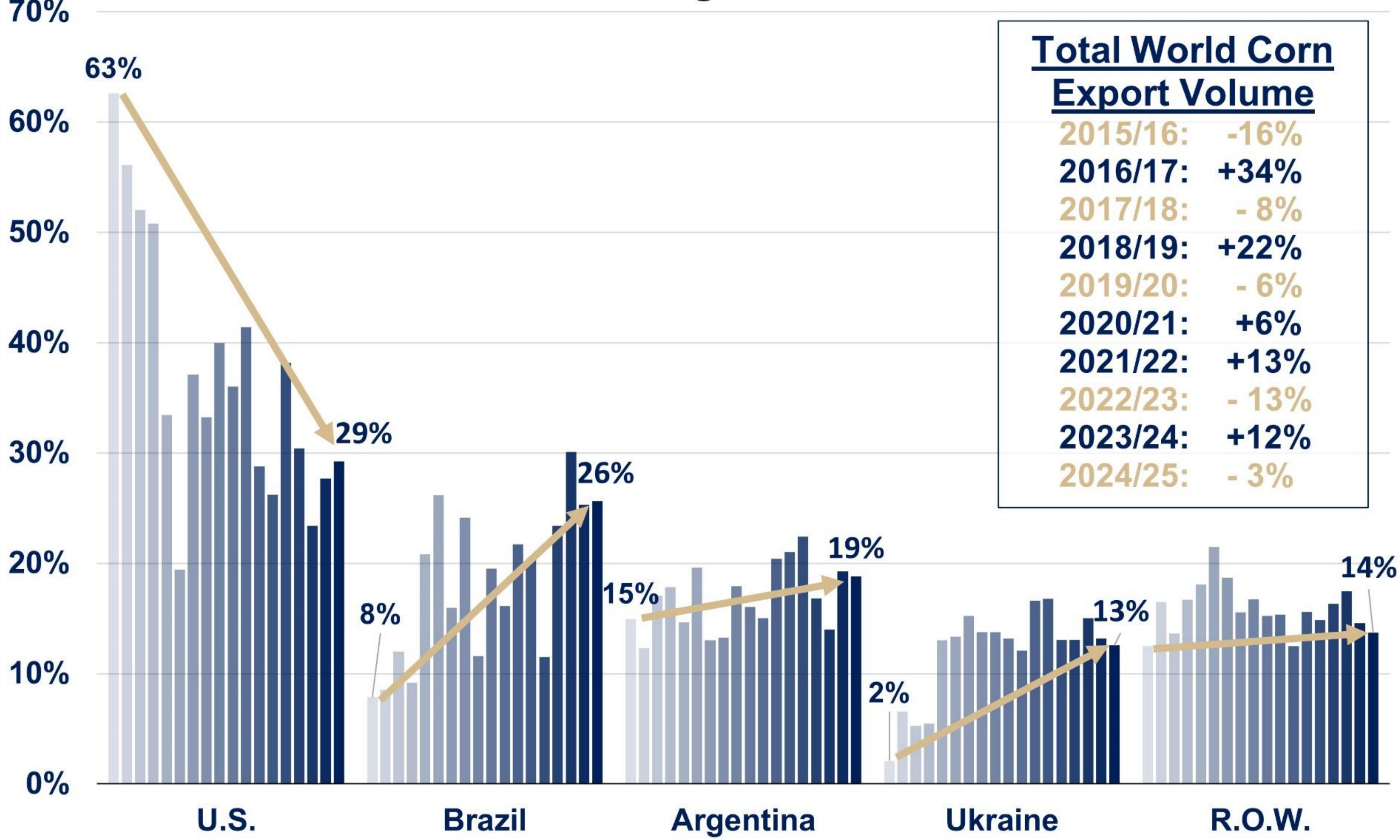
Agricultural Trade



U.S. Share of World Exports
Corn
Soybeans
Wheat
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Soybeans
27.6%
Corn
29.2%
Wheat
9.8%
Source: USDA, May 2024
90/91
92/93
94/95
96/97
98/99
00/01
02/03
04/05
06/07
08/09
10/11
12/13
14/15
16/17
18/19
20/21
22/23
24/25

World Corn Export Share

2007/08 through est. 2024/25



Source: USDA, May 2024

Source: Brock Associates

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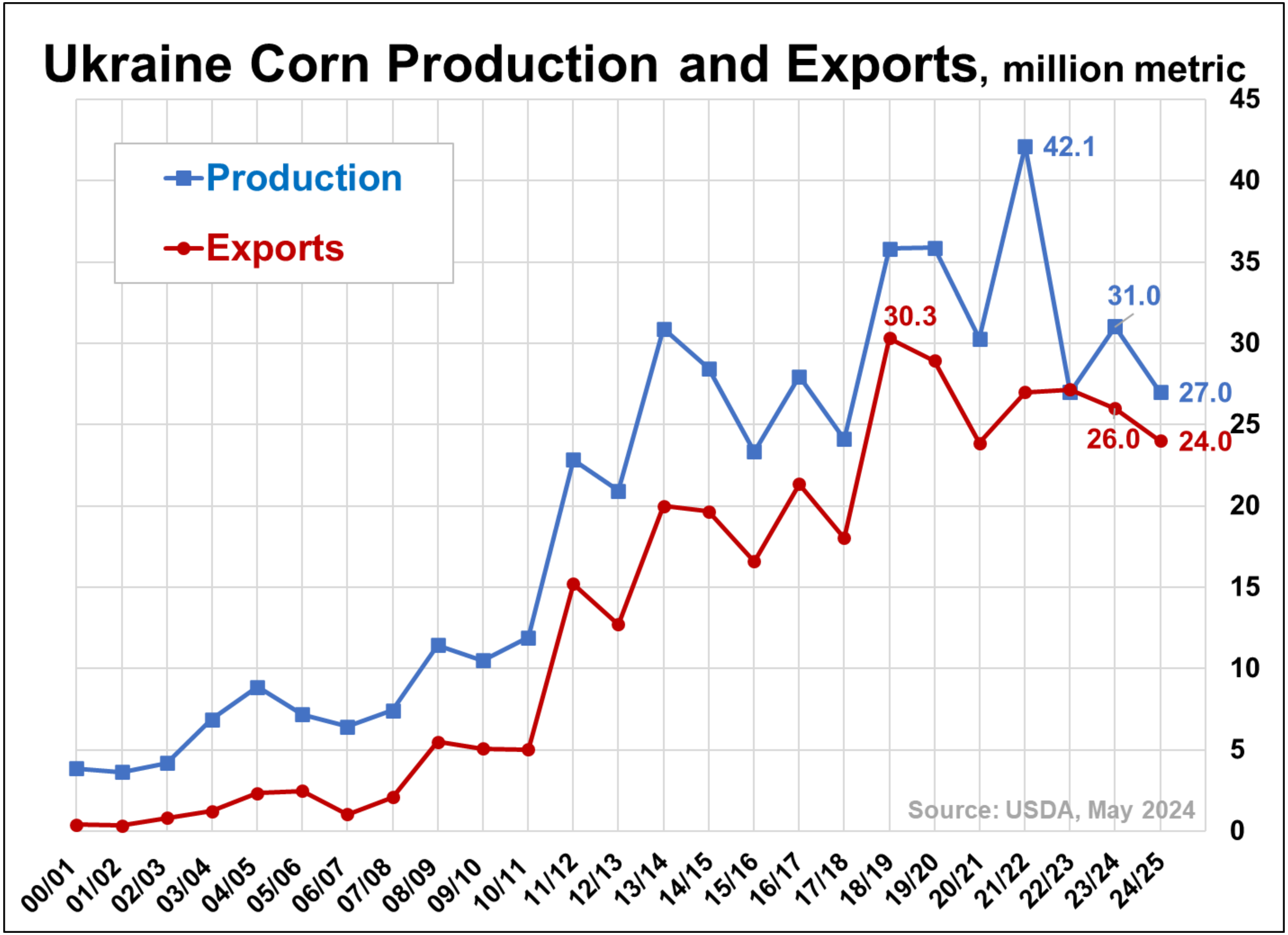
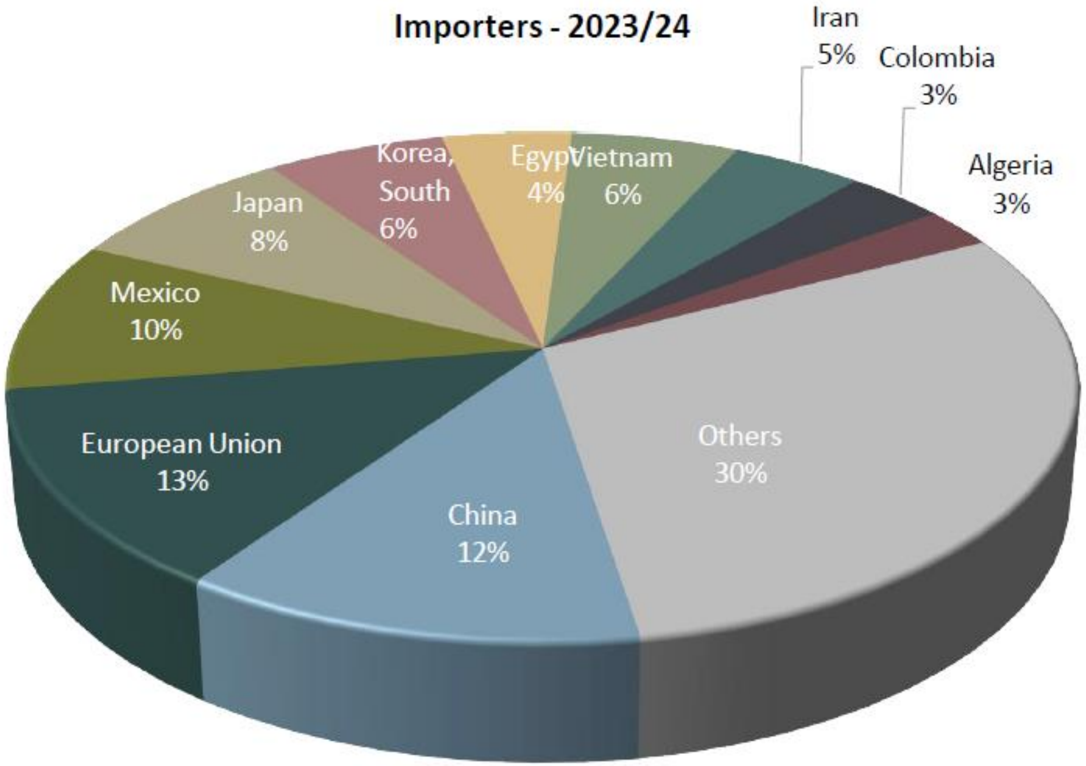


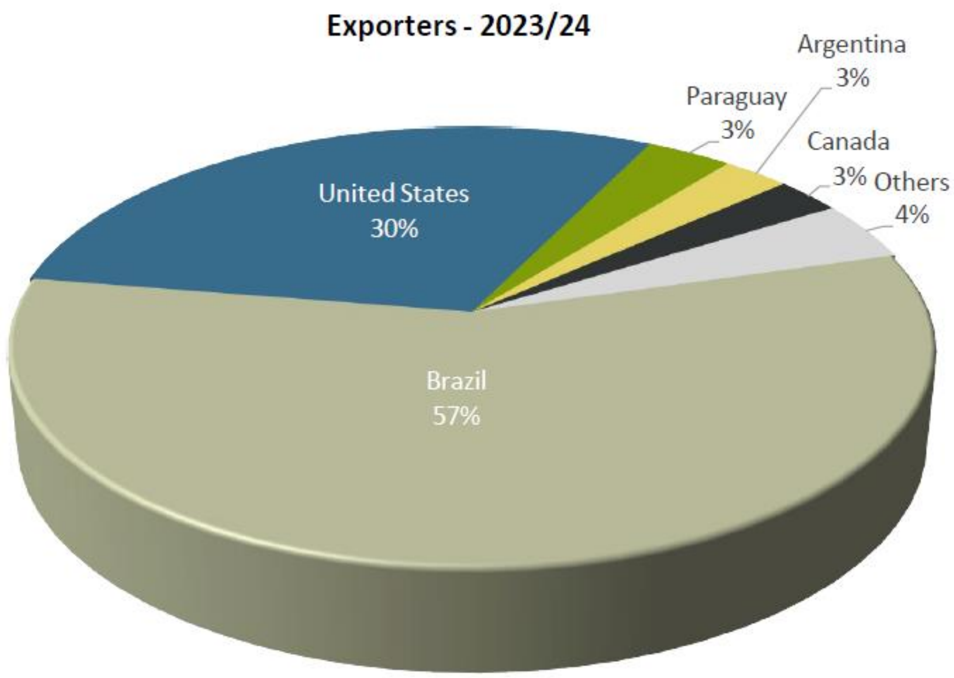
Source: Brock Associates

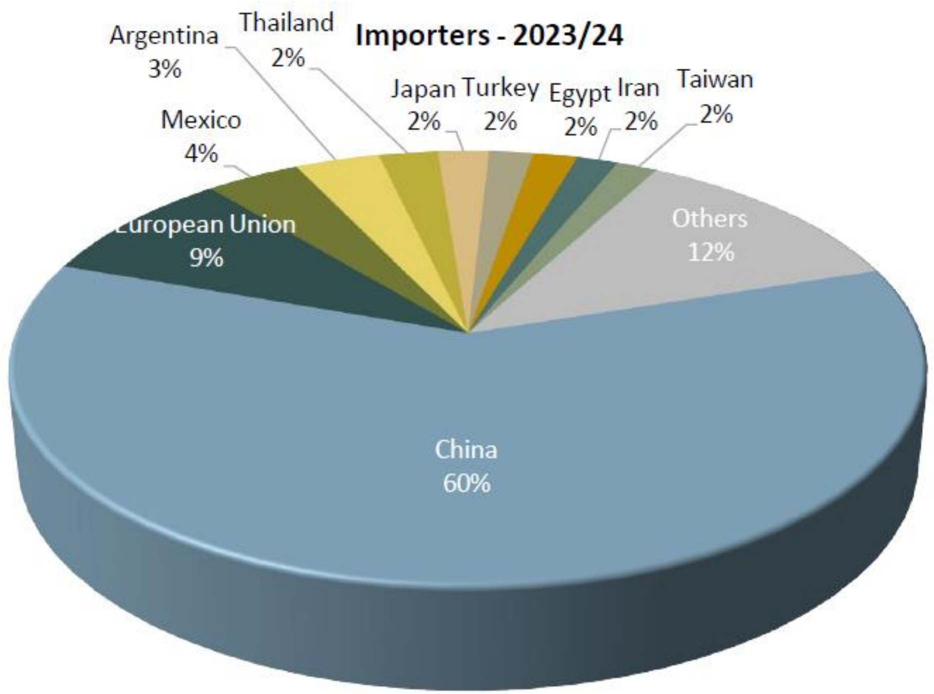
World Corn Imports



Major Importers (MMT)	2021/22	2022/23	2023/24
China	19.7	24.5	24.0
European Union	21.9	18.0	23.0
Mexico	17.6	17.2	18.0
Japan	15.0	15.0	15.5
World	**184.5**	**175.1**	**188.4**

