

2024 Ag. Finance And Production Costs

Bryon Parman

Extension Agricultural Finance Specialist

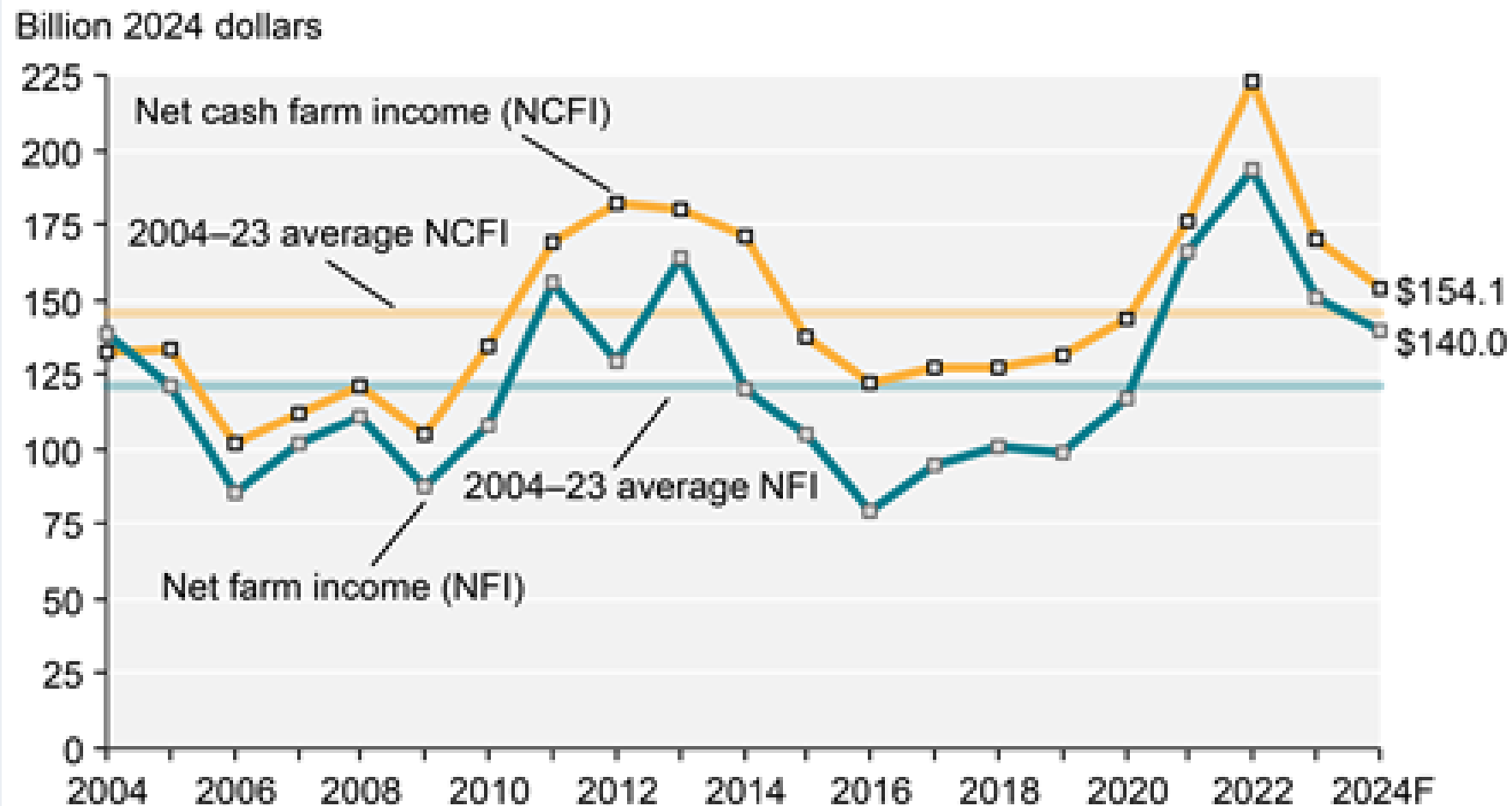
North Dakota State University



NDSU

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U.S. net farm income and net cash farm income, inflation adjusted, 2004–24F



Note: F = forecast. Values are adjusted for inflation using the U.S. Department of Commerce, Bureau of Economic Analysis, Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2024 by USDA, Economic Research Service. Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of September 5, 2024.

Average net cash farm income for farm businesses specializing in crop production, 2024F compared with 2023

Farm specialization	Average NCFI, 2024F	Change in average NCFI, 2023–2024F
	<i>Dollars (per farm)</i>	<i>Percent</i>
Cotton	286,900	-26
Corn	142,400	-36
Wheat	55,600	-48
Soybeans	60,000	-38
Specialty crops 1/	259,400	-9
Other crops	65,000	-21

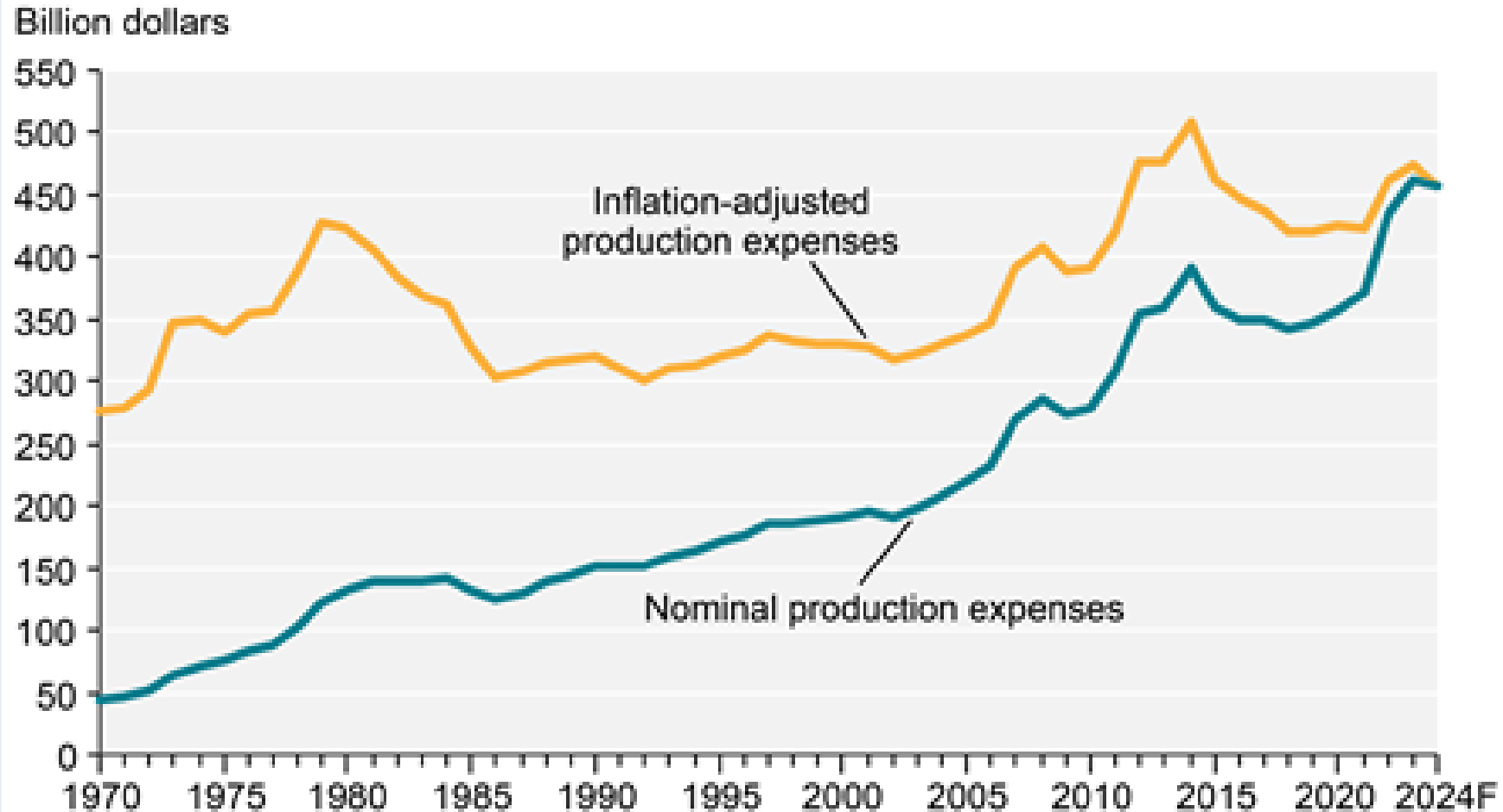
Average net cash farm income for farm businesses specializing in animals/animal products production, 2024F compared with 2023

Farm specialization	Average NCFI, 2024F	Change in average NCFI, 2023–2024F
	<i>Dollars (per farm)</i>	<i>Percent</i>
Dairy	552,000	51
Hogs	218,300	14
Poultry	147,100	15
Cattle/calves	56,600	13

F = forecast. NCFI = net cash farm income.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics data product, [Farm business average net cash income by commodity specialization and region](#). Data as of September 5, 2024.