World Soybean Trade

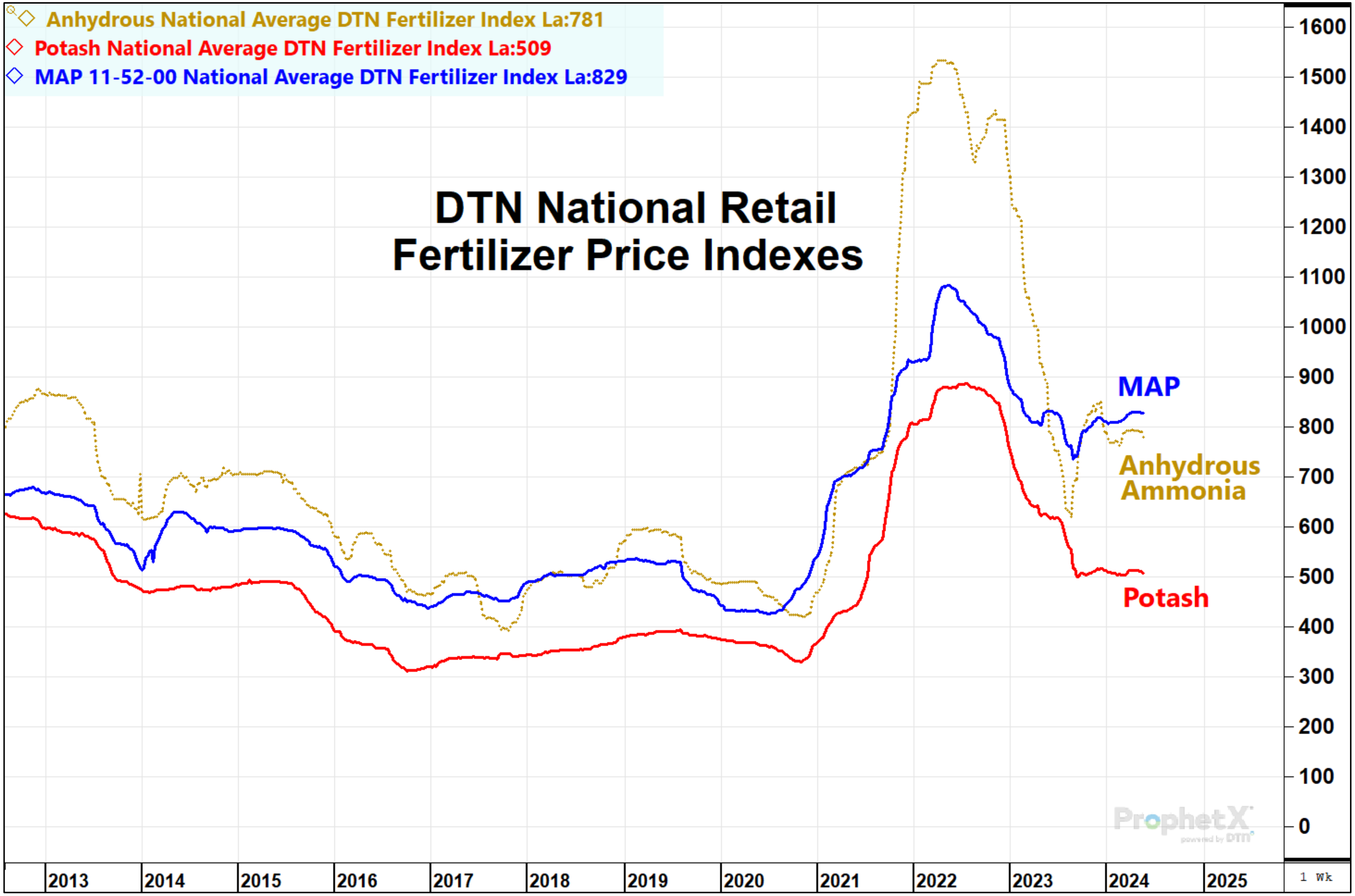




Major Exporters (MMT)	2021/22	2022/23	2023/24
Brazil	79.1	94.0	96.5
United States	58.6	53.9	50.3
Paraguay	2.3	5.7	5.9
Argentina	2.9	3.8	4.6
World	**153.9**	**168.9**	**169.3**

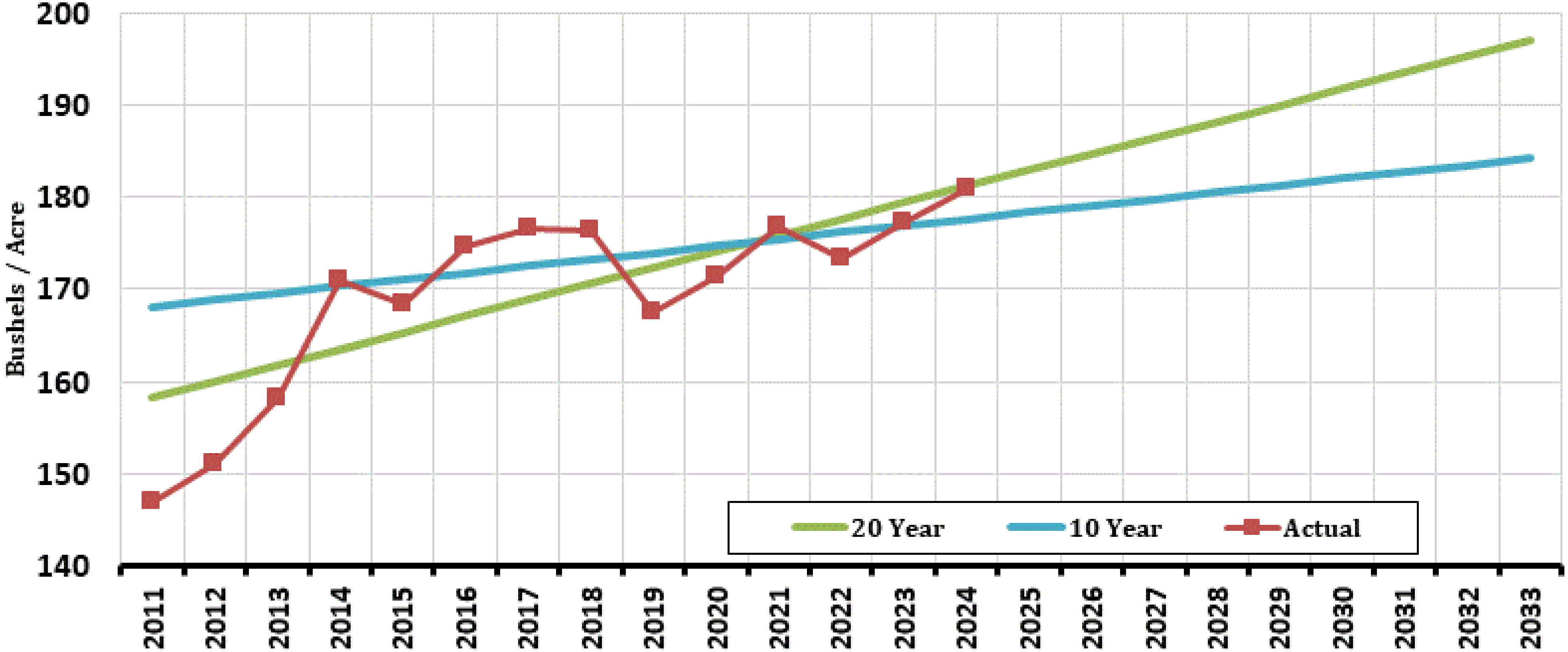
Major Importers (MMT)	2021/22	2022/23	2023/24
China	91.6	99.0	99.0
European Union	14.5	13.9	14.0
Mexico	6.0	6.4	6.4
Argentina	3.8	8.7	5.7
World	**156.6**	**165.8**	**166.6**

Corn Market


Anhydrous National Average DTN Fertilizer Index La:781
Potash National Average DTN Fertilizer Index La:509
MAP 11-52-00 National Average DTN Fertilizer Index La:829
DTN National Retail
Fertilizer Price Indexes
MAP
Anhydrous
Ammonia
Potash
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
1 Wk
ProphetX

Source: DTN

U.S. Corn Yield
Actual vs. Trend Line



Updated: 07/12/2024

The Hightower Report

Source: The Hightower Report

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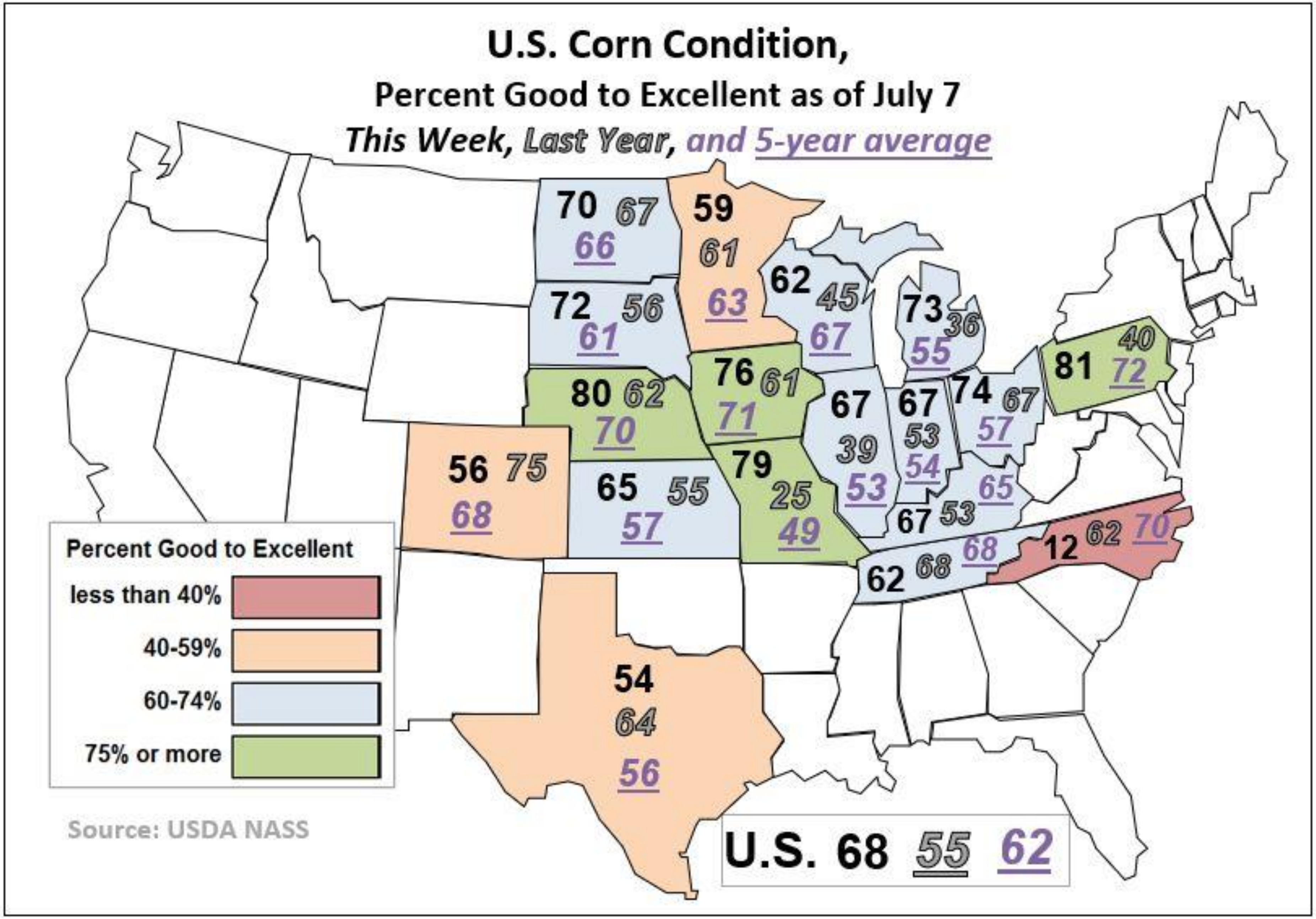
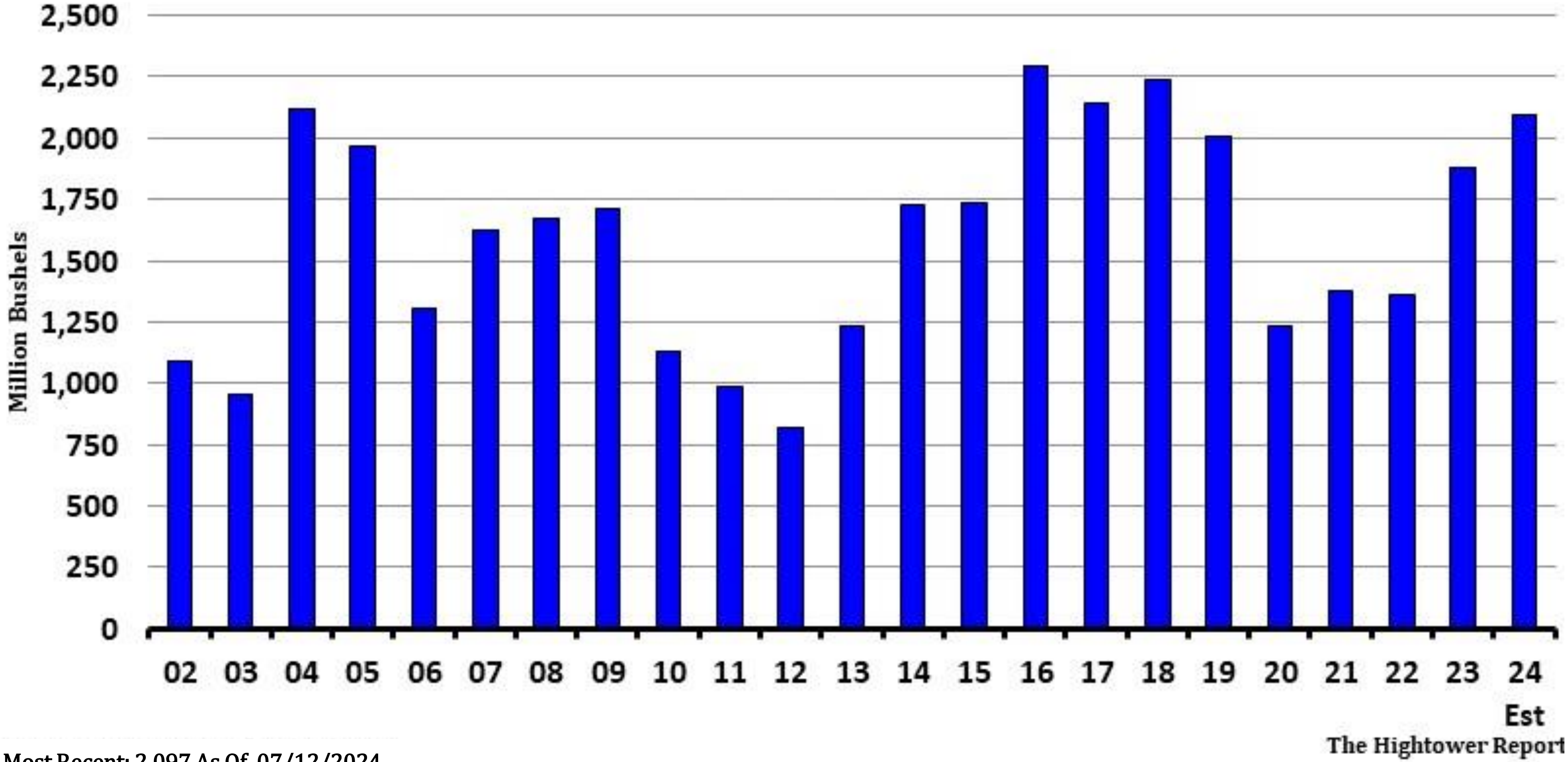
U.S. Corn Supply and Use

Marketing Year (2023 = 9/1/23 to 8/31/24)		2020	2021	2022	2023	2024
Area Planted	(mil. acres)	90.7	93.3	88.2	94.6	91.5
Yield	(bu./acre)	171.4	176.7	173.4	177.3	181.0
Production	(mil. bu.)	14,111	15,074	13,657	15,342	15,100
Beg. Stocks	(mil. bu.)	1,919	1,235	1,377	1,360	1,877
Imports	(mil. bu.)	24	24	39	30	25
Total Supply	(mil. bu.)	16,055	16,333	15,066	16,732	17,002
Feed & Residual	(mil. bu.)	5,607	5,718	5,486	5,775	5,825
Ethanol	(mil. bu.)	5,028	5,275	5,176	5,450	5,450
Food, Seed, & Other	(mil. bu.)	1,439	1,440	1,383	1,405	1,405
Exports	(mil. bu.)	2,747	2,471	1,661	2,225	2,225
Total Use	(mil. bu.)	14,821	14,956	13,706	14,855	14,905
Ending Stocks	(mil. bu.)	1,235	1,377	1,360	1,877	2,097
Season-Average Price	($/bu.)	4.53	6.00	6.54	4.65	4.30