Nominal and inflation-adjusted U.S. farm production expenses, 1970–2024F



Note: F = forecast. Values are adjusted for inflation using the U.S. Department of Commerce, Bureau of Economic Analysis, Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2024 by USDA, Economic Research Service.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of September 5, 2024.

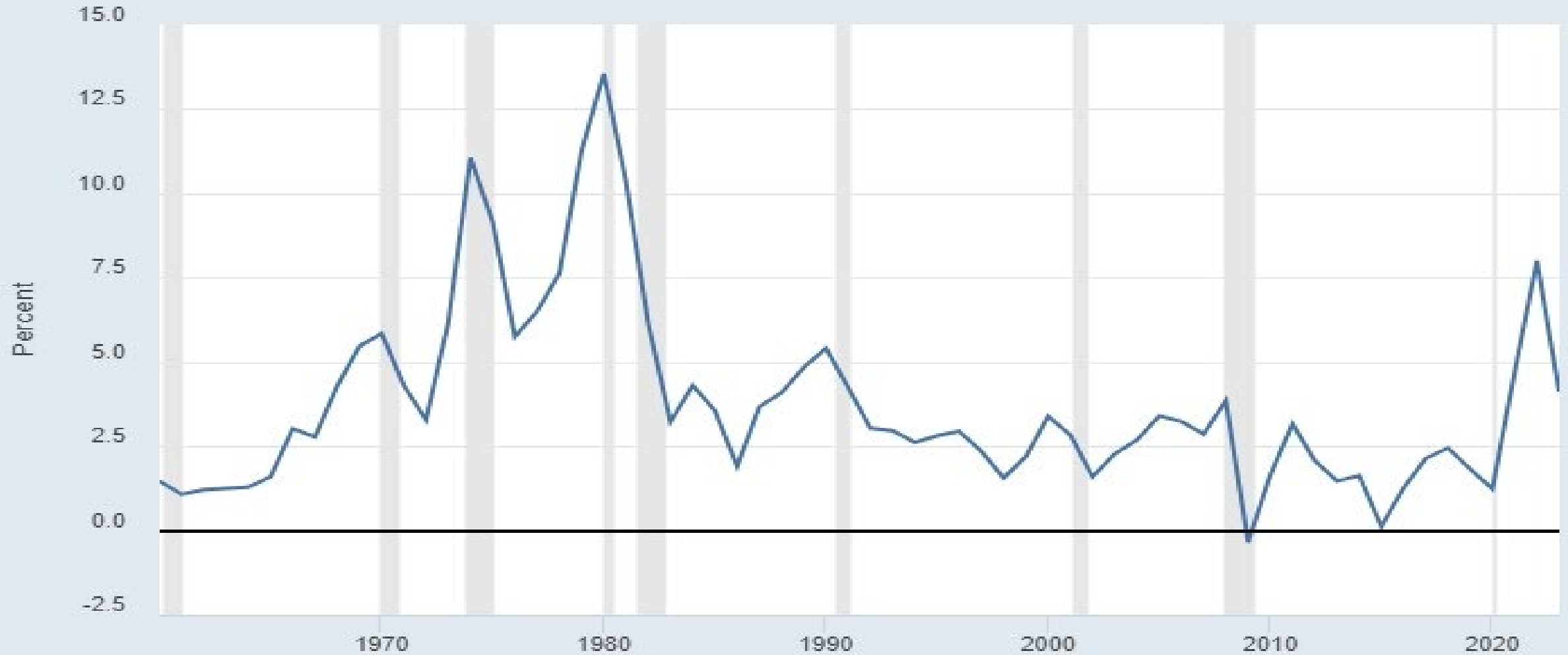
Federal Reserve Inflation Target

- ▶ The FED has stated that it wants a 2% year over year average inflation rate
 - ▶ With a 2% YoY rate, the purchasing power of \$1 today will be approximately \$0.55 in 30 years
- ▶ So why does the FED want inflation at all? Why not try and hit 0%?
 - ▶ **Deflation**
 - ▶ A low positive inflation rate acts as a buffer to help prevent deflation
 - ▶ Deflation will hurt borrowers with fixed interest rates as they are paying back debts with dollars “worth more” than when they borrowed them (the great depression)
 - ▶ Deflation can hurt employers as wages are much more difficult to correct downwards than upwards
 - ▶ If prices fall, and continue to fall, then people expect them to keep falling and stop spending reducing business profits and creating a deflationary spiral (consumer spending about 70% of GDP)

Standard Headline Inflation Rate Since 1960

FRED 

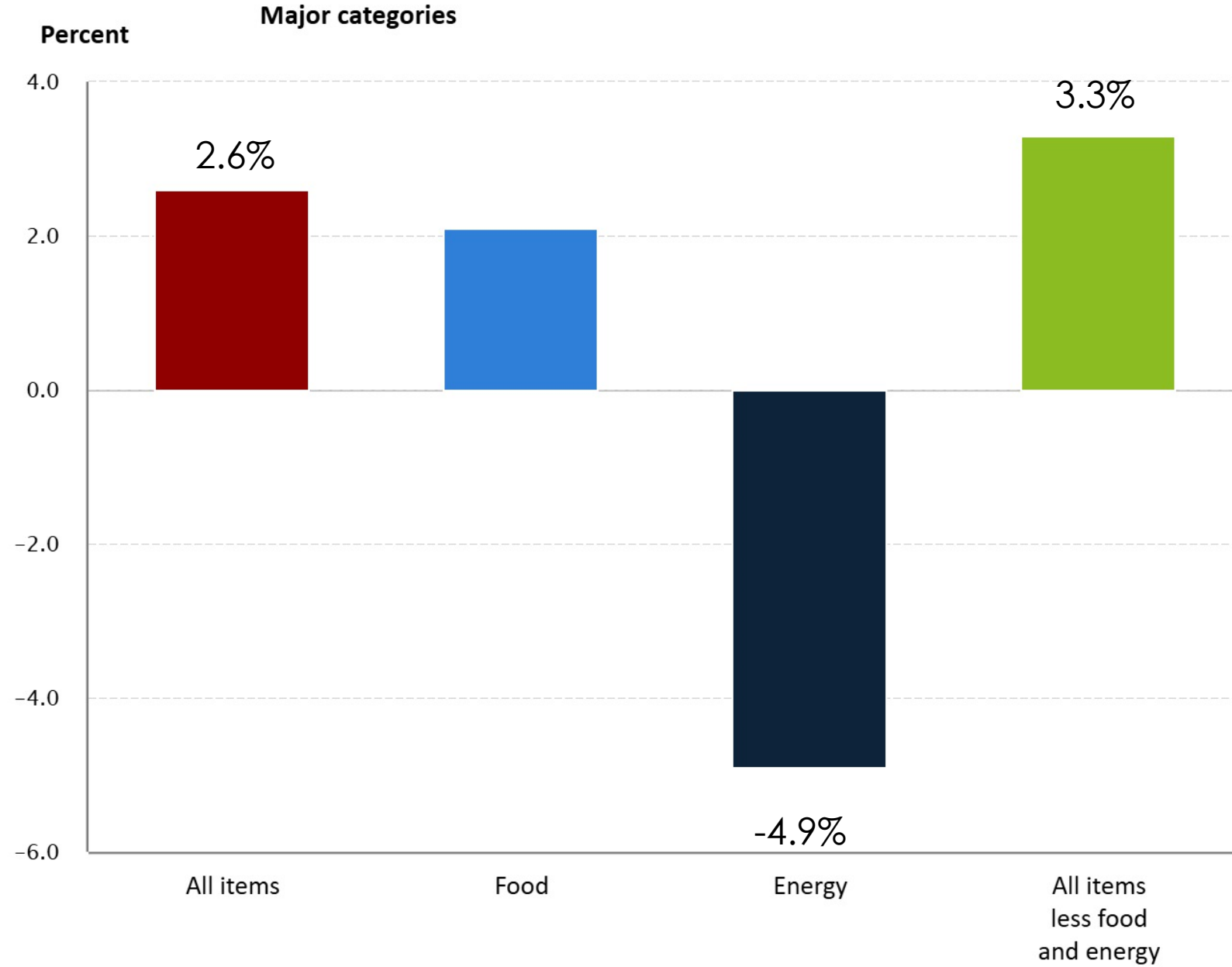
— Inflation, consumer prices for the United States



Source: World Bank

12-month percentage change, Consumer Price Index, selected categories, October 2024, not seasonally adjusted

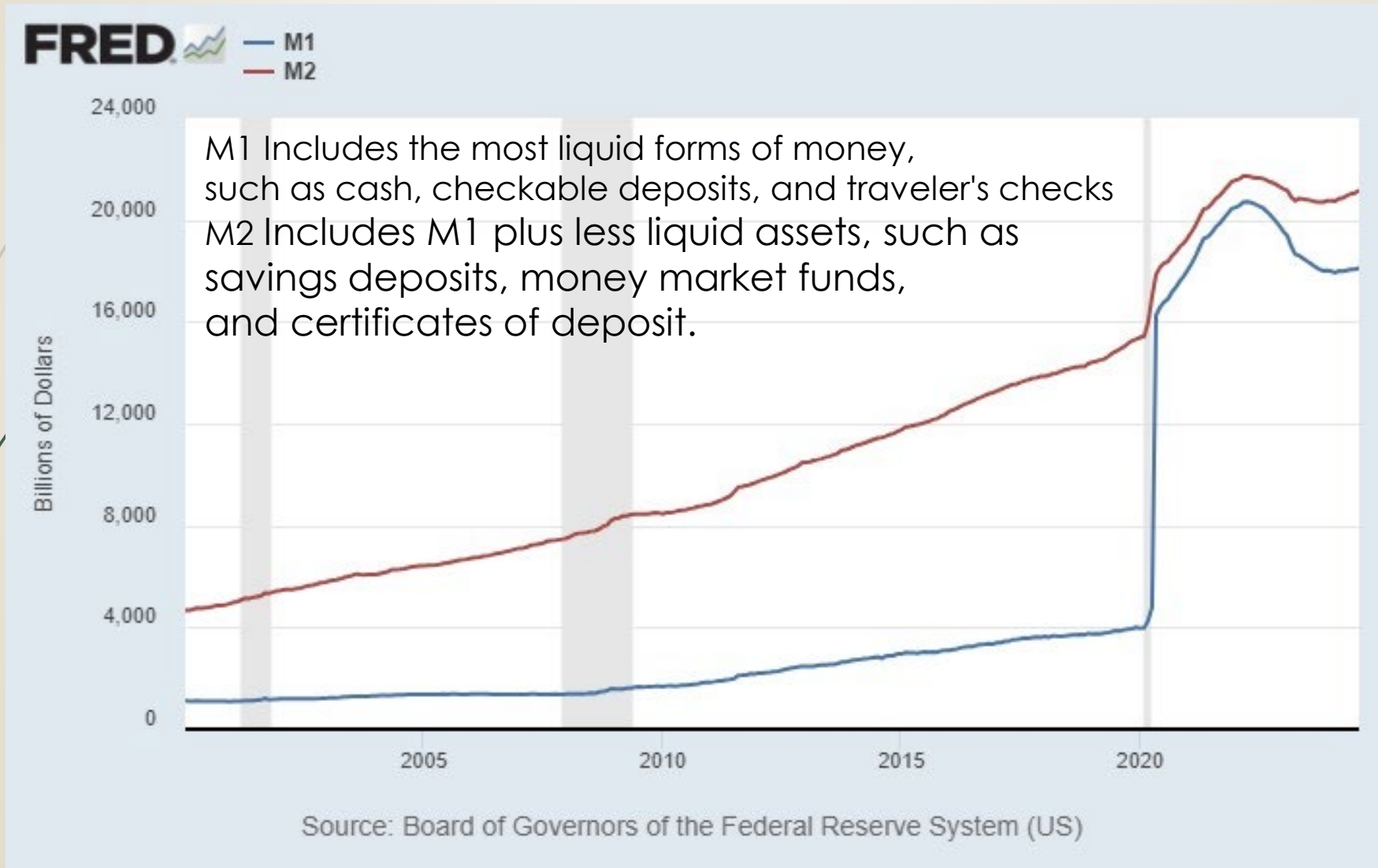
Click on columns to drill down




Source: U.S. Bureau of Labor Statistics.



The FED and the U.S. Government Dramatically Increases the Money Supply in 2020



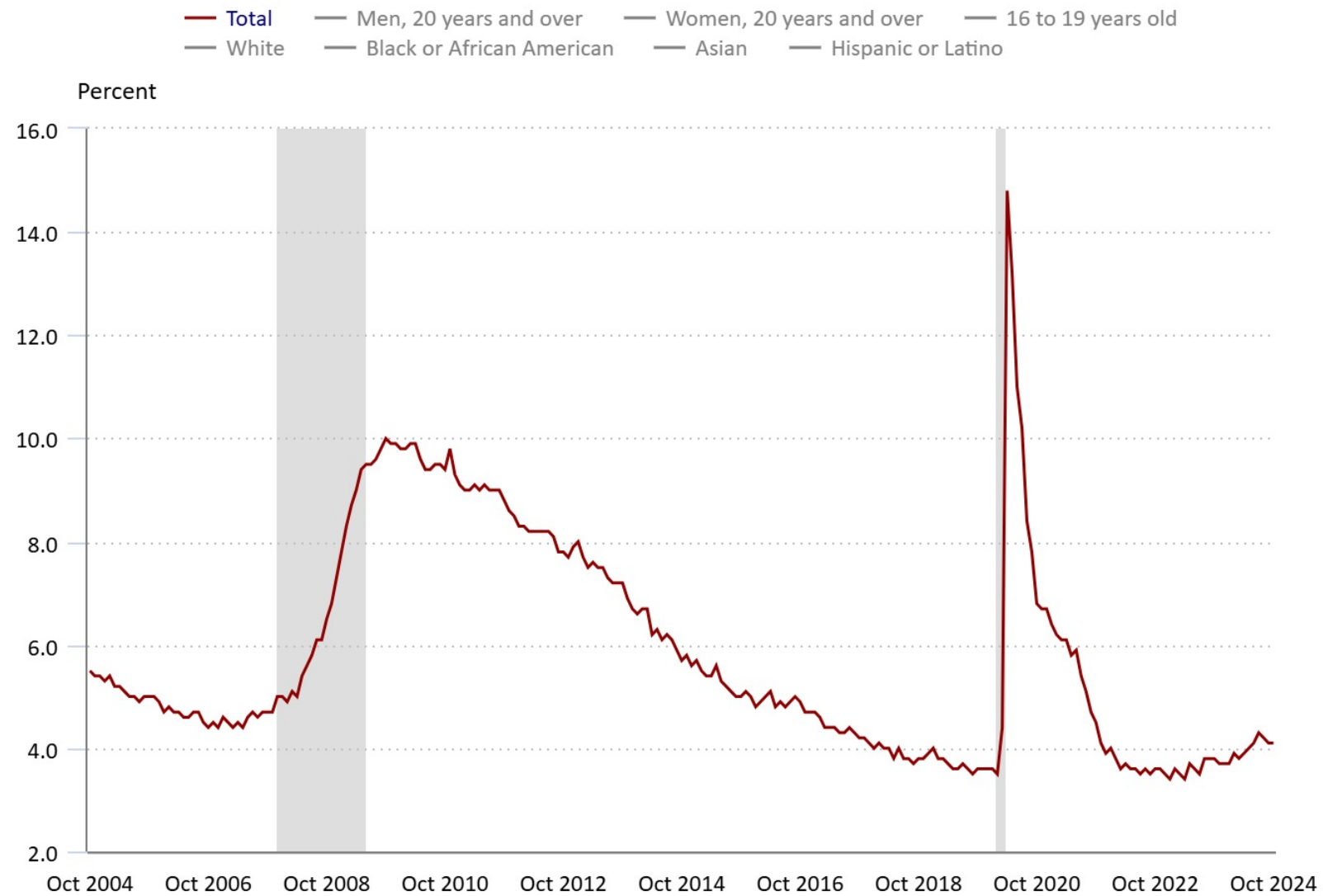
Federal Funds Rate History Since March 2022



FOMC Meeting Date	Rate Change (bps)	Federal Funds Rate
Nov 7, 2024	-25	4.5% to 4.75%
Sept 18, 2024	-50	4.75% to 5.00%
July 26, 2023	+25	5.25% to 5.50%
May 3, 2023	+25	5.00% to 5.25%
March 22, 2023	+25	4.75% to 5.00%
Feb 1, 2023	+25	4.50% to 4.75%
Dec 14, 2022	+50	4.25% to 4.50%
Nov 2, 2022	+75	3.75% to 4.00%
Sept 21, 2022	+75	3.00% to 3.25%
July 27, 2022	+75	2.25% to 2.50%
June 16, 2022	+75	1.50% to 1.75%
May 5, 2022	+50	0.75% to 1.00%
March 17, 2022	+25	0.25% to 0.50%

Civilian unemployment rate, seasonally adjusted

Click and drag within the chart to zoom in on time periods



Source: U.S. Bureau of Labor Statistics.