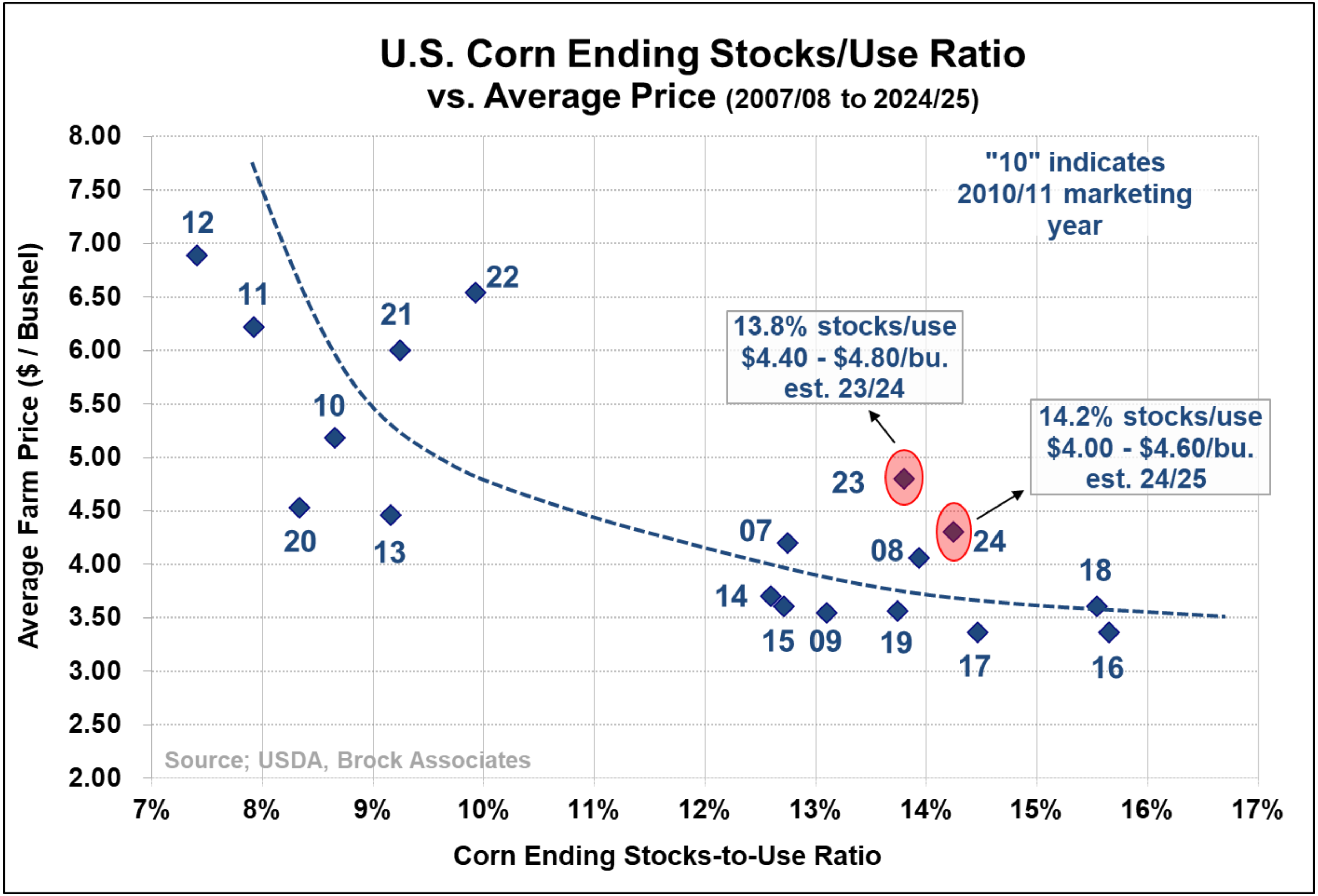
Source: Chad E. Hart


U.S. Corn Condition,
Percent Good to Excellent as of July 7
This Week, Last Year, and 5-year average
70 67 66
59 61 63
72 56 61
62 45 67
73 36 55
80 62 70
76 61 71
81 40 72
67 39 53
67 53 54
74 67 57
56 75 68
65 55 57
79 25 49
67 53 65
12 62 70
62 68 68
54 64 56
Percent Good to Excellent
less than 40%
40-59%
60-74%
75% or more
Source: USDA NASS
U.S. 68 55 62

U.S. Corn Ending Stocks



Most Recent: 2,097 As Of 07/12/2024



Source: Brock Associates

Corn Demand

U.S. Corn Exports

Most Recent: 2,225 As Of 07/12/2024

Source: The Hightower Report

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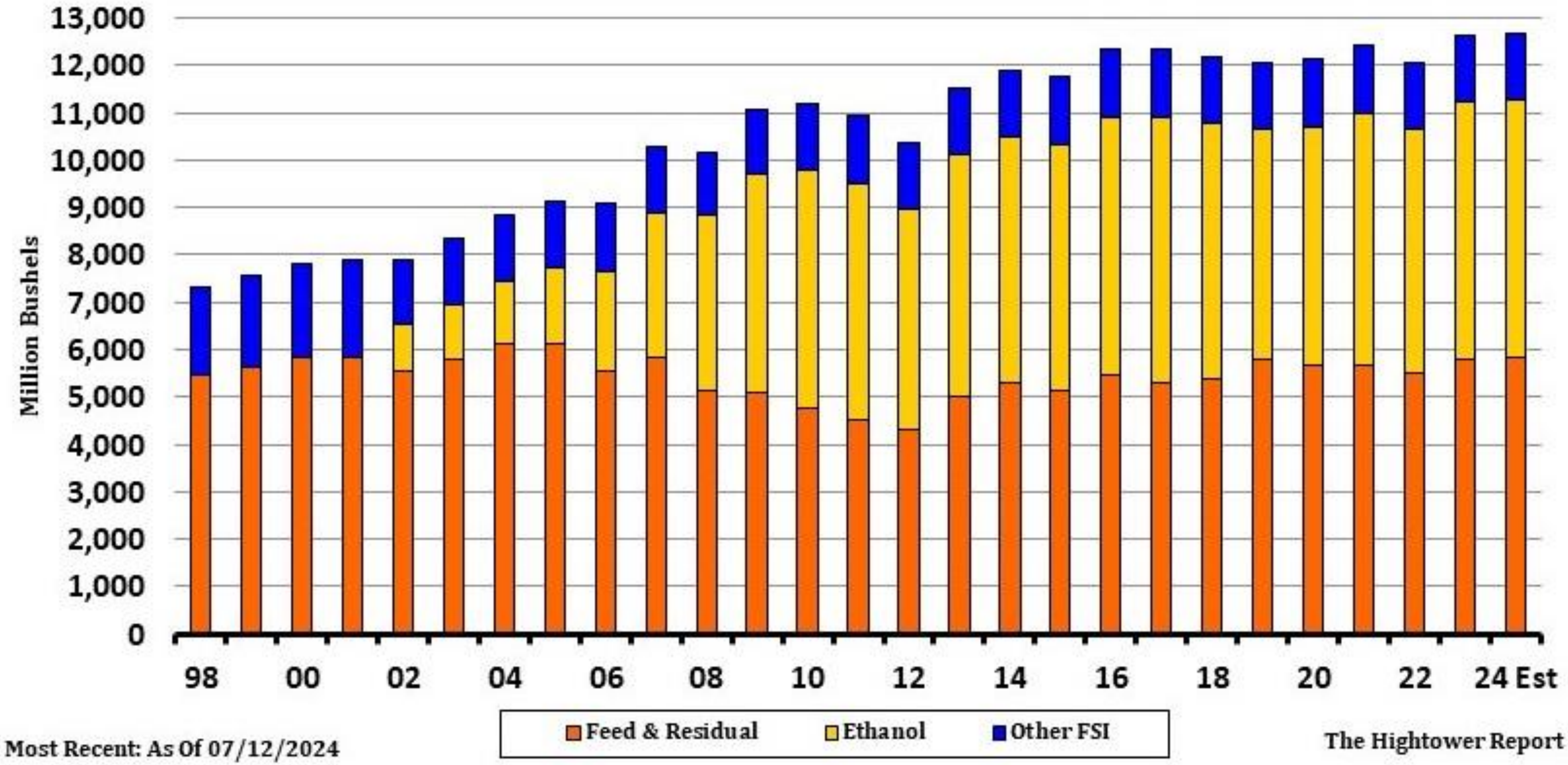
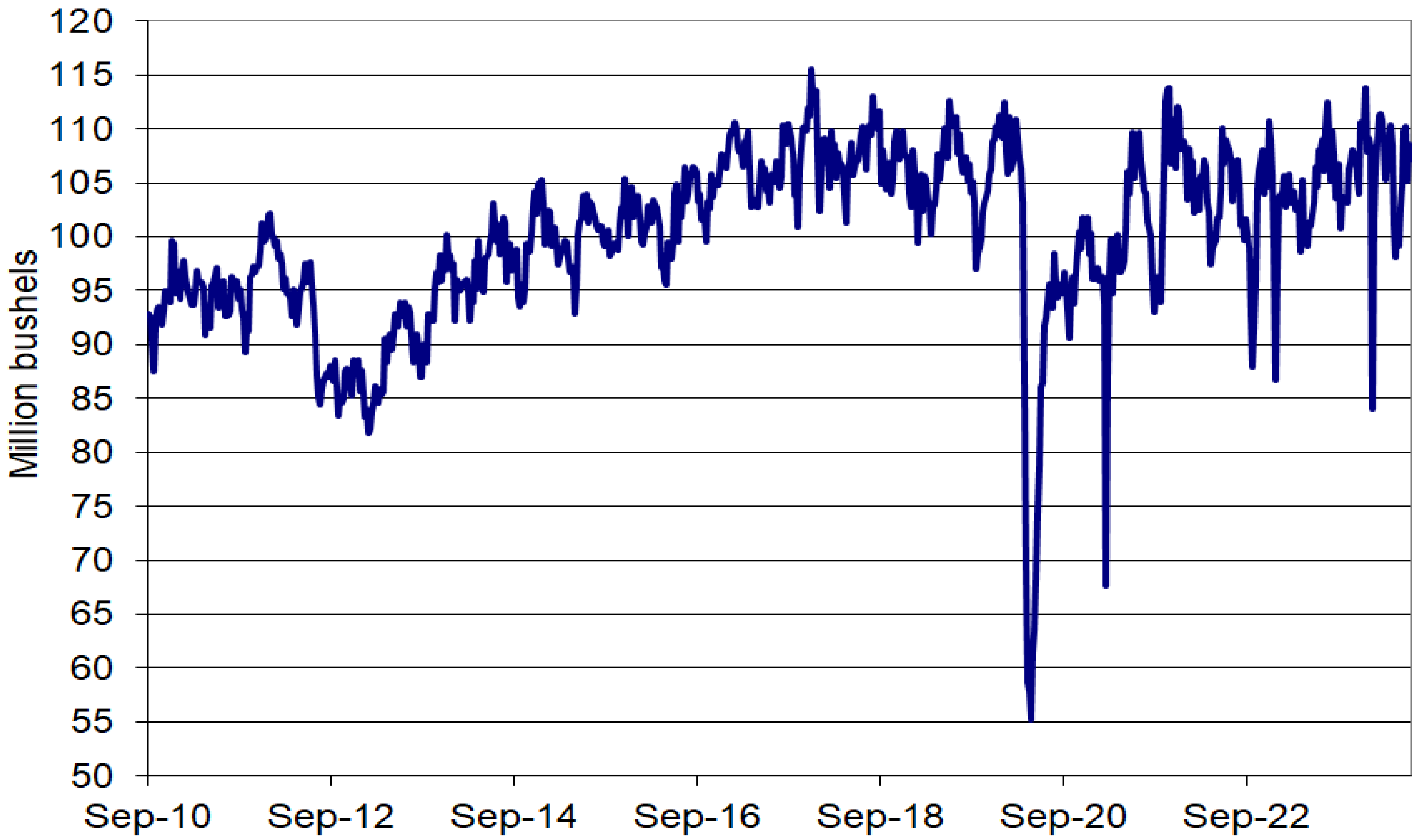
U.S. Corn Total Usage



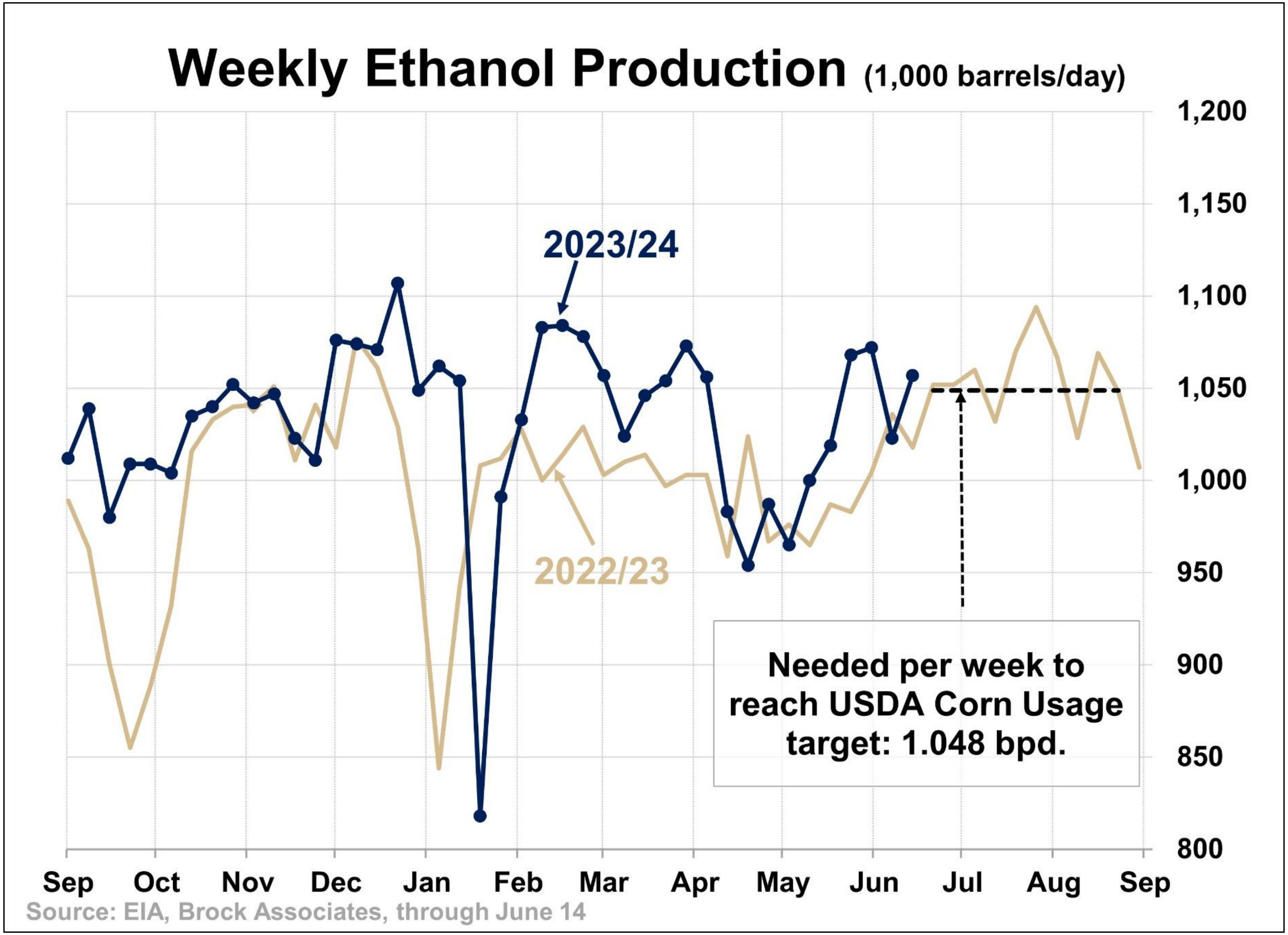
Source: CME Group

Renewable Fuels

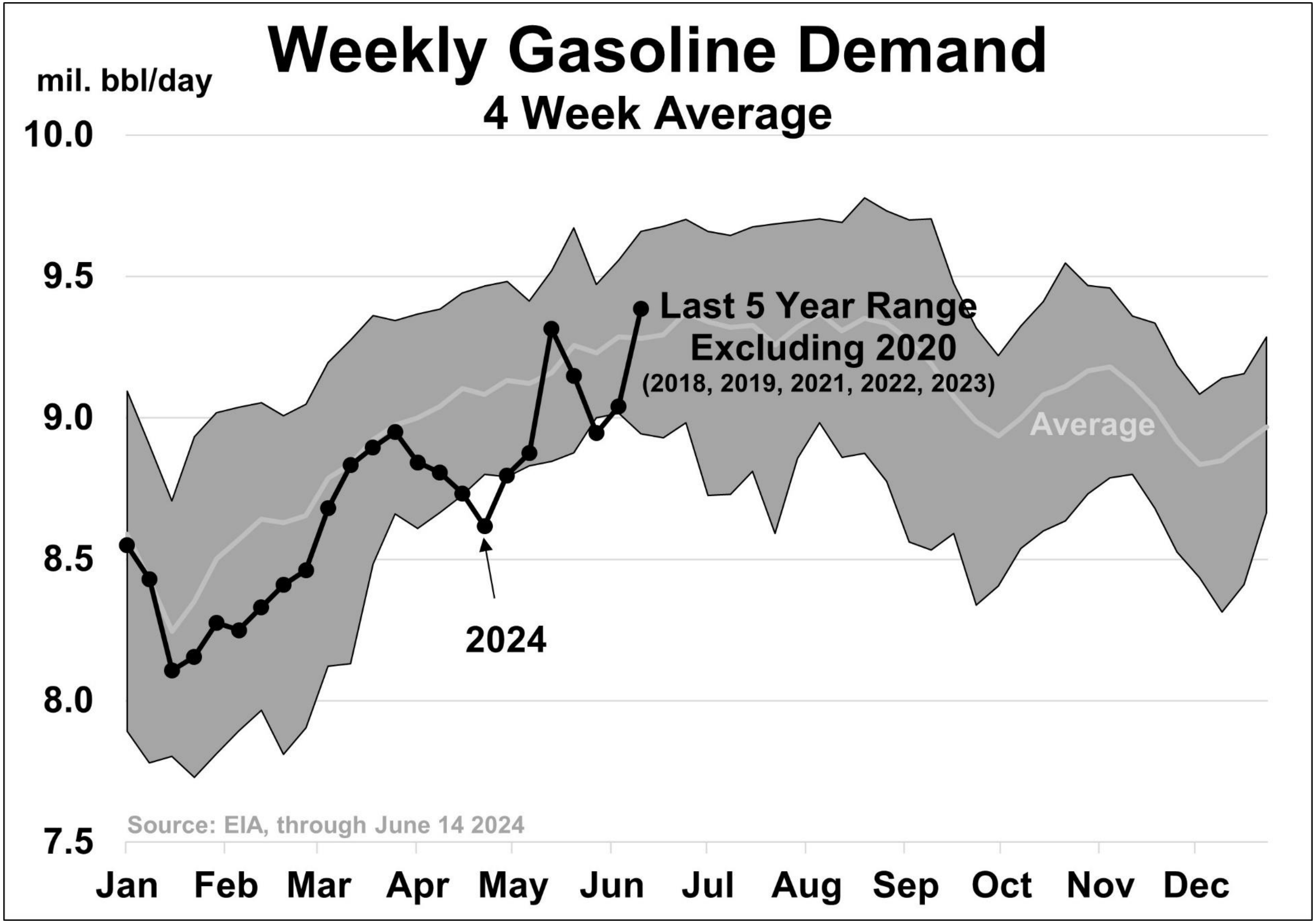
Corn Grind for Ethanol



Source: Brock Associates



Source: Brock Associates



Source: Brock Associates

BIODIESEL	RENEWABLE DIESEL
Developed by Rudolph Diesel in 1890	Chemically identical to petroleum diesel
Transesterification of vegetable oils & animal fats	Hydrotreating process utilizing a variety of feedstocks
Require separate storage & handling due to cold-weather properties	Can use existing pipelines & infrastructure
20% maximum blend (B20)	A 'drop-in' fuel that can be used as 1-for-1 replacement
Higher cloud point (can gel in cold temps)	Very low cloud point (won't gel)

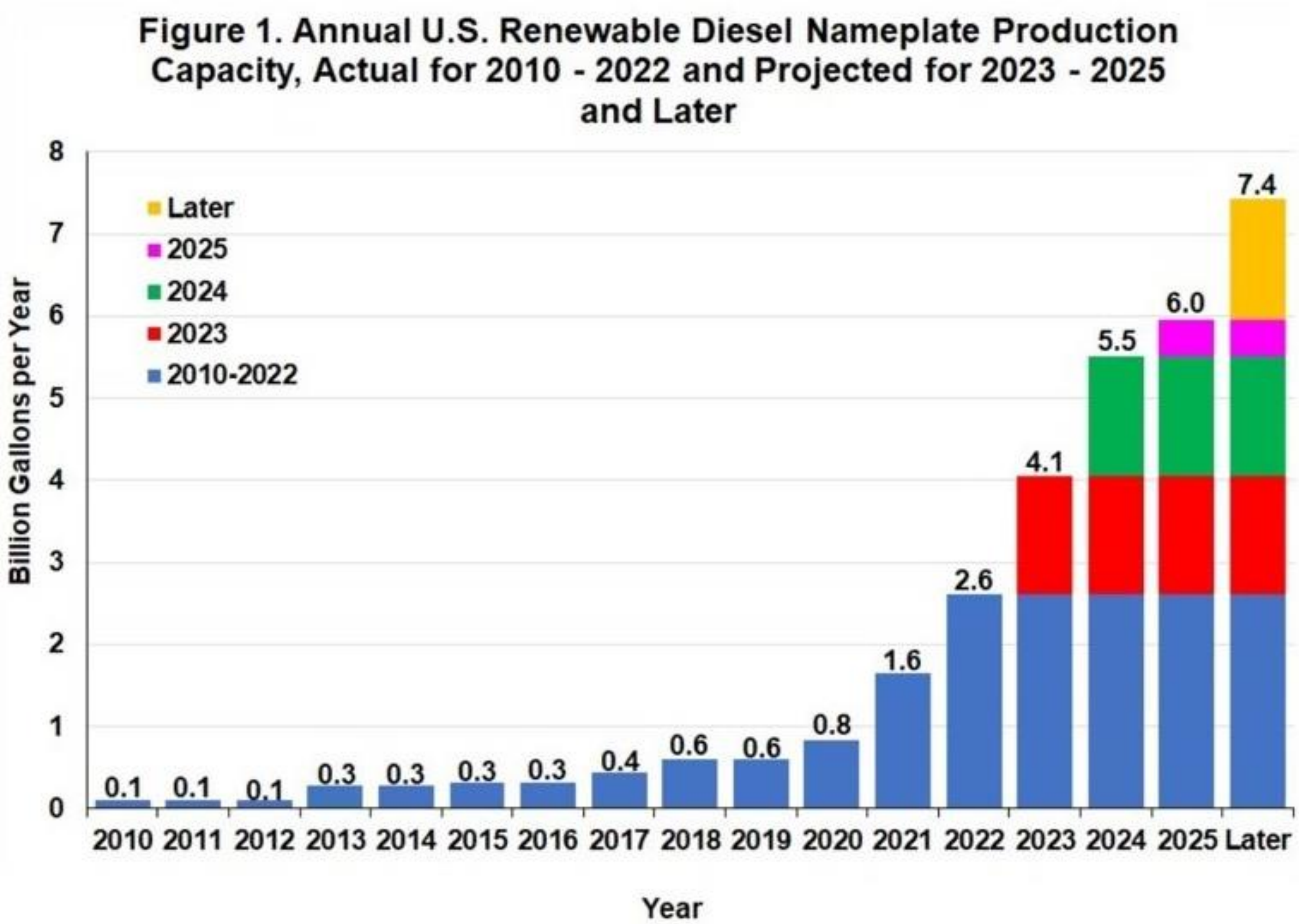
Source: Energy Information Administration

Source: EIA

Renewable Diesel

Source: EIA

Renewable Diesel Push



Source: EIA

Sustainable Aviation Fuel – SAF

Source: Honeywell

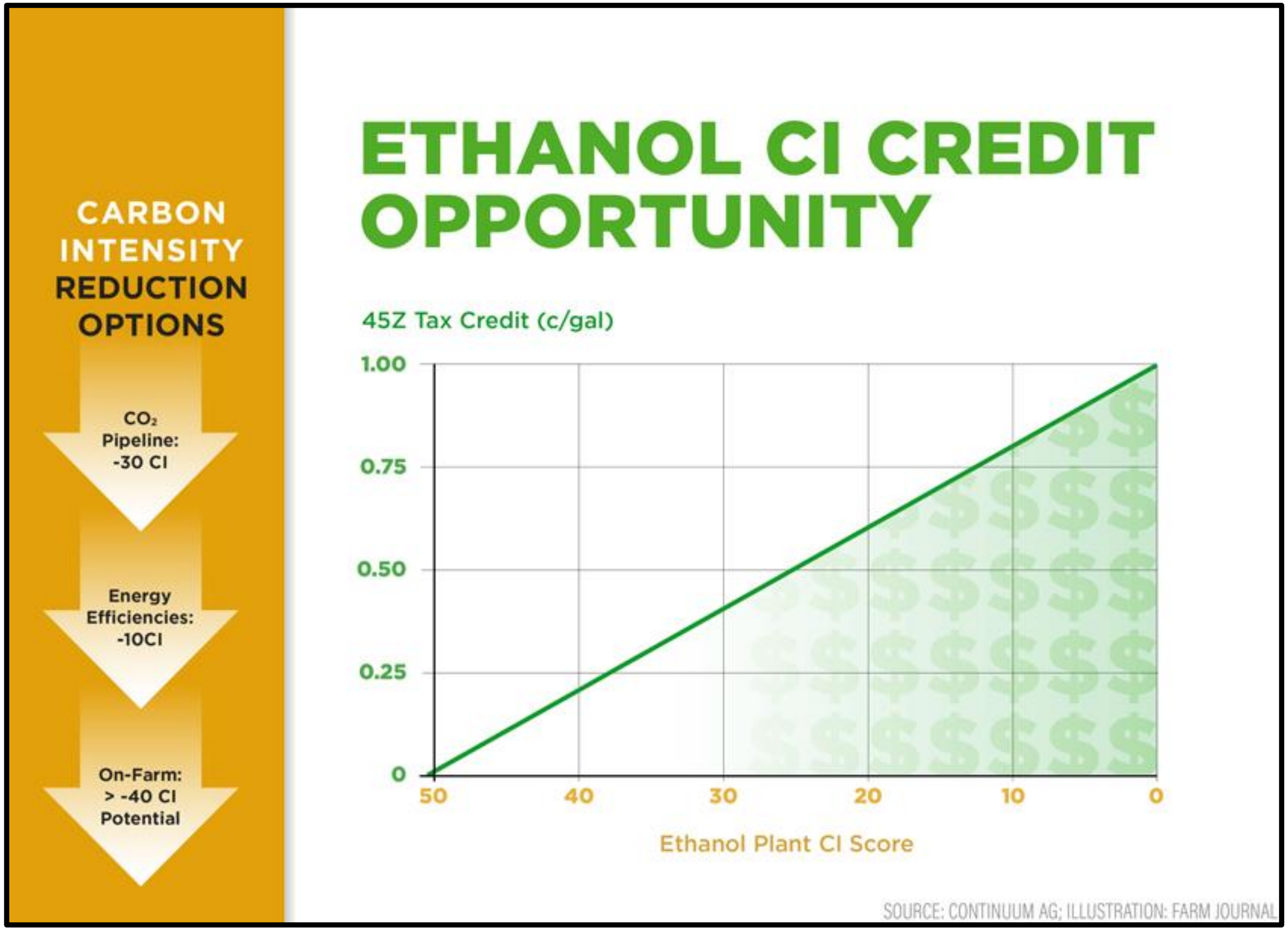
Sustainable Aviation Fuel – SAF

- Over 450,000 flights using SAF – 50 airlines test.
- SAF reduces emissions by 75-90% reducing the carbon footprint of the airlines.
- The WH wants 3B gallons by 2030 and a full 35B gallons by 2050.
- Today, we take 5B bushels of corn to make 17B gallons of ethanol. To meet 35B gallons an ADDITIONAL 10B bushels of corn would be needed to meet this demand if all the technology comes together on this.
- Only SAF plant online is in Georgia and is importing ethanol from South America because of lower CI scores.
- Summit pipeline approved.
- Could be huge boom for farmers if policy is written correctly.

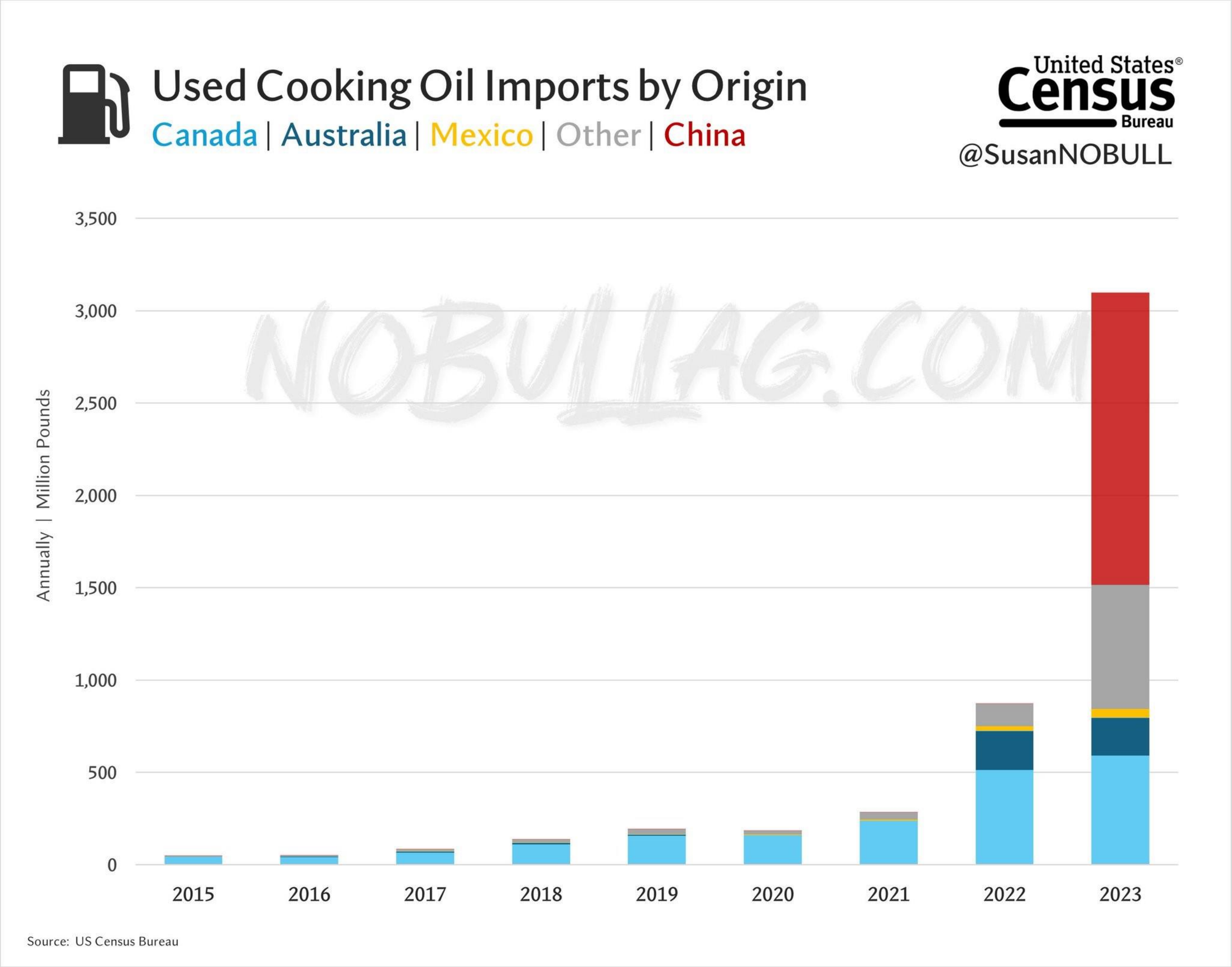
45Z Tax Credit

- Incentive for biofuel producers to lower carbon intensity (CI) scores starting Jan. 1, 2025
- Ethanol plant typical CI = 50-60
  - Every point below 50 earns $.02 per gal tax credit
  - How?
    - Carbon Capture Storage (ex. pipelines)
    - Improved energy efficiency
    - Low-carbon feedstocks (corn, soybeans)
      - Utilizing no-till, cover crops, efficient fertilizer use
      - Calculations will be based on IRS rules (still TBD)
      - Processors ***__may__*** provide premium for low-carbon grain; no programs in place yet