A “New” Administration Makes the Next Few Quarters Harder to Predict



Inflation and the Federal Funds Rate 1960 – 1990.

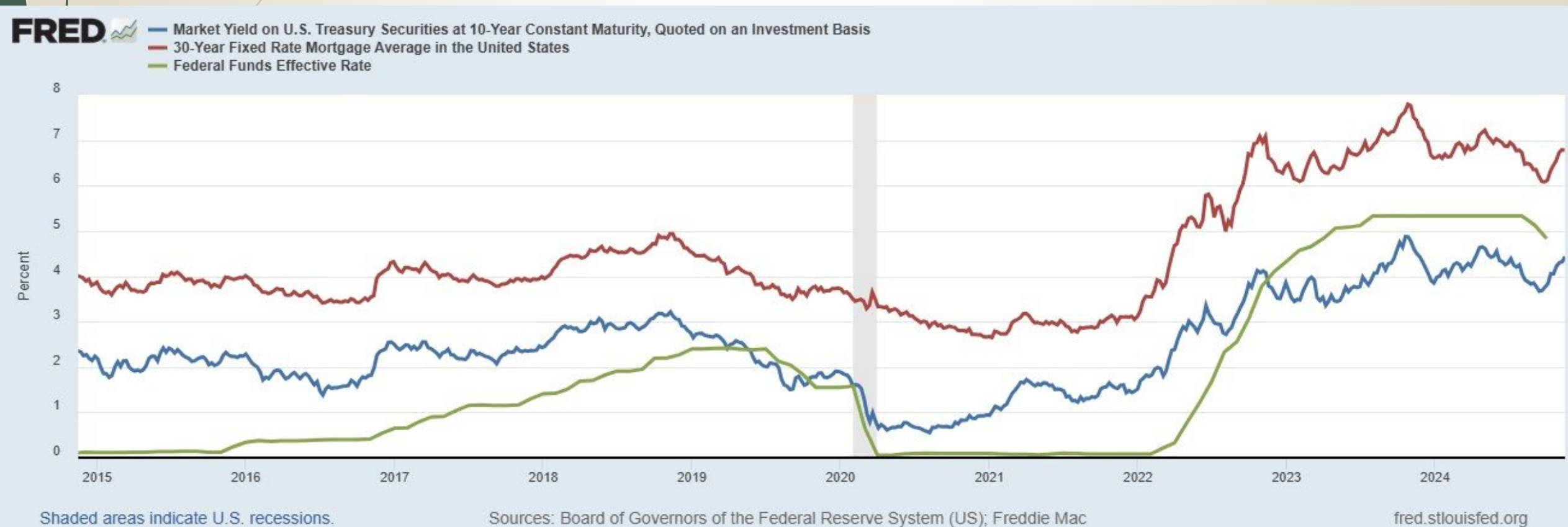



Agricultural interest rates from the Federal Reserve Bank of Minneapolis' quarterly survey of agricultural credit conditions

		Operating		Machinery		Real estate	
		Fixed	Var.	Fixed	Var.	Fixed	Var.
Q3-22	October	6.5	6.3	6.2	6.1	5.9	5.8
Q4-22	January	7.7	7.6	7.3	7.3	7.0	7.0
Q1-23	April	8.1	8.0	7.6	7.6	7.3	7.4
Q2-23	July	8.5	8.5	7.9	8.0	7.5	7.5
Q3-23	October	8.8	8.7	8.3	8.2	7.9	7.9
Q4-23	January	8.8	8.7	8.3	8.3	8.0	8.0
Q1-24	April	8.6	8.6	8.2	8.4	7.9	8.0
Q2-24	July	8.8	8.7	8.4	8.5	8.0	8.1
Q3-24	October	8.7	8.7	8.3	8.4	7.8	8.0

Source: Minneapolis Federal Reserve, "Despite generally good harvests, Farm incomes decline": 2024 ag. credit conditions survey. Joe Mahon, Nov 15th 2024

Federal Funds Rate vs. 30 Year Mortgage rate vs. 10-Year Treasuries





Final Comment On Inflation and Interest Rates

- ➔ **The end of high inflation does not mean prices return to where they were before the inflationary period**

New And Used Equipment Trends and Prices

- ▶ Sandhills Global
- ▶ **Historic Auction-To-Asking Price Gaps Persist in Used Farm Equipment Market: LINCOLN, Nebraska — October, 2024**

- ▶ Market data and charts from Sandhills Global

- ▶ Headquarters

P.O. Box 82545

Lincoln, NE 68501-5310

<https://www.sandhills.com/>



Sandhills Equipment Value Index : US Used Combine Market

Asking vs Auction Equipment Value Index Y/Y Variance



■ Auction Value Index - % Year Over Year Change ■ Asking Value Index - % Year Over Year Change

Inventory Y/Y Variance



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Sandhills Equipment Value Index : US Used Sprayers Market

Asking vs Auction Equipment Value Index Y/Y Variance



Inventory Y/Y Variance



■ Asking Value Index - % Year Over Year Change ■ Auction Value Index - % Year Over Year Change

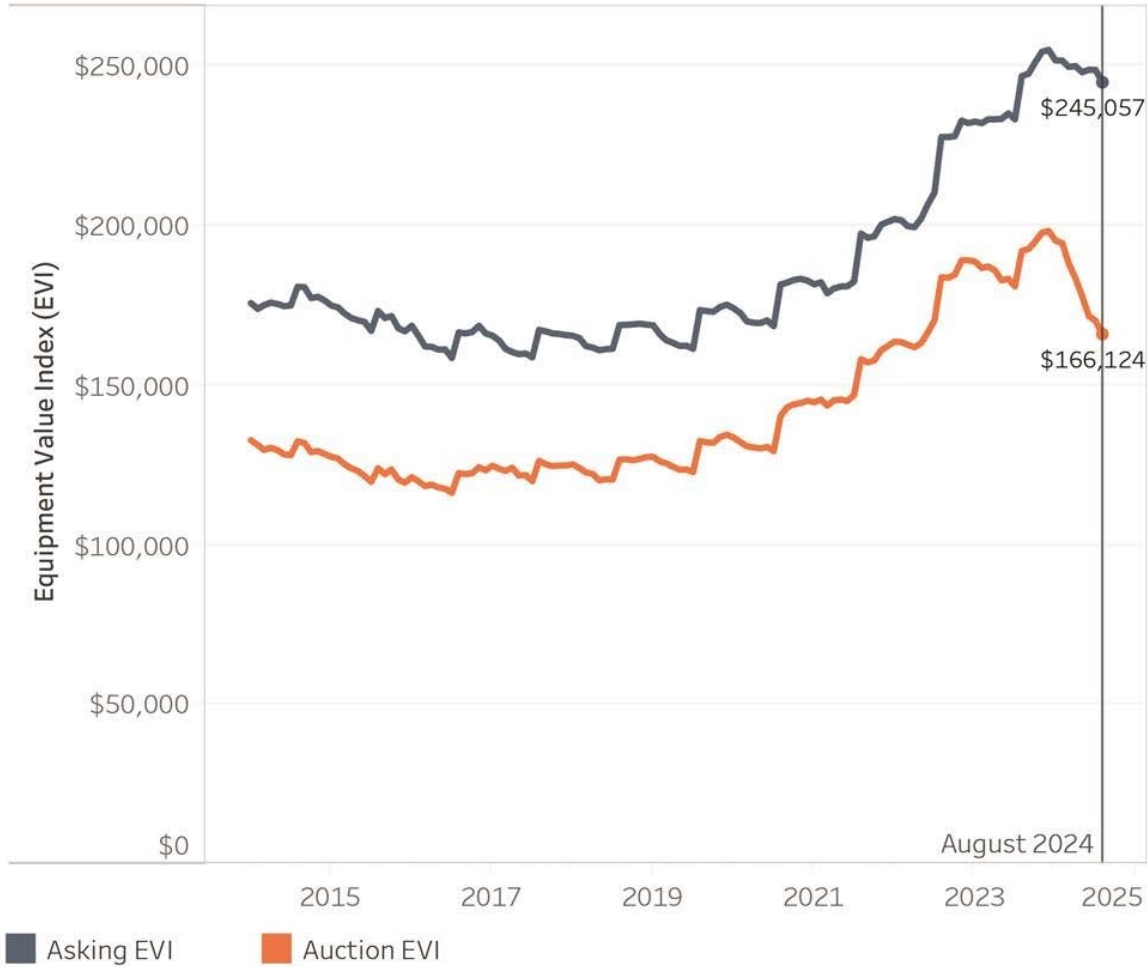
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Sandhills Equipment Value Index and Inventory : US Used Tractors Over 300 HP Market