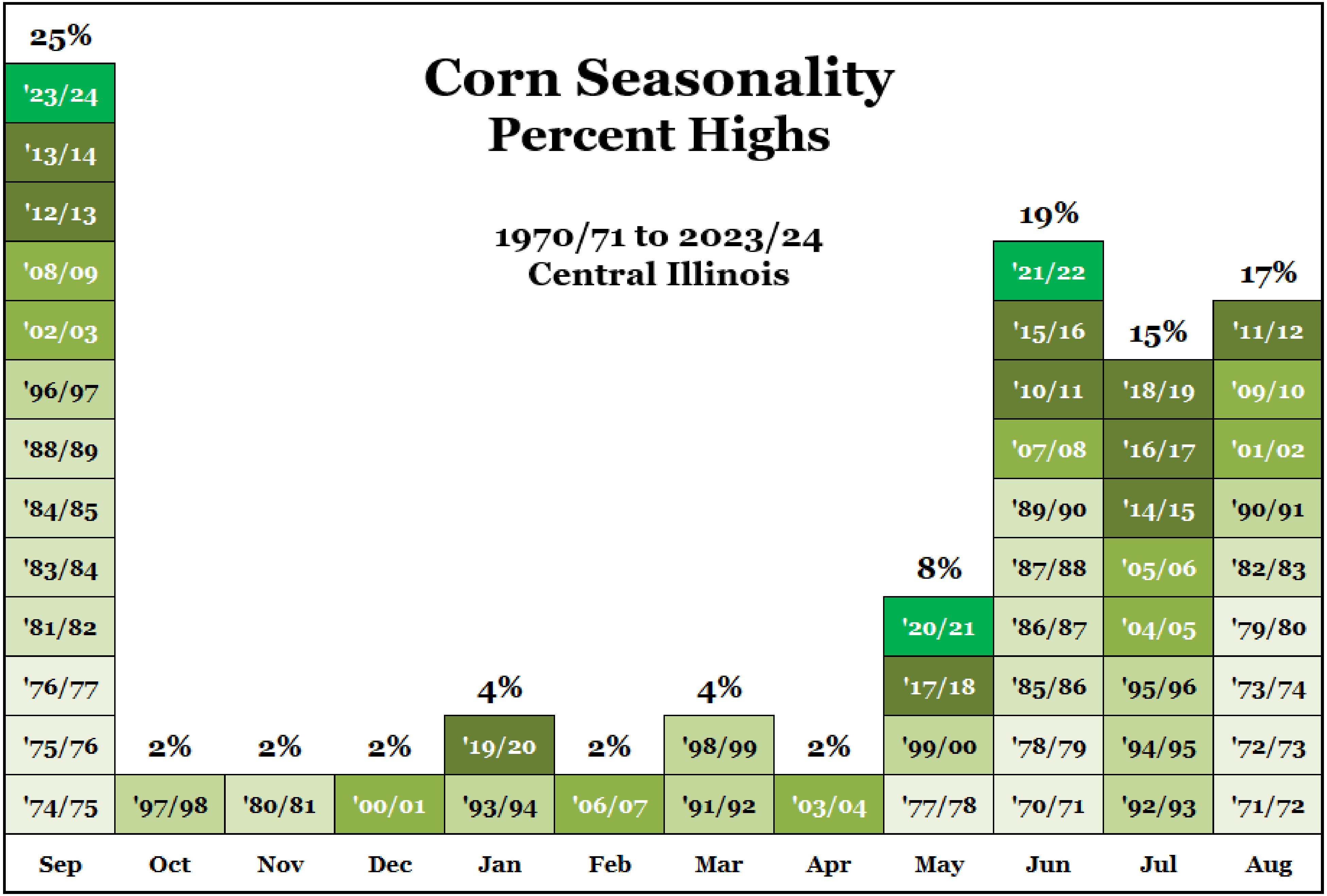
45Z Tax Credit



Source: Continuum Ag



Source: No Bull Ag



Source: Brock Associates

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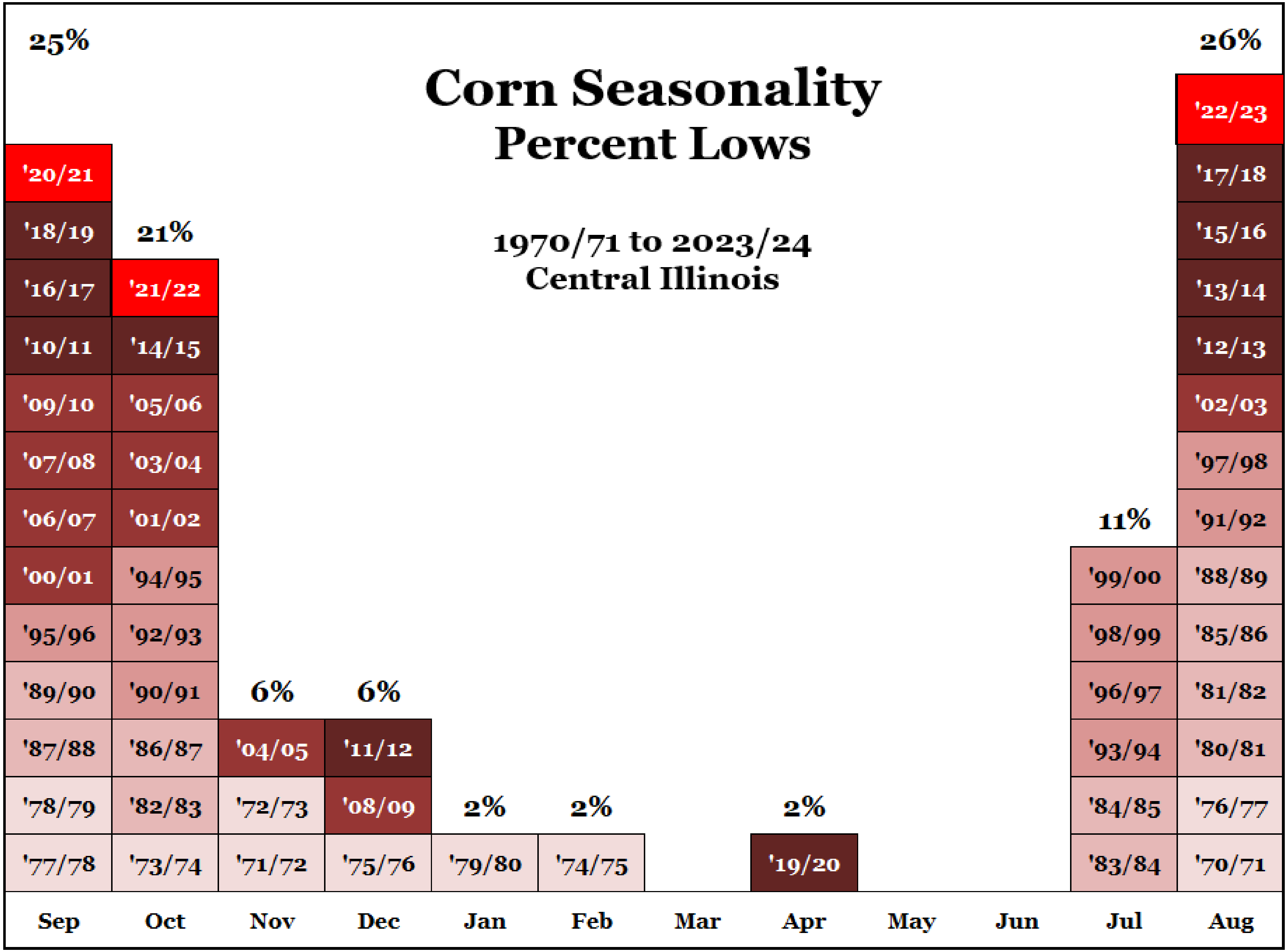

Source: Brock Associates

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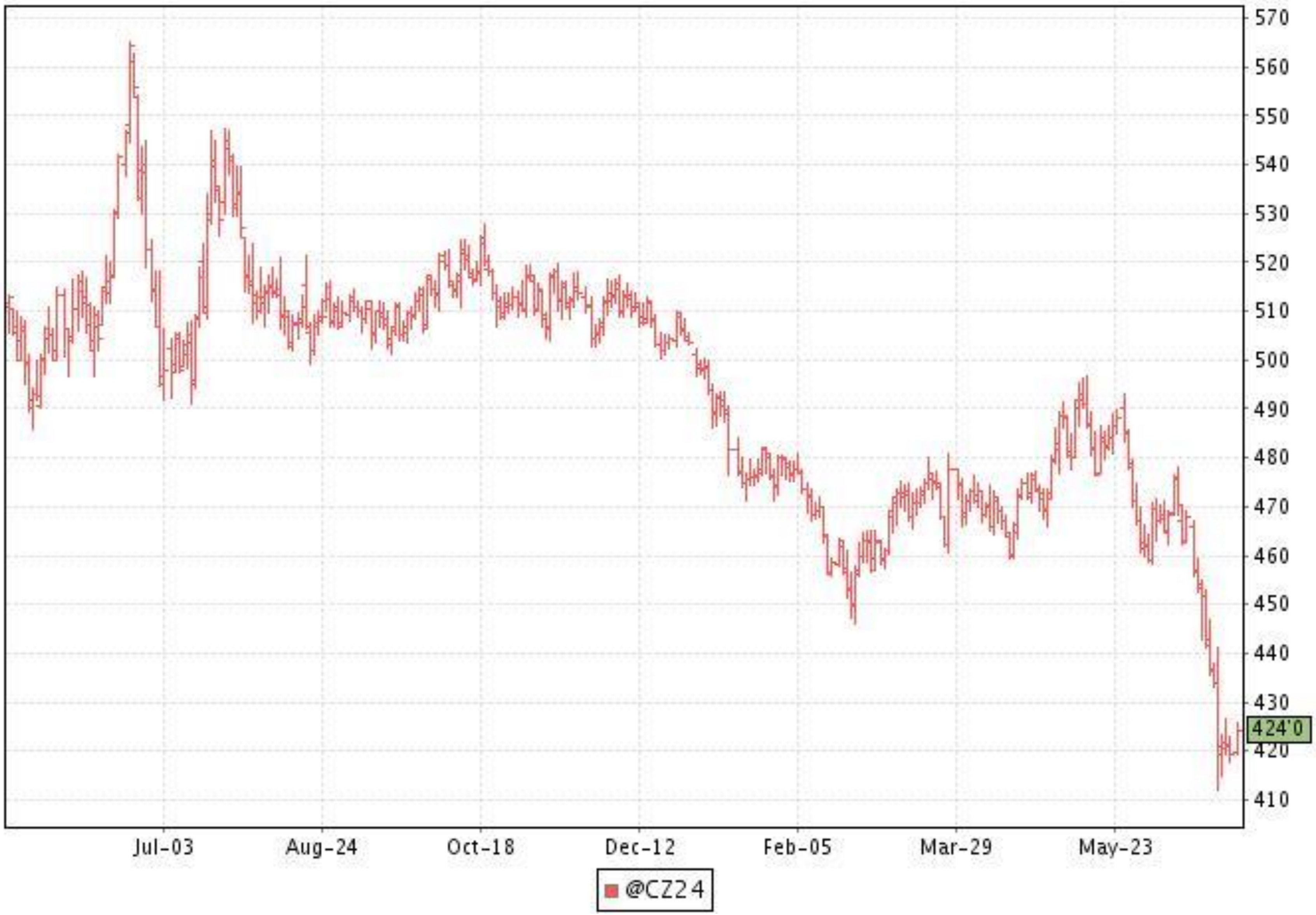
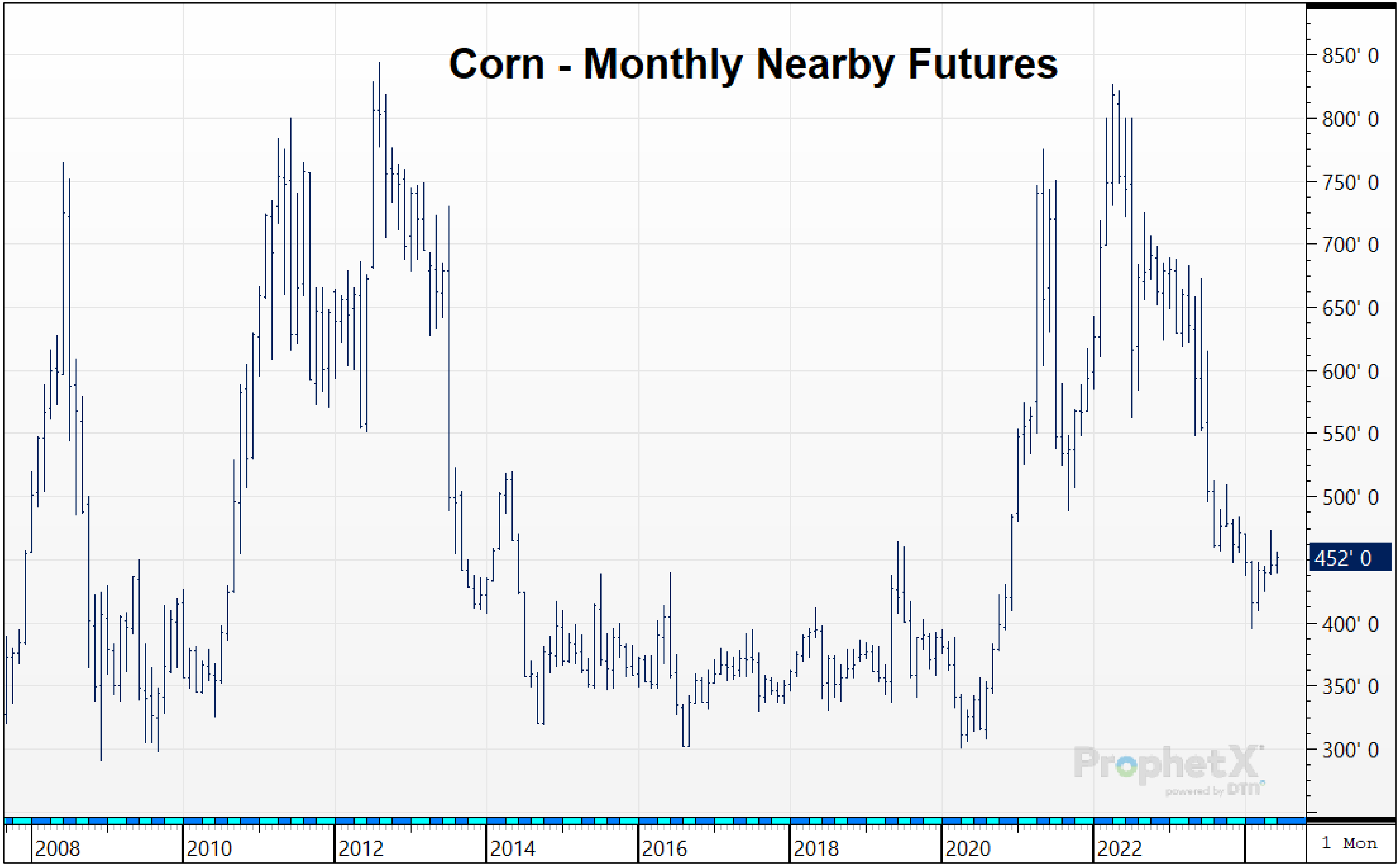
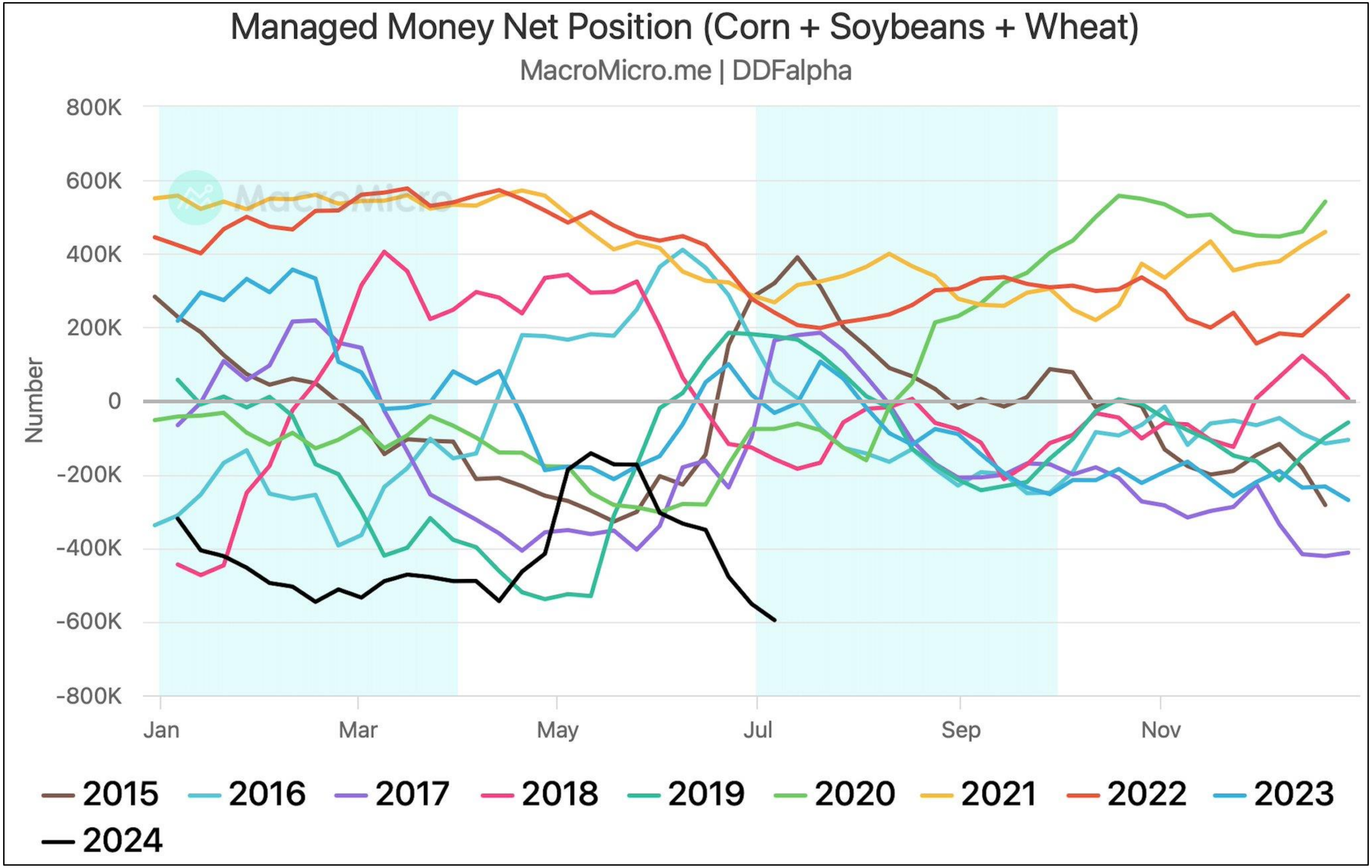
December 2024 Corn Chart