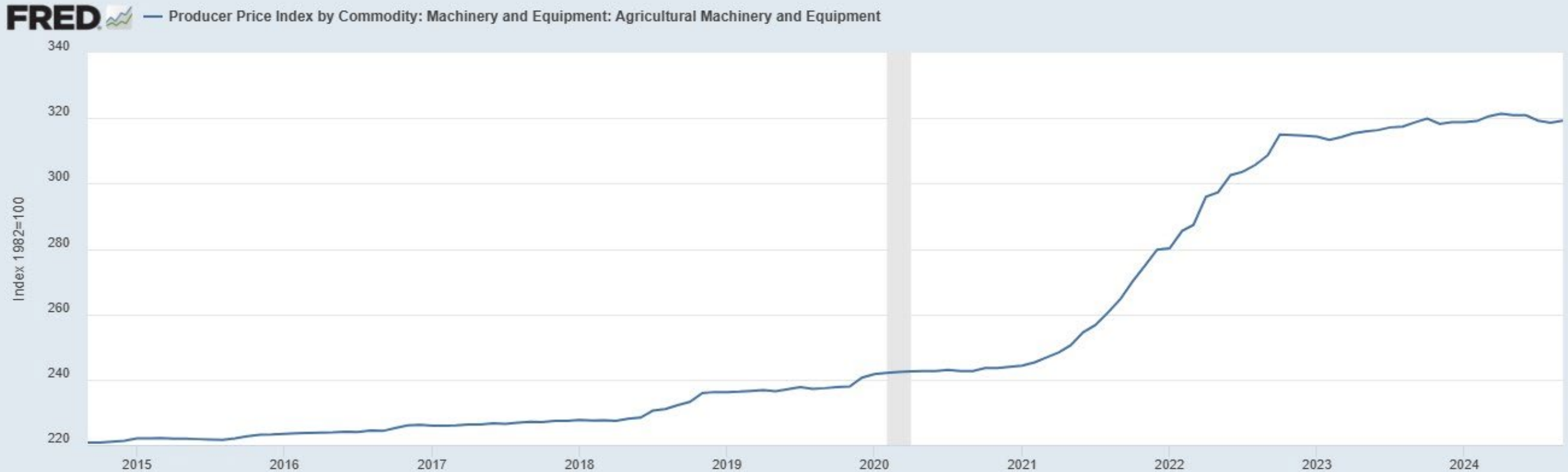
Asking vs Auction Equipment Value Index



Inventory and Equipment Value Index Spread



New Ag. Equipment Price Index



Shaded areas indicate U.S. recessions.

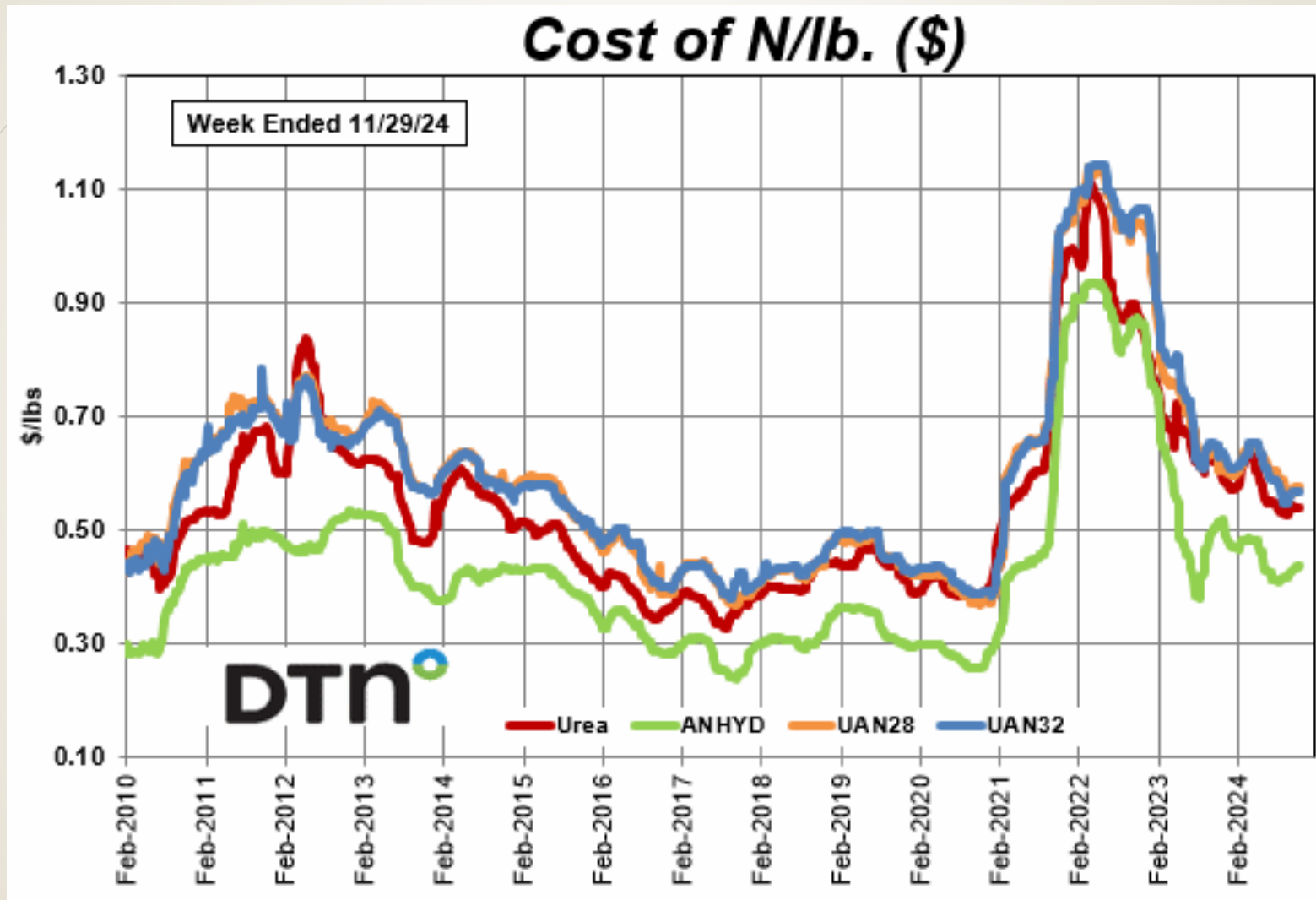
Source: U.S. Bureau of Labor Statistics

fred.stlouisfed.org

Farm Equipment PPI for Parts

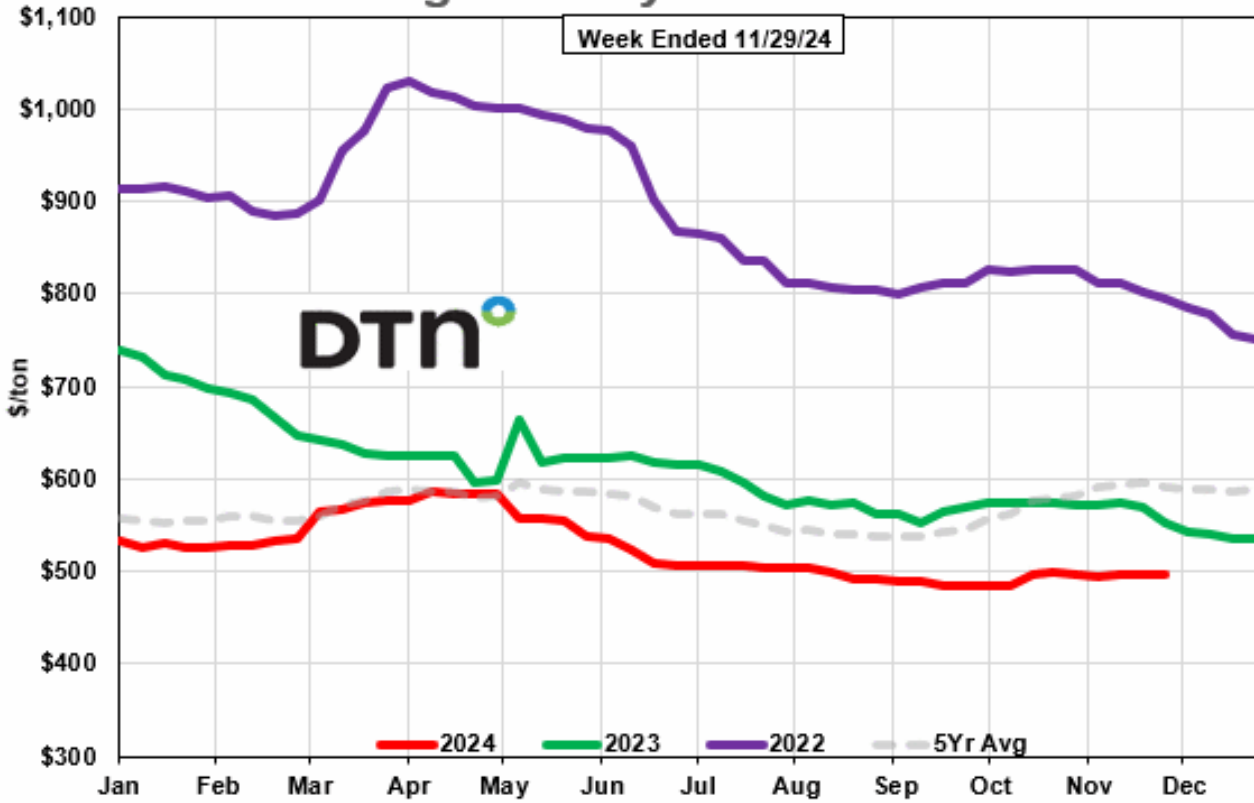


Current Fertilizer Prices

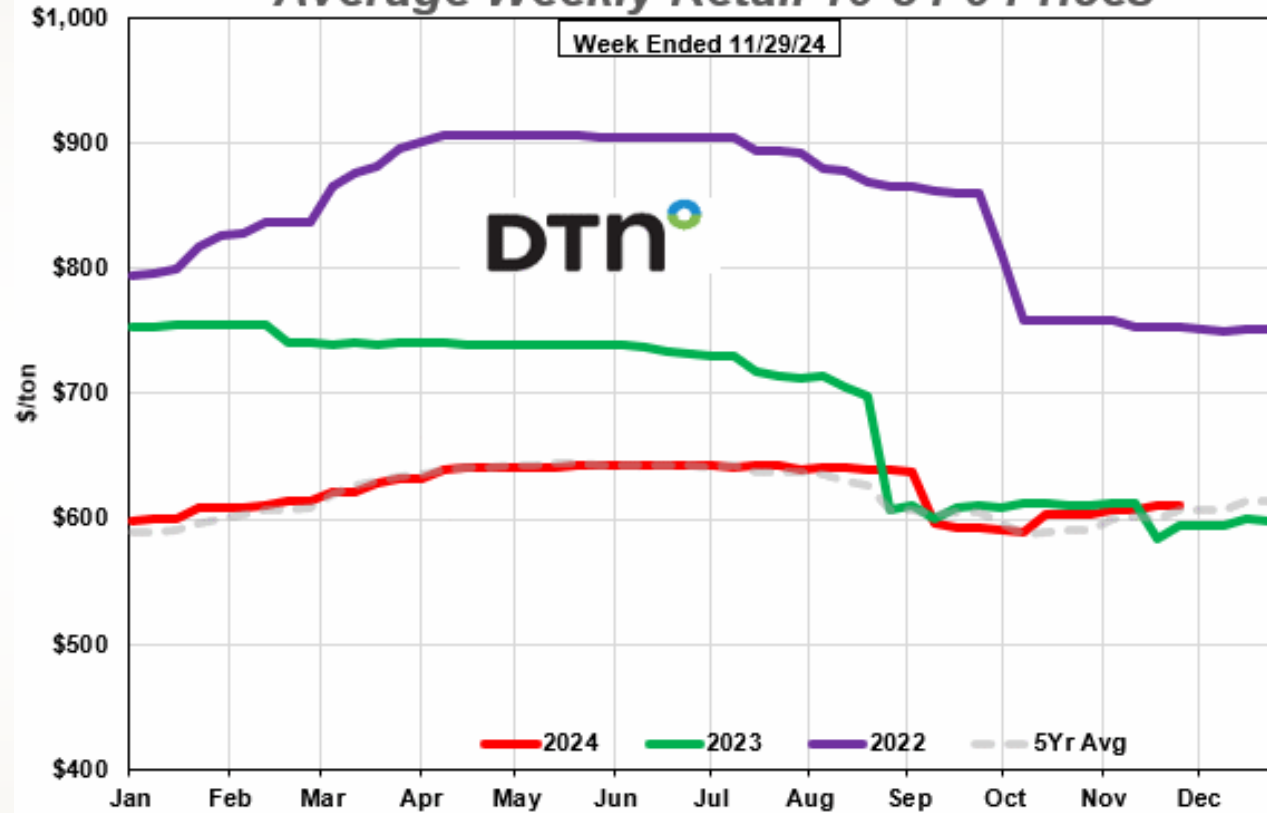


Current Fertilizer Prices

Average Weekly Retail Urea Prices

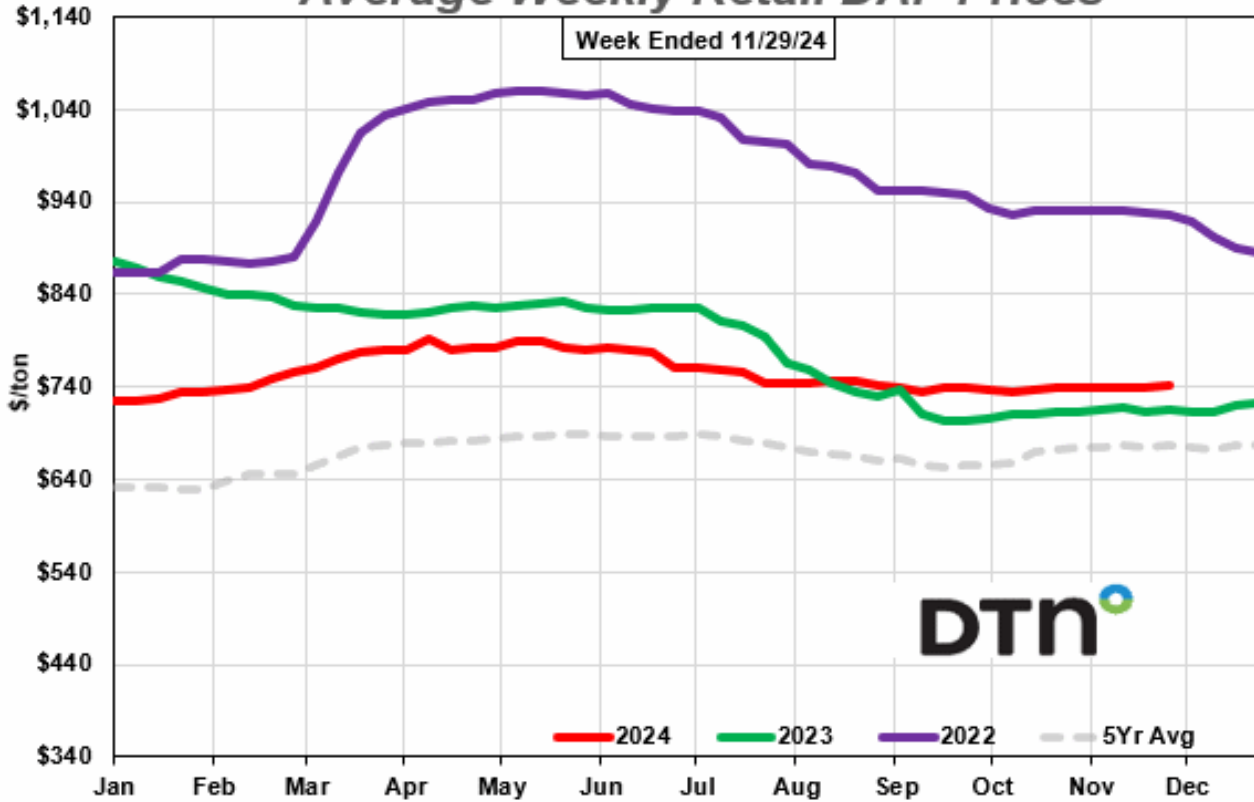


Average Weekly Retail 10-34-0 Prices

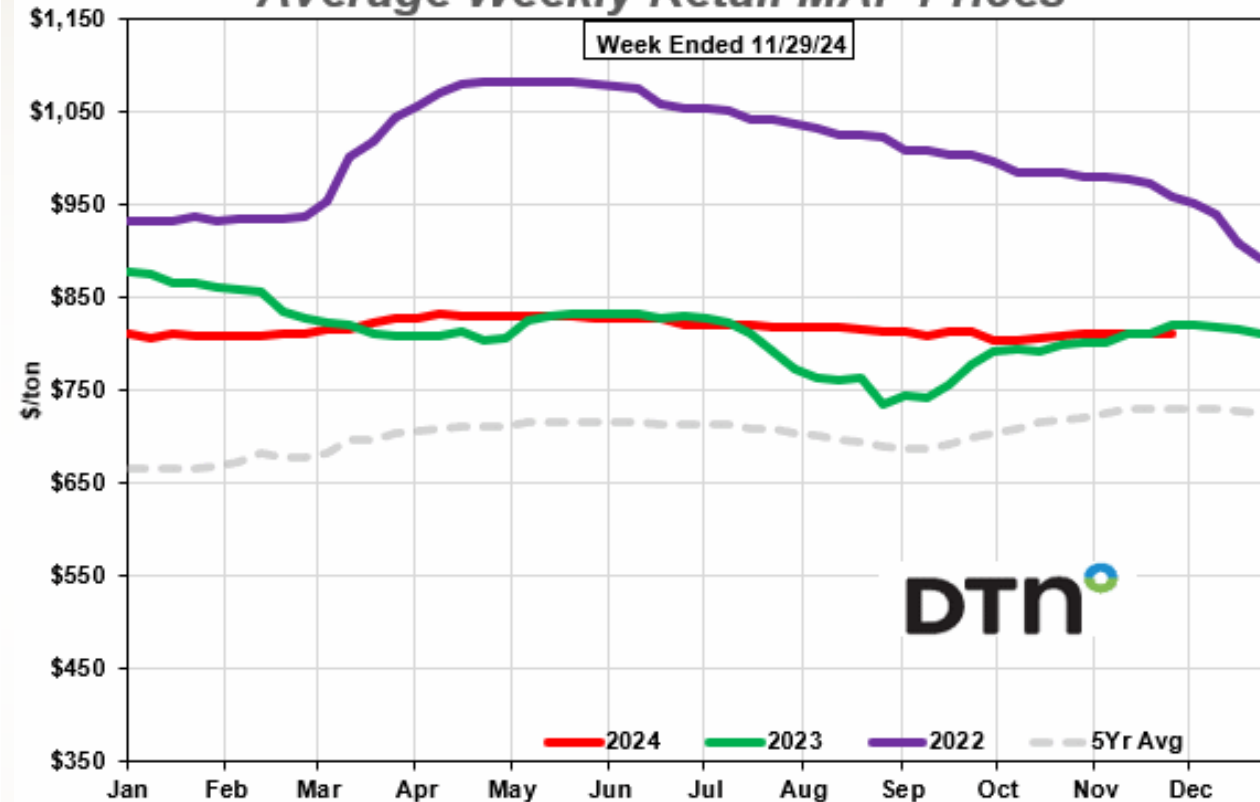


Current Fertilizer Prices