Source: DTN


Corn - Monthly Nearby Futures
850' 0
800' 0
750' 0
700' 0
650' 0
600' 0
550' 0
500' 0
452' 0
400' 0
350' 0
300' 0
2008
2010
2012
2014
2016
2018
2020
2022
1 Mon
ProphetX
powered by DTN



Source: MacroMicro.me

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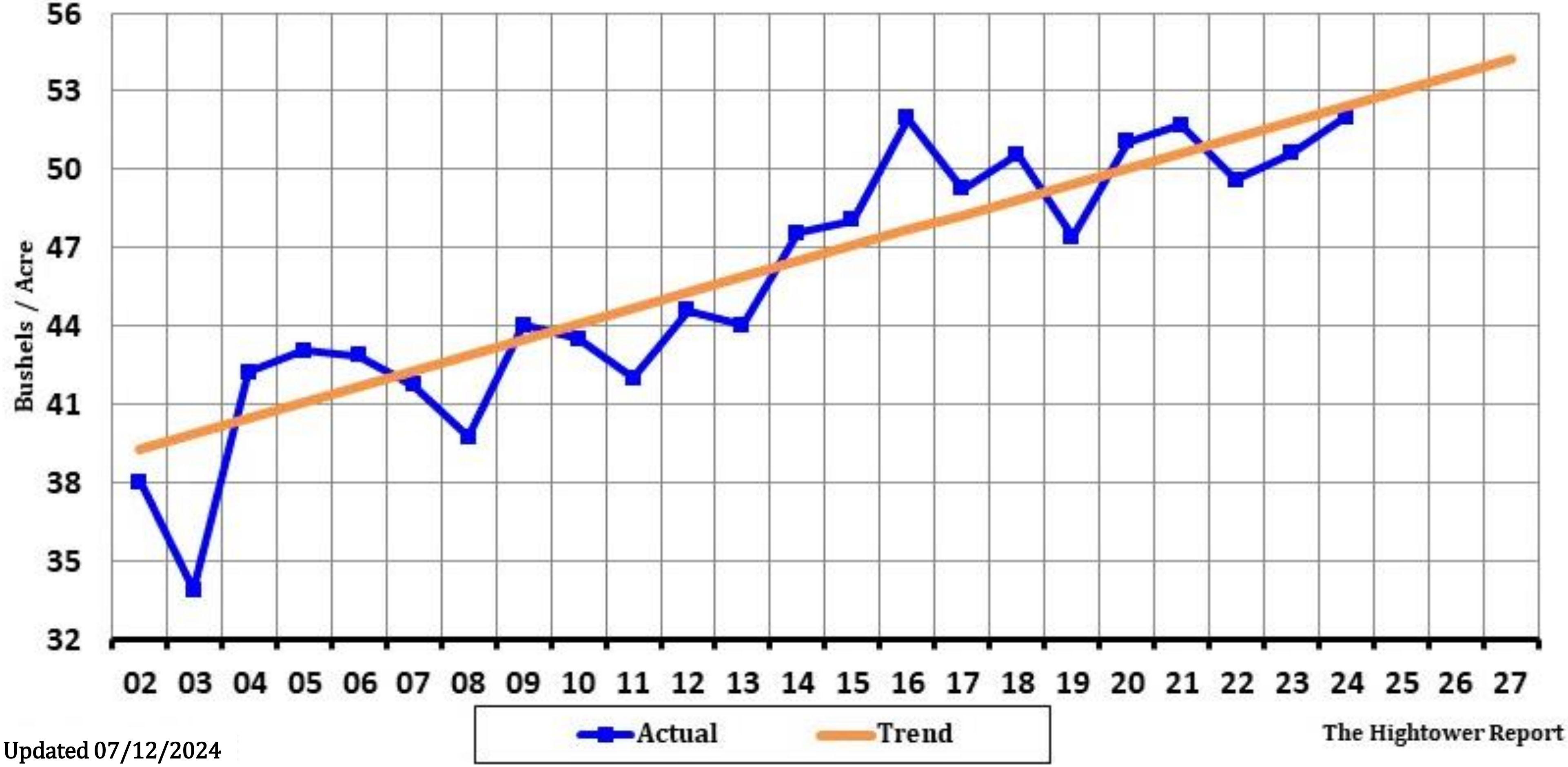
Soybean Market

U.S. Soybean Yield
Actual vs. Trendline

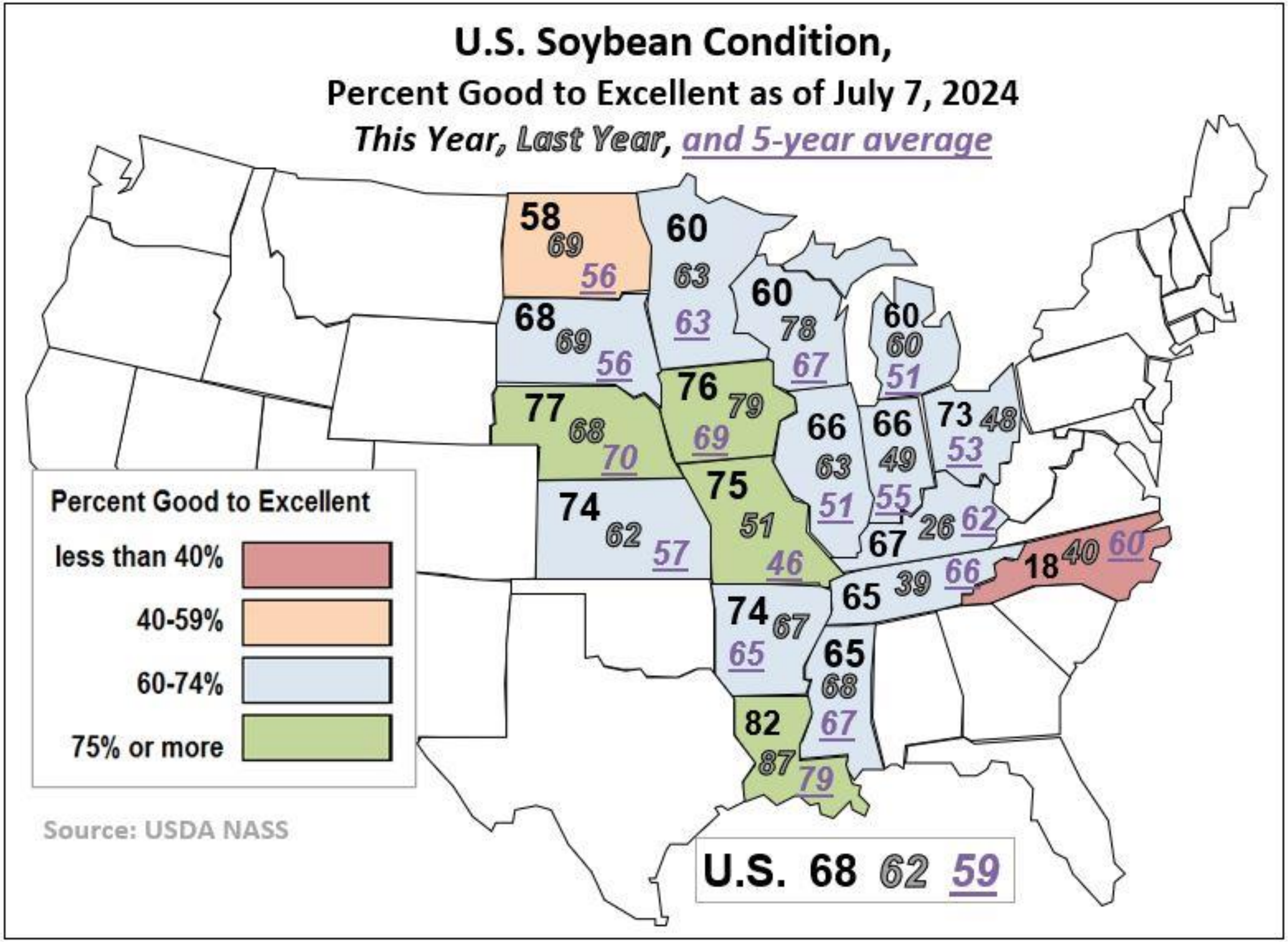


Updated 07/12/2024

U.S. Soybean Supply and Use

Marketing Year (2023 = 9/1/23 to 8/31/24)		2020	2021	2022	2023	2024
Area Planted	(mil. acres)	83.4	87.2	87.5	83.6	86.1
Yield	(bu./acre)	51.0	51.7	49.6	50.6	52.0
Production	(mil. bu.)	4,216	4,465	4,270	4,165	4,435
Beg. Stocks	(mil. bu.)	525	257	274	264	345
Imports	(mil. bu.)	20	16	25	20	15
Total Supply	(mil. bu.)	4,761	4,738	4,569	4,449	4,795
Crush	(mil. bu.)	2,141	2,204	2,212	2,290	2,425
Seed & Residual	(mil. bu.)	97	103	101	114	110
Exports	(mil. bu.)	2,265	2,158	1,992	1,700	1,825
Total Use	(mil. bu.)	4,504	4,464	4,305	4,104	4,360
Ending Stocks	(mil. bu.)	257	274	264	345	435
Season-Average Price	($/bu.)	10.80	13.30	14.20	12.50	11.10

Source: Chad E. Hart



Source: Brock Associates

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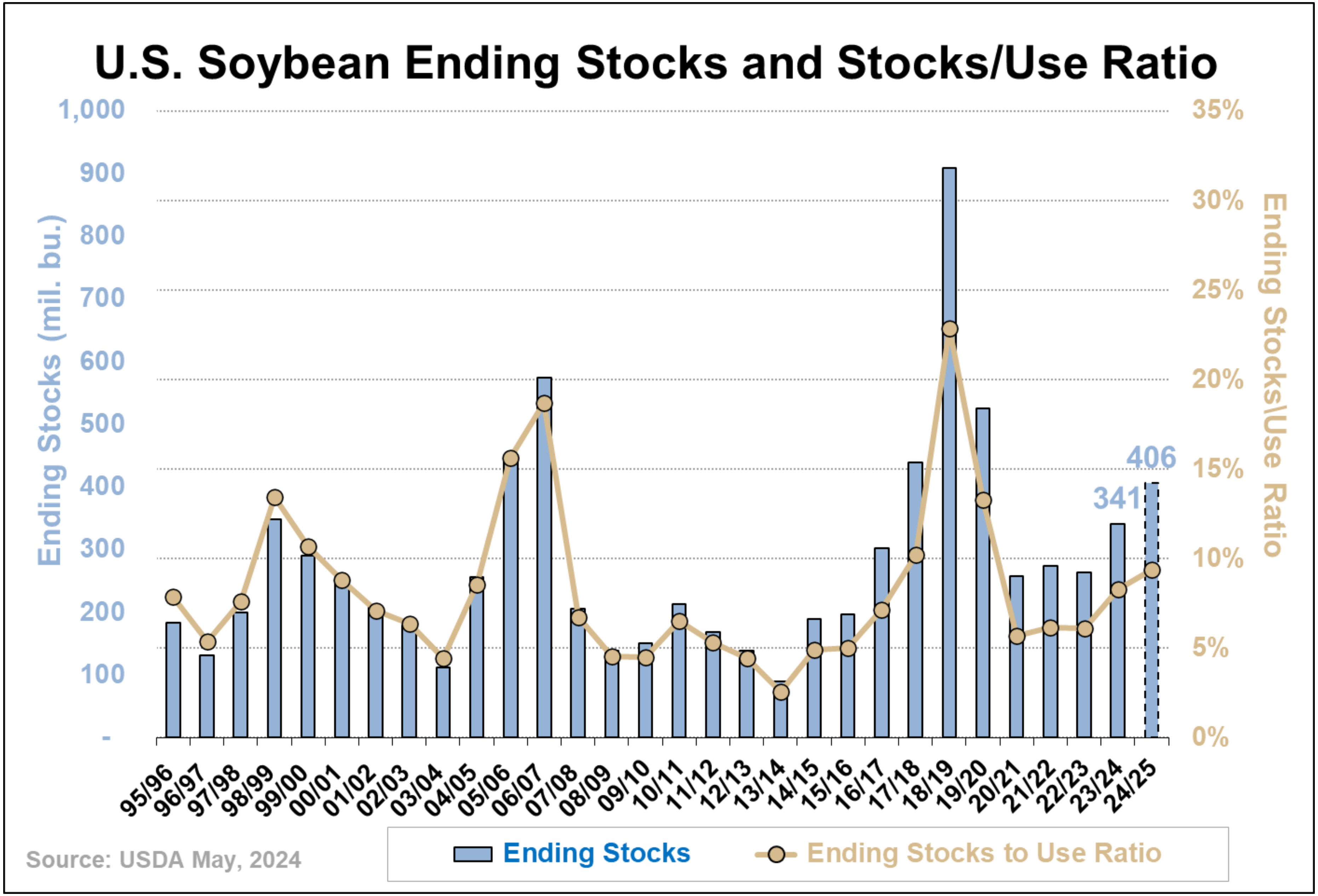
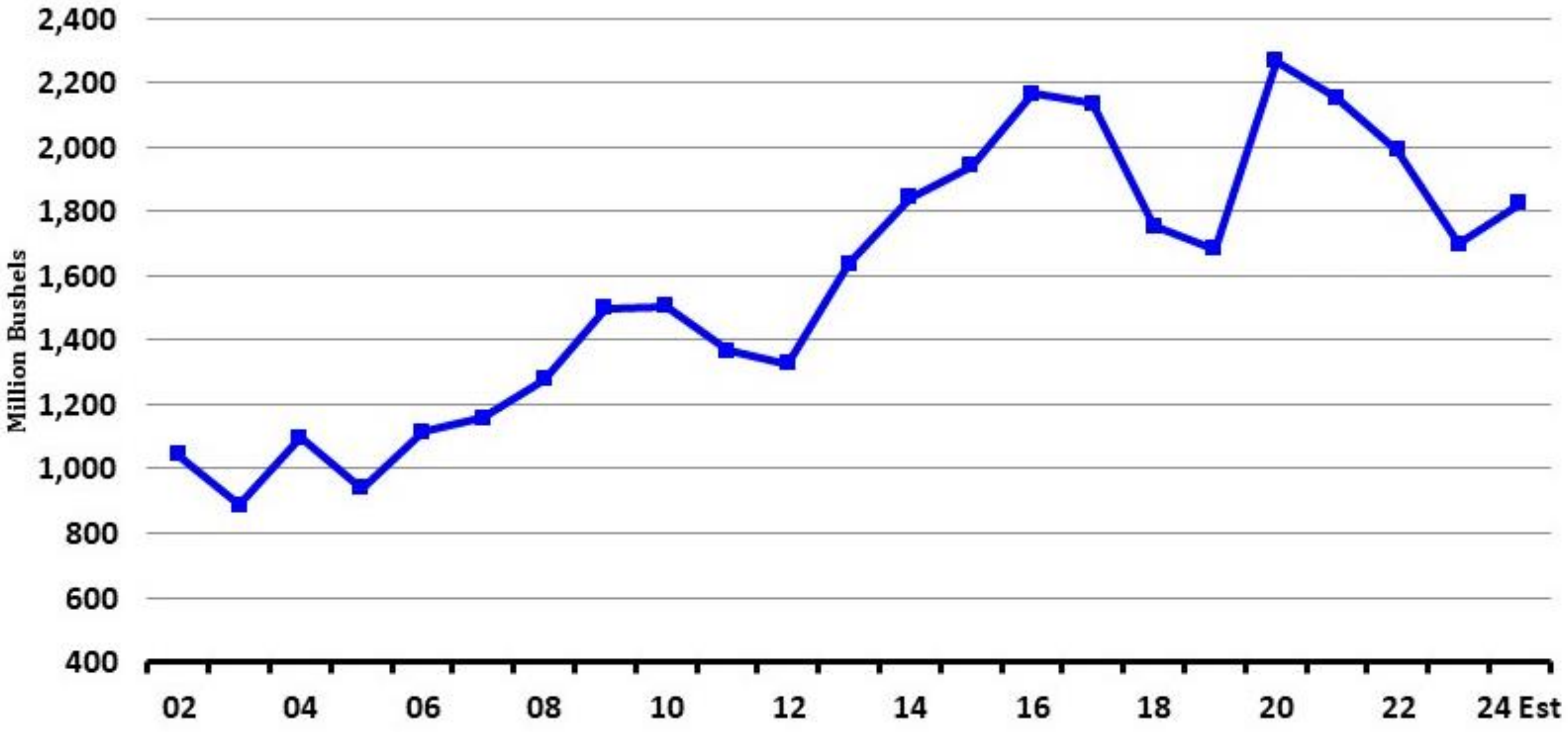