Average Weekly Retail DAP Prices



Average Weekly Retail MAP Prices



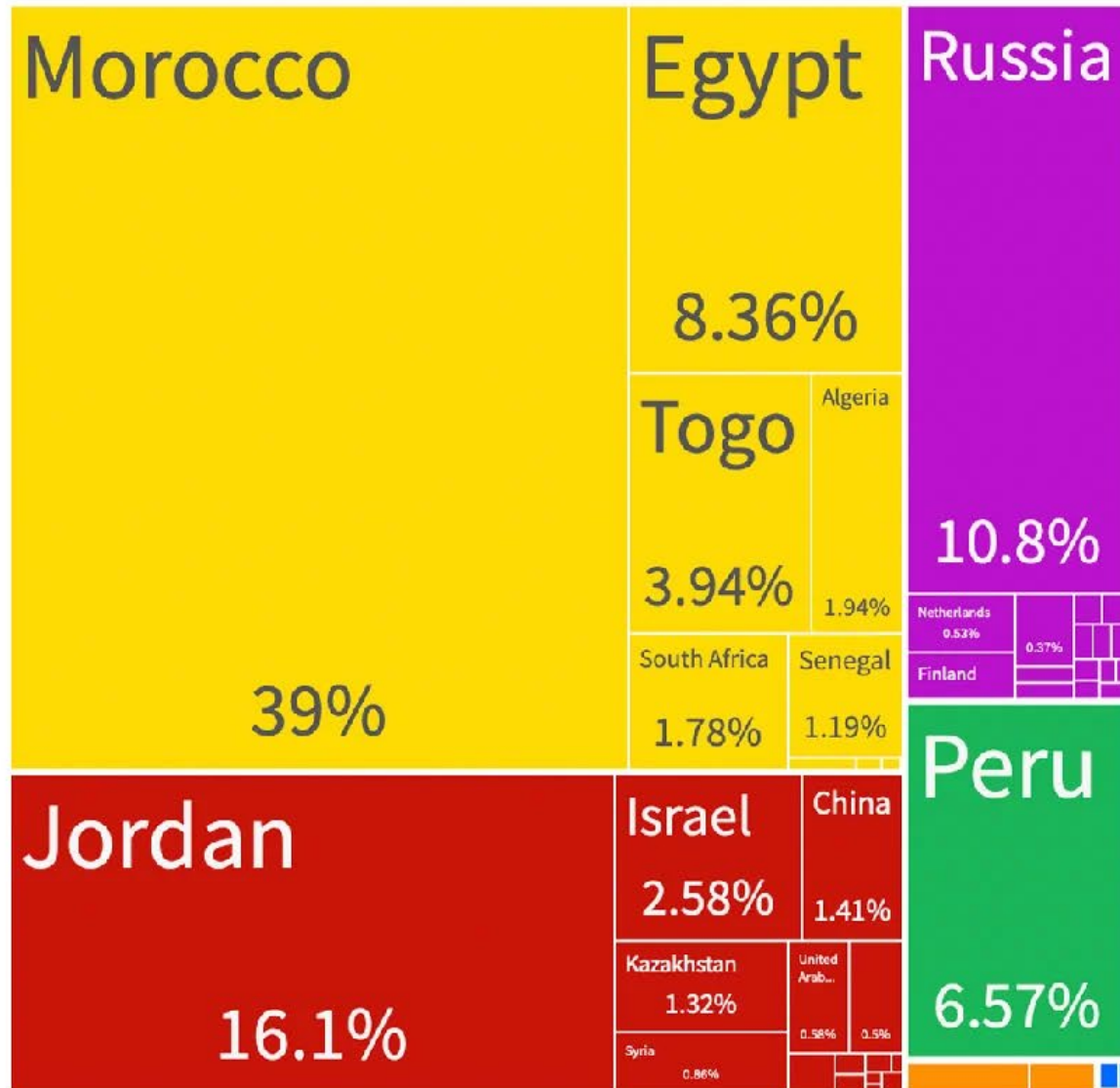
In June Commerce Dept raised tariffs on Moroccan phosphate from 2.12% - 14.21%
 Russian phosphate fertilizer tariffs reduced from 28.5% to 18.83%

An initial tariff was approved on Morocco of 19.97% in 2021
 OCP (Morocco) Stopped Shipping to the U.S. due to the high tariffs

Exporters of Calcium Phosphates (2020)

[Click to Select a Country]