U.S. Soybean Ending Stocks and Stocks/Use Ratio
Ending Stocks (mil. bu.)
1,000
900
800
700
600
500
400
300
200
100
-
35%
30%
25%
20%
15%
10%
5%
0%
Ending Stocks\Use Ratio
406
341
95/96
96/97
97/98
98/99
99/00
00/01
01/02
02/03
03/04
04/05
05/06
06/07
07/08
08/09
09/10
10/11
11/12
12/13
13/14
14/15
15/16
16/17
17/18
18/19
19/20
20/21
21/22
22/23
23/24
24/25
Source: USDA May, 2024
Ending Stocks
Ending Stocks to Use Ratio

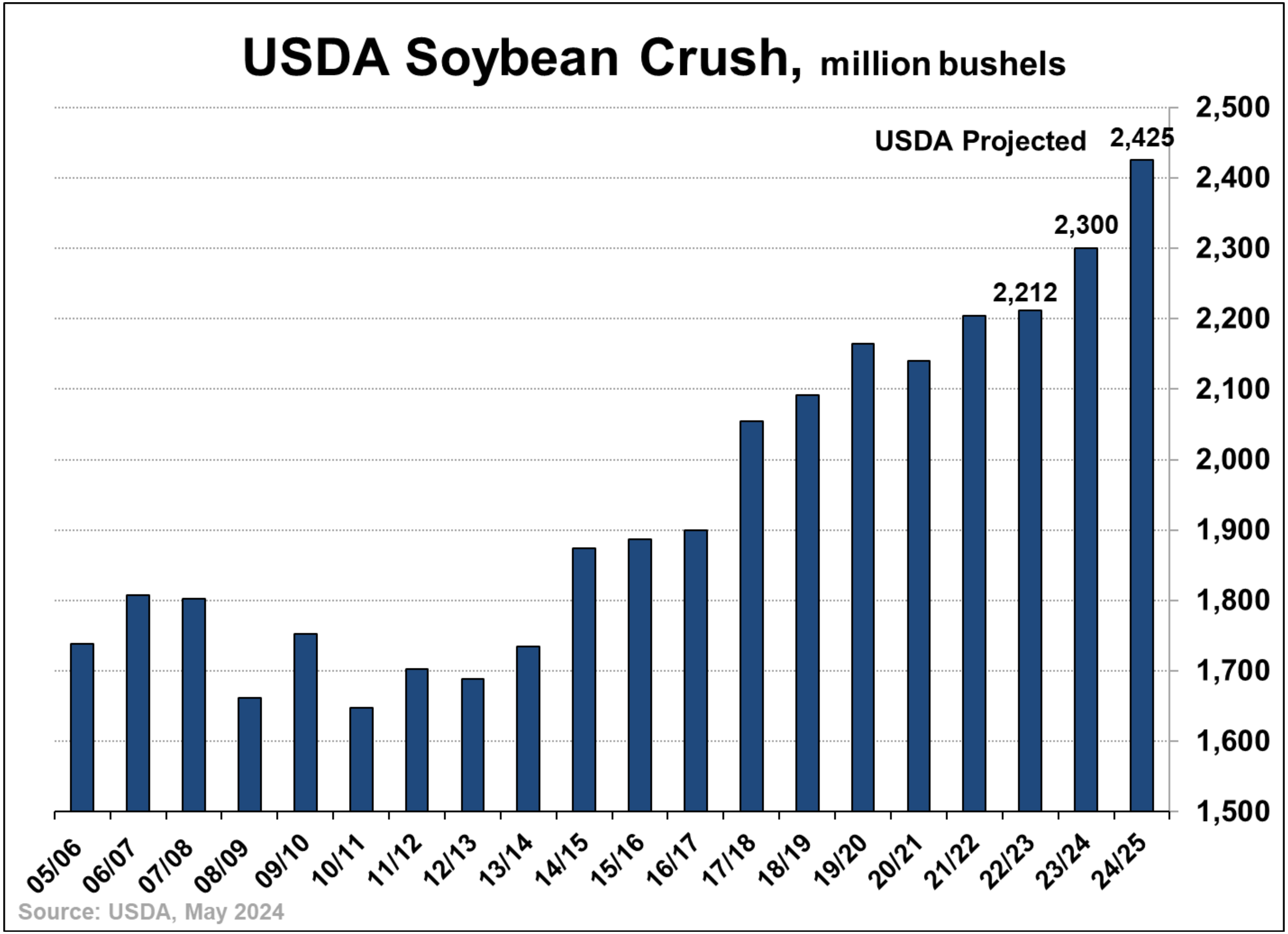
Source: USDA

U.S. Soybean Exports



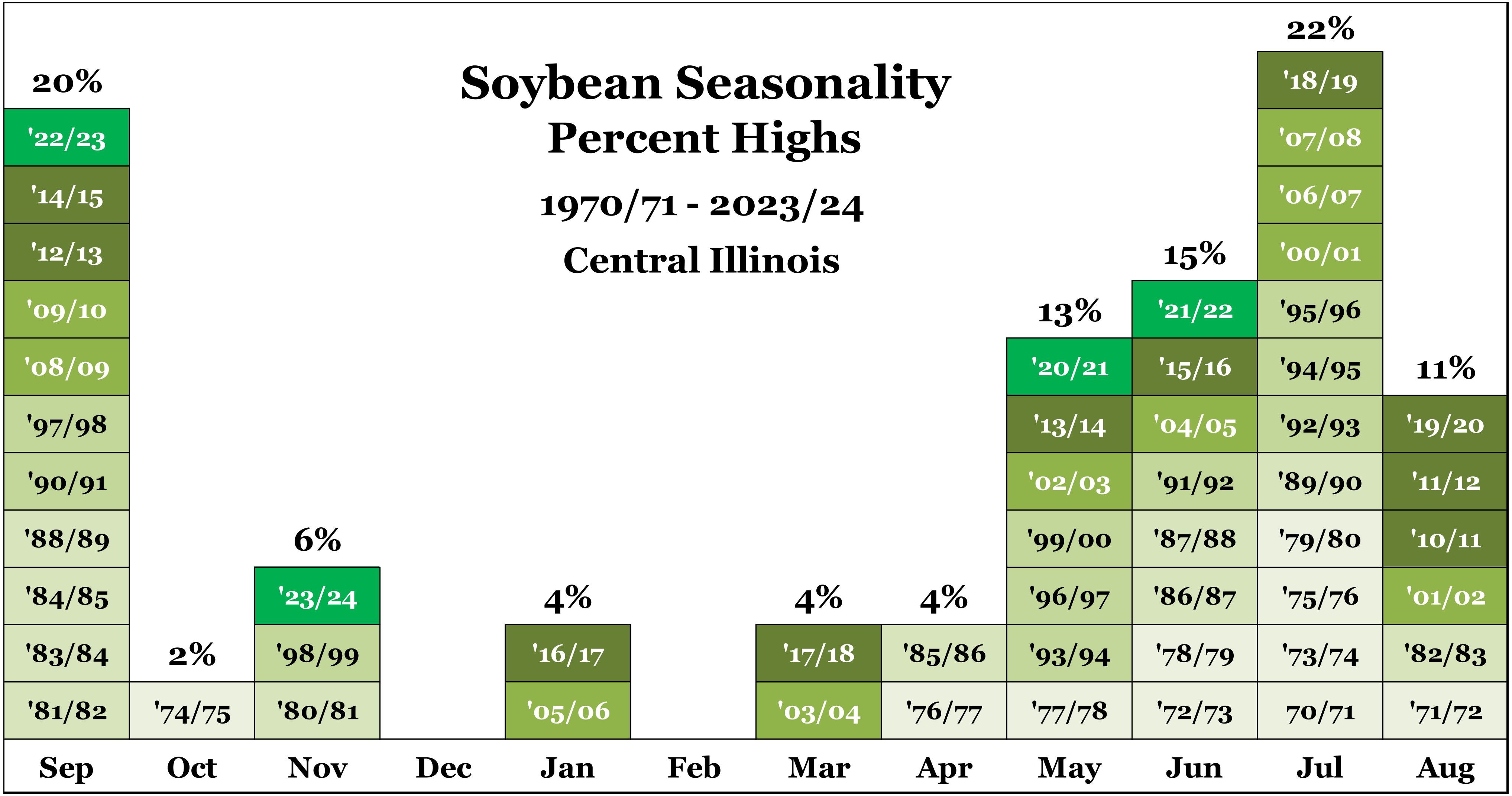
Most Recent: 1,825 As Of 07/12/2024

The Hightower Report



USDA Soybean Crush, million bushels
2,500
2,400
2,300
2,200
2,100
2,000
1,900
1,800
1,700
1,600
1,500
USDA Projected
2,425
2,300
2,212
05/06
06/07
07/08
08/09
09/10
10/11
11/12
12/13
13/14
14/15
15/16
16/17
17/18
18/19
19/20
20/21
21/22
22/23
23/24
24/25
Source: USDA, May 2024

Source: USDA



Source: Brock Associates

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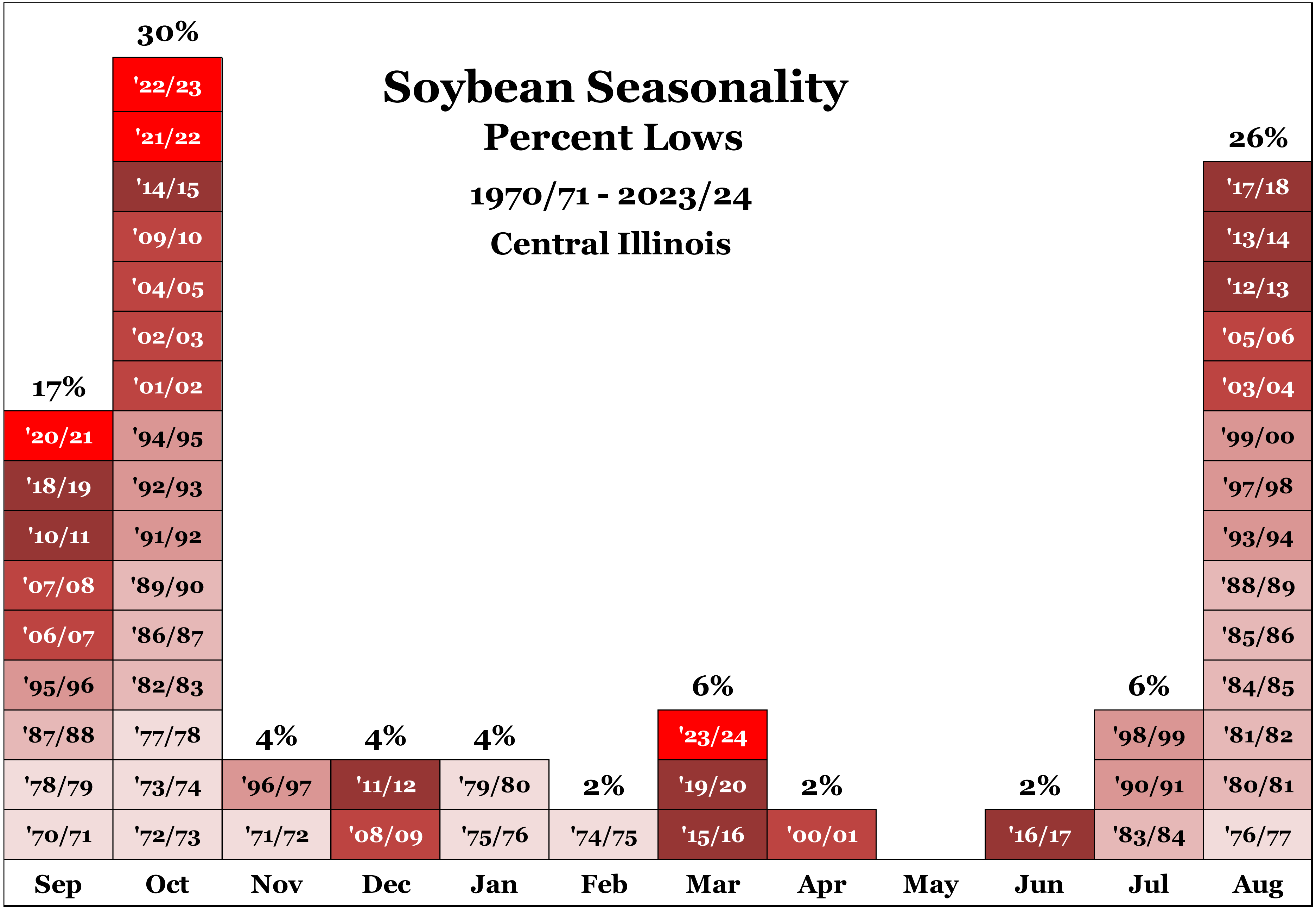

Source: Brock Associates

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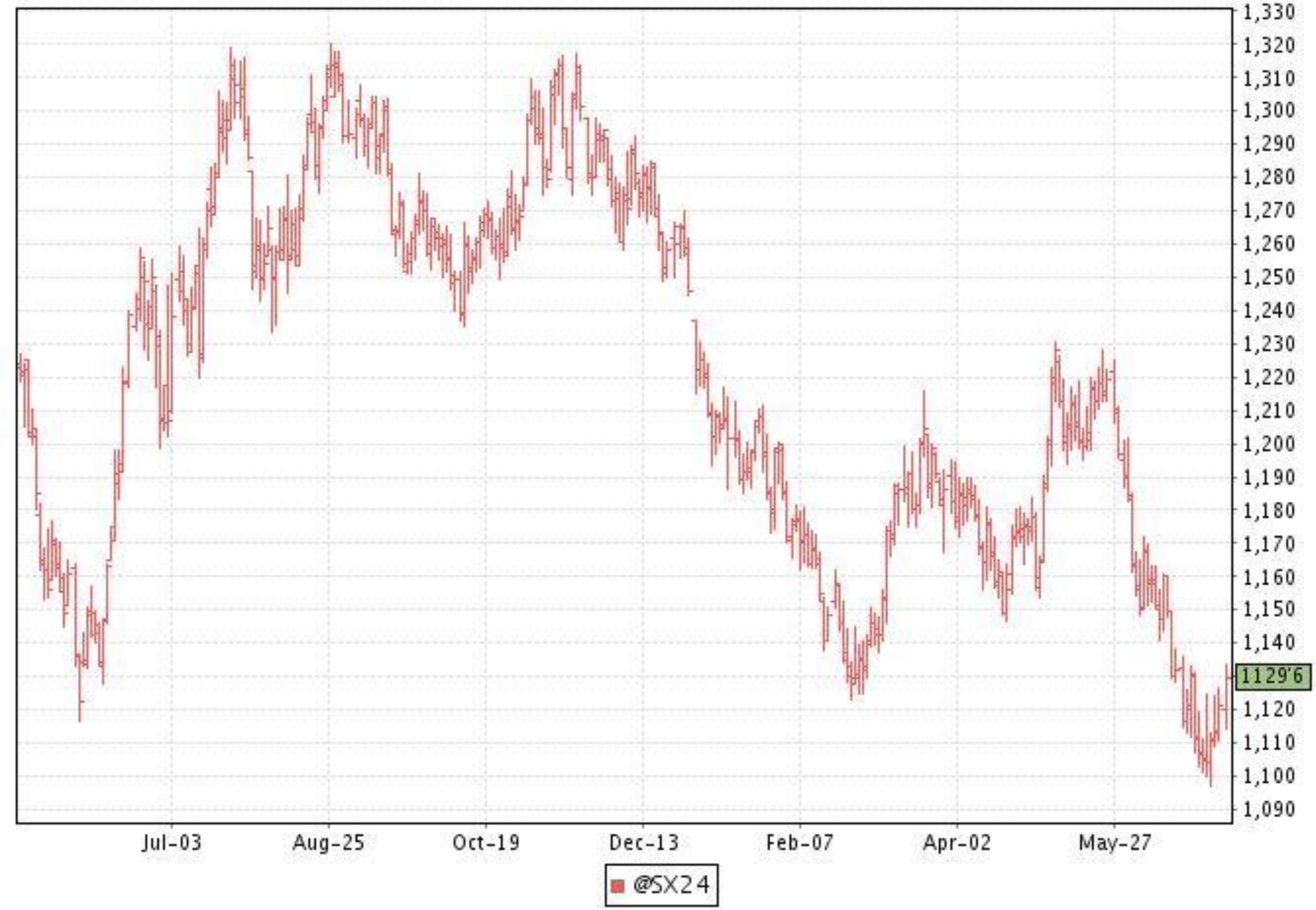
December 2024 Soybean Chart



Source: DTN

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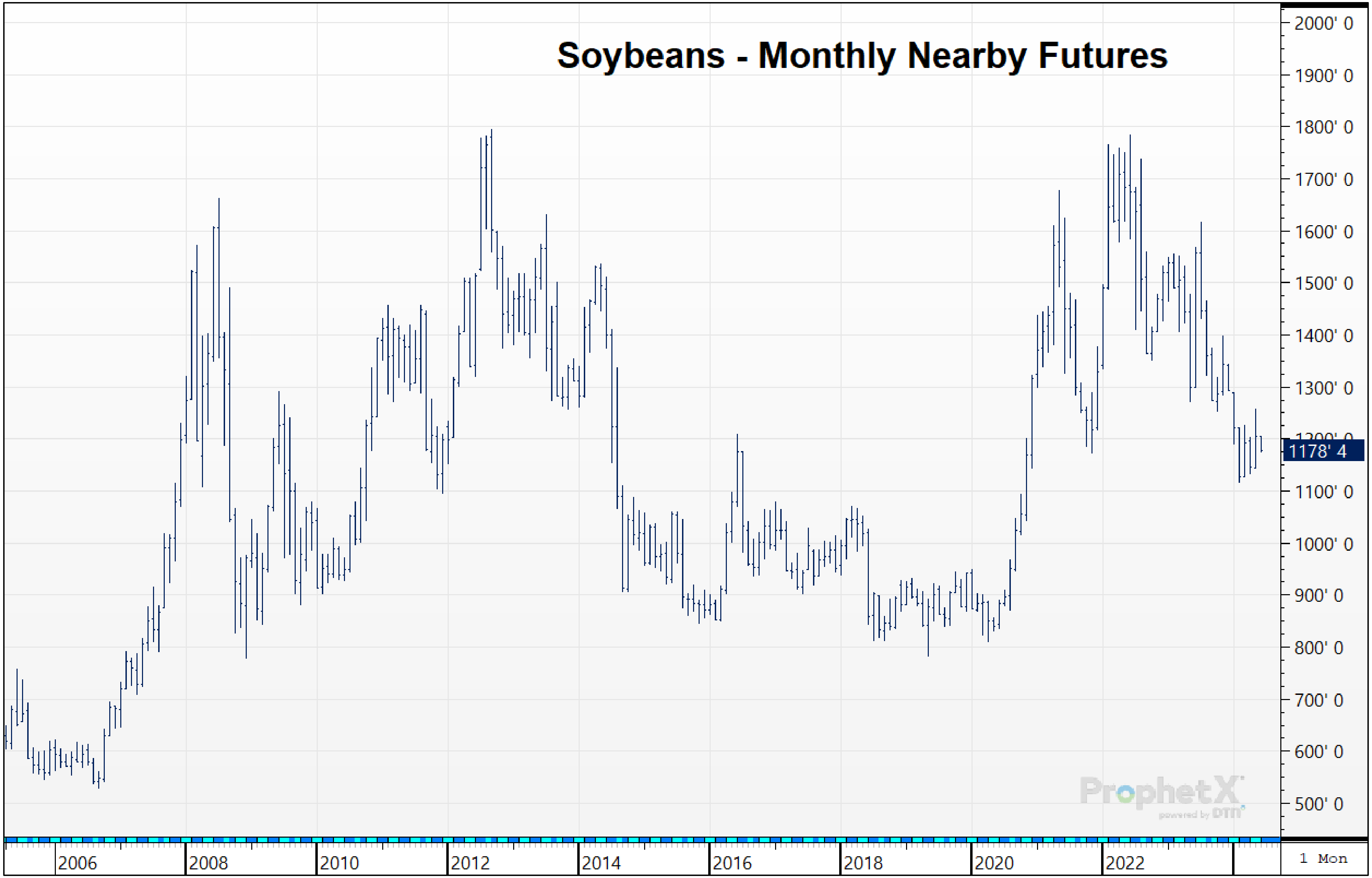

Source: DTN

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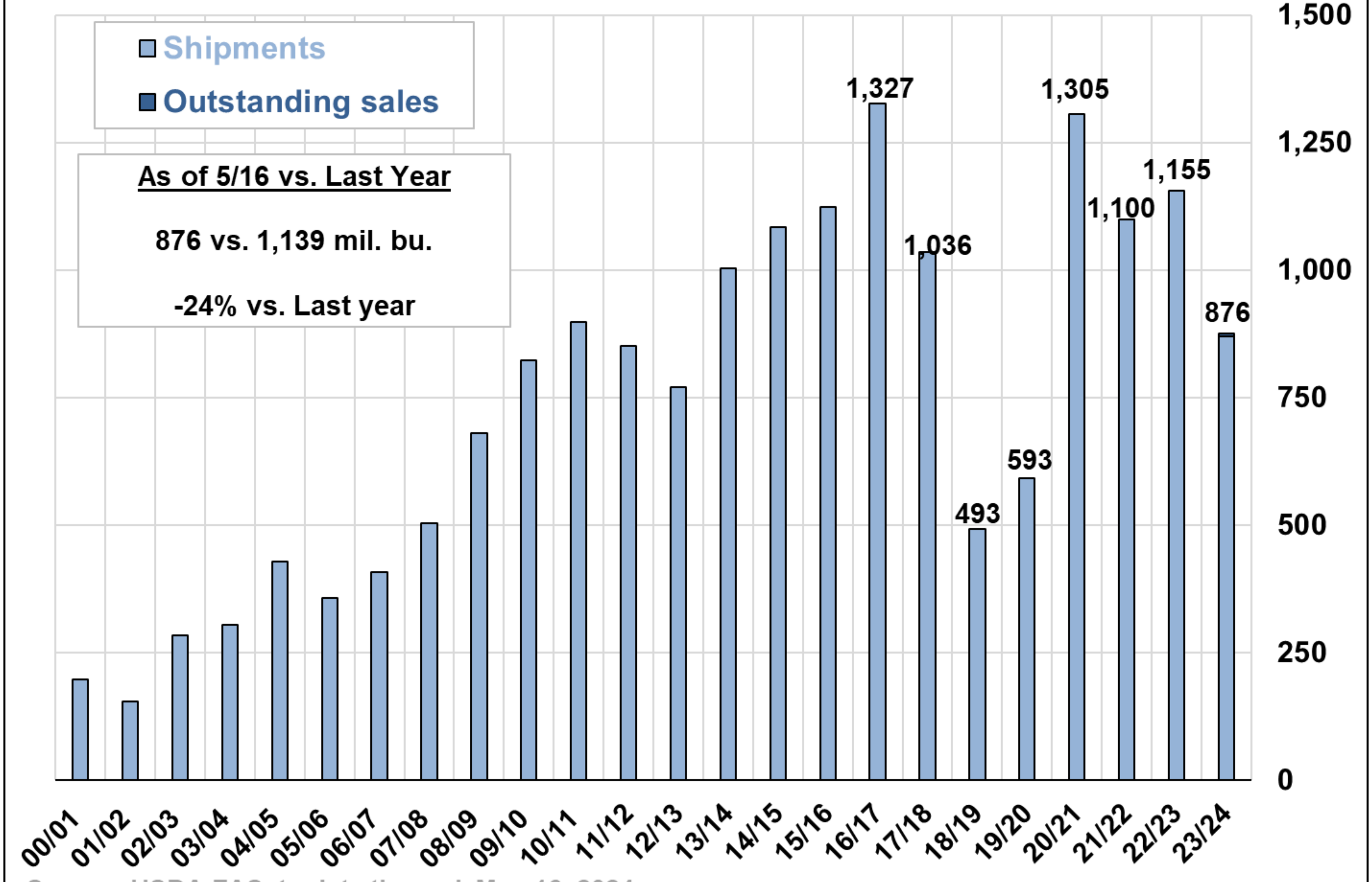
CHINA
Road
River
National Capital
Province Capital
City of Town
0 250 500 KM
0 250 500 Miles
RUSSIA
MONGOLIA
KAZAKHSTAN
KYRGYZSTAN
INDIA
NEPAL
BHUTAN
BANGLADESH
BURMA
LAOS
VIETNAM
THAILAND
NORTH KOREA
SOUTH KOREA
JAPAN
TAIWAN
PHILIPPINES
Novosibirsk
Krasnoyarsk
Bratsk
Atbassan
Astana
Novokuznetsk
Qaraghandy
Irtysh
Lake Baikal
Irkutsk
Ulan Ude
Chita
Amur
Khabarovsk
Balqash
Lake Baikhash
Hovd
Uliastay
Ulaanbaatar
Qiqihar
Harbin
Jixi
Bishkek
Almaty
Karamay
Altay
Jilin
Changchung
Sea of Japan
Urumqi
Dalandzadagad
Fuxin
Shenyang
Benxi
Hami
Korla
Kashi
Hohhot
Baotou
Beijing
Dalian
Pyongyang
Yumen
Tianjin
Seoul
Hotan
Qiemo
Yinchuan
Taiyuan
Islamabad
Golmud
Jinan
Qingdao
Pusan
Taian
Xining
Lanzhou
Huang
Yellow Sea
Nagasaki
Amritsar
Zhengzhou
Kaifeng
Xian
Nanjing
Hefei
Shanghai
New Delhi
Mianyang
Wuhan
Hangzhou
Ningbo
East China Sea
Jaipur
Agra
Lhasa
Chengdu
Kathmandu
Zigong
Chongqing
Yueyang
Nanchang
Wenzhou
Thimbu
Changsha
Fuzhou
Panzhihua
Guiyang
Taipei
Xamen
Taichung
Dhaka
Kunming
Tainan
Shantou
Kao-Hsiung
Mandalay
Guangzhou
Nanning
Hong Kong
Salween
South China Sea
Hanoi
Haiphong
Haikou
Bay of Bengal
Vientiane
Rangoon
Hue

U.S. Soybean Export Shipments & Sales to China, million bu.



Source: USDA FAS, to date through May 16, 2024

Source: Brock Associates

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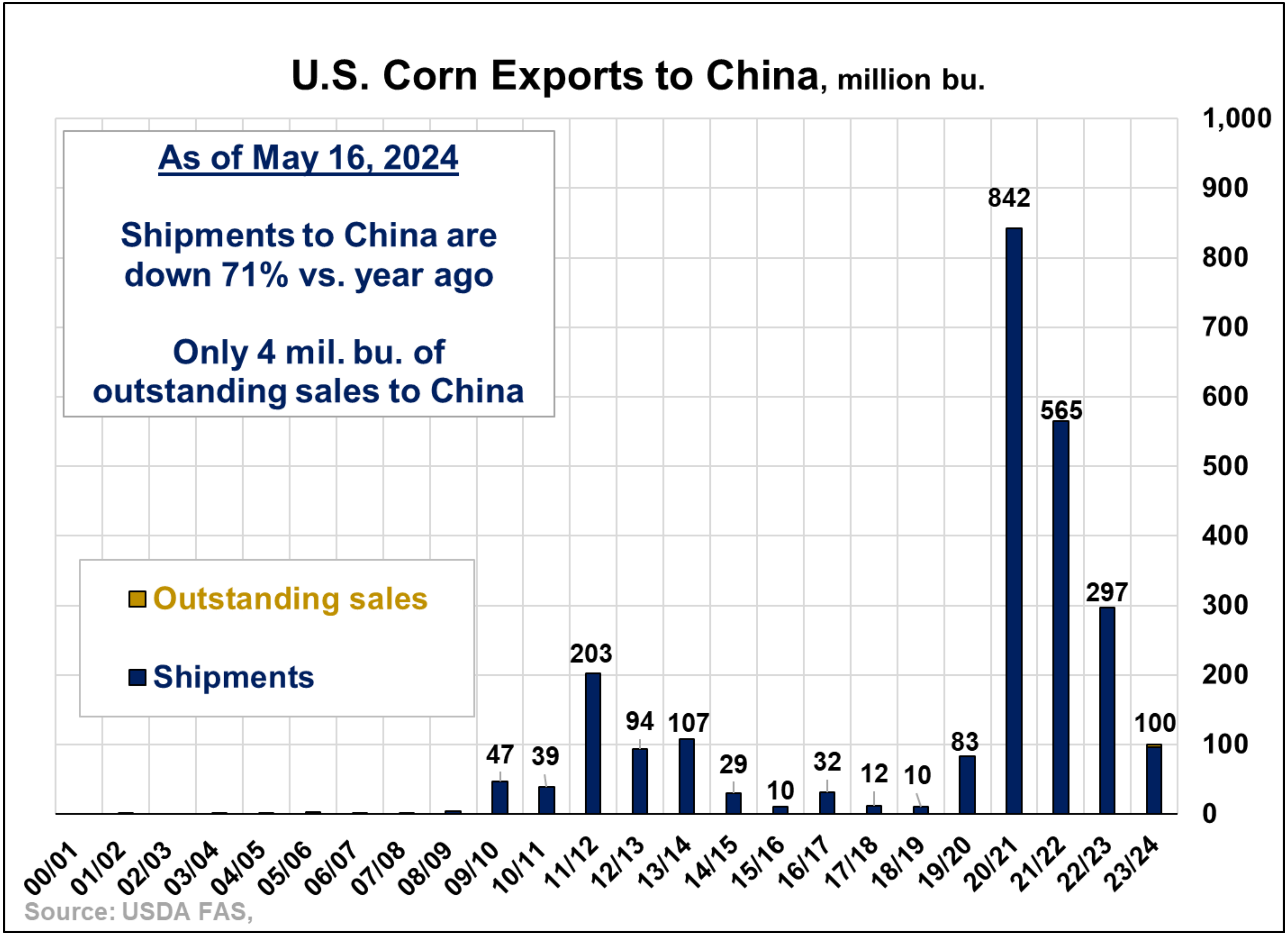

Source: Brock Associates

B.R.I.C.S. Agreement & Trade

- Stands for Brazil, Russia, India, China, South Africa
- Trying to de-dollarize the global economy to reduce US influence and power on the world
- Members become priority trade partners
  - Could lead to less US exports of grains and other agricultural products
- Saudi Arabia, Iran, Egypt, Ethiopia, and UAE joined in January of 2024
- If successful, could weaken US sanctions
- Chances of long-term success are low
  - USD has universal appeal and liquidity
  - USD is backed by world’s largest economy and is already the world’s reserve currency

Outlook

Key Influences

1. US & Global Weather
2. Election – Tariffs?
3. Economic Growth vs Recession – US & China
4. Inflation
5. Interest Rates
6. South American Expansion
7. Asset Prices
   - – Equities Due for a Correction
8. Population Growth
   - – Population of 9 Billion by 2050

Source: Brock Associates

Questions?

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Hertz Appraisal Services

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