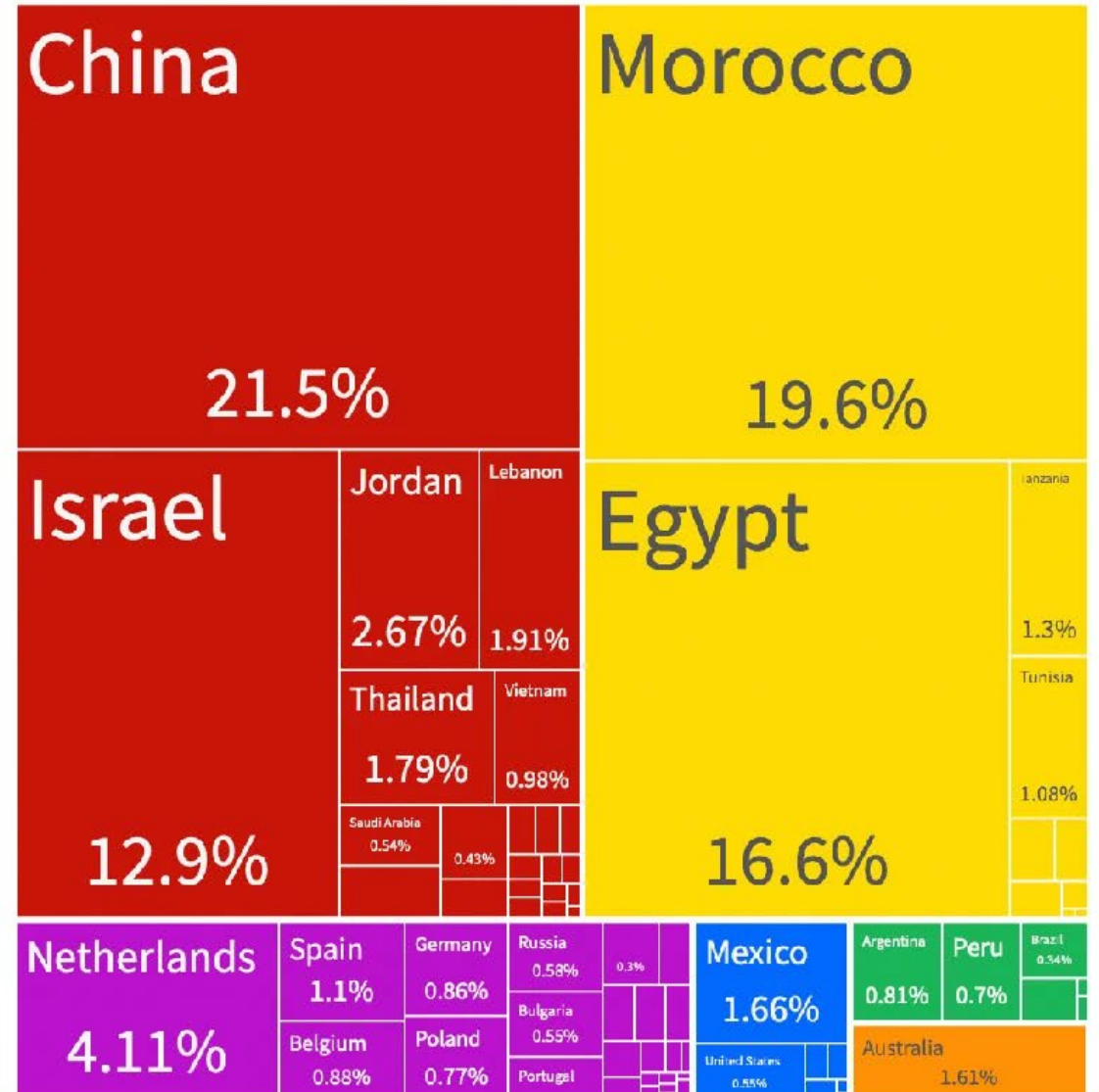
Total: \$3B



Exporters of Phosphatic Fertilizers (2020)

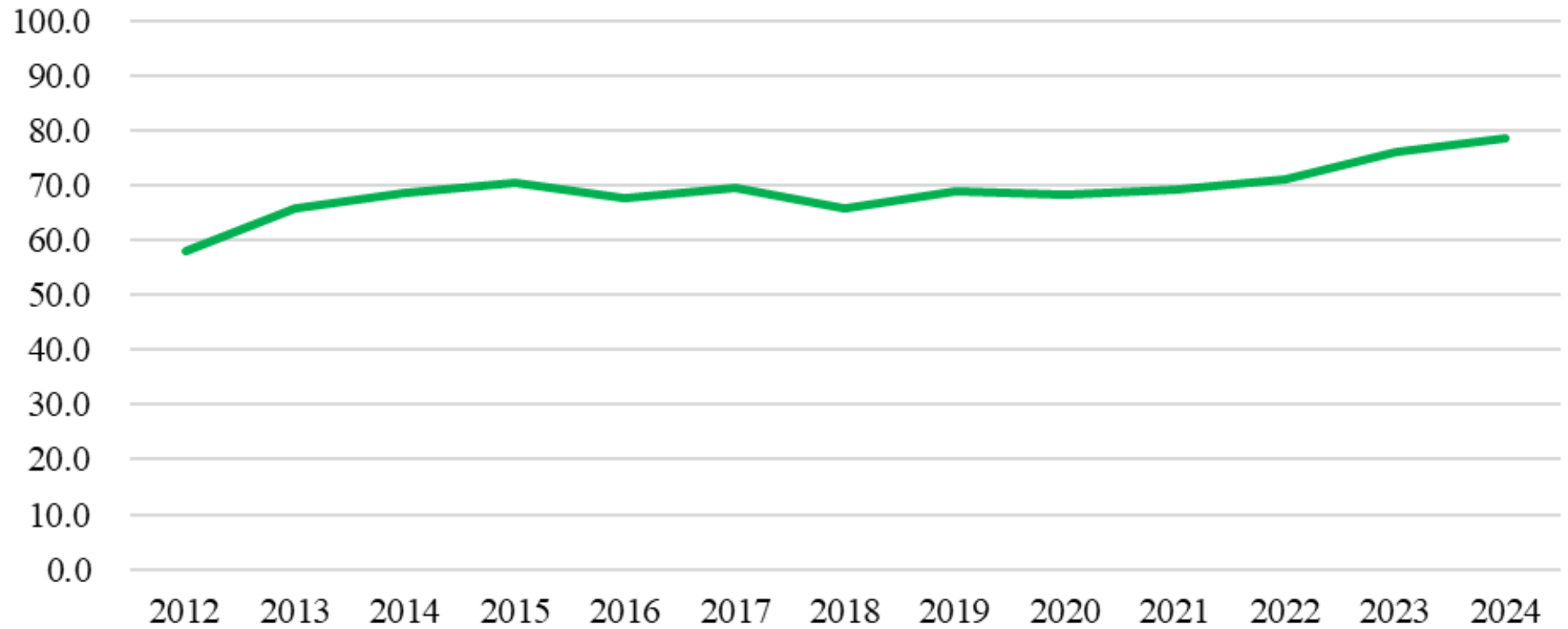
[Click to Select a Country]

Total: \$1.43B



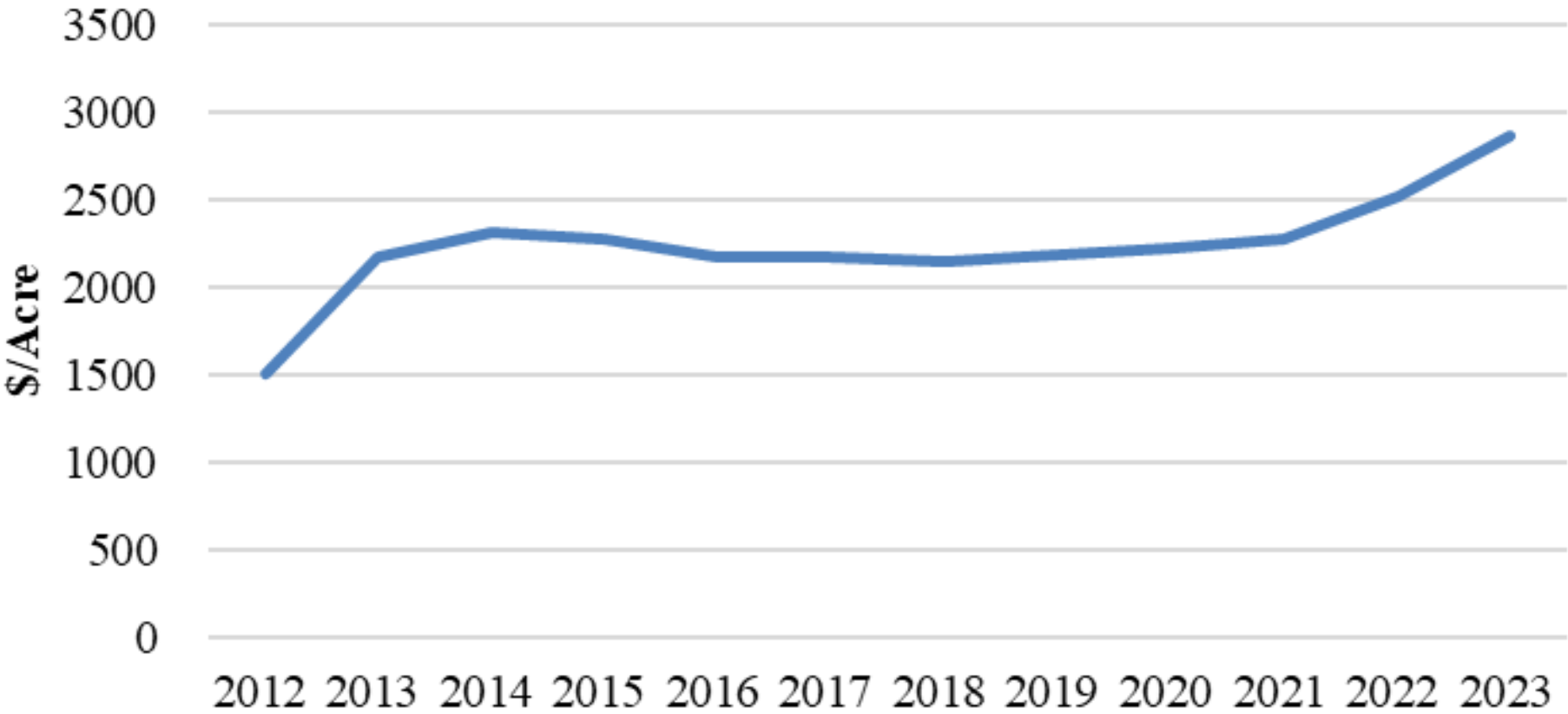
North Dakota Cropland Rents up 13.9% Since 2021, Up 3.71% in 2024

North Dakota Cash Rents \$/Acre Cropland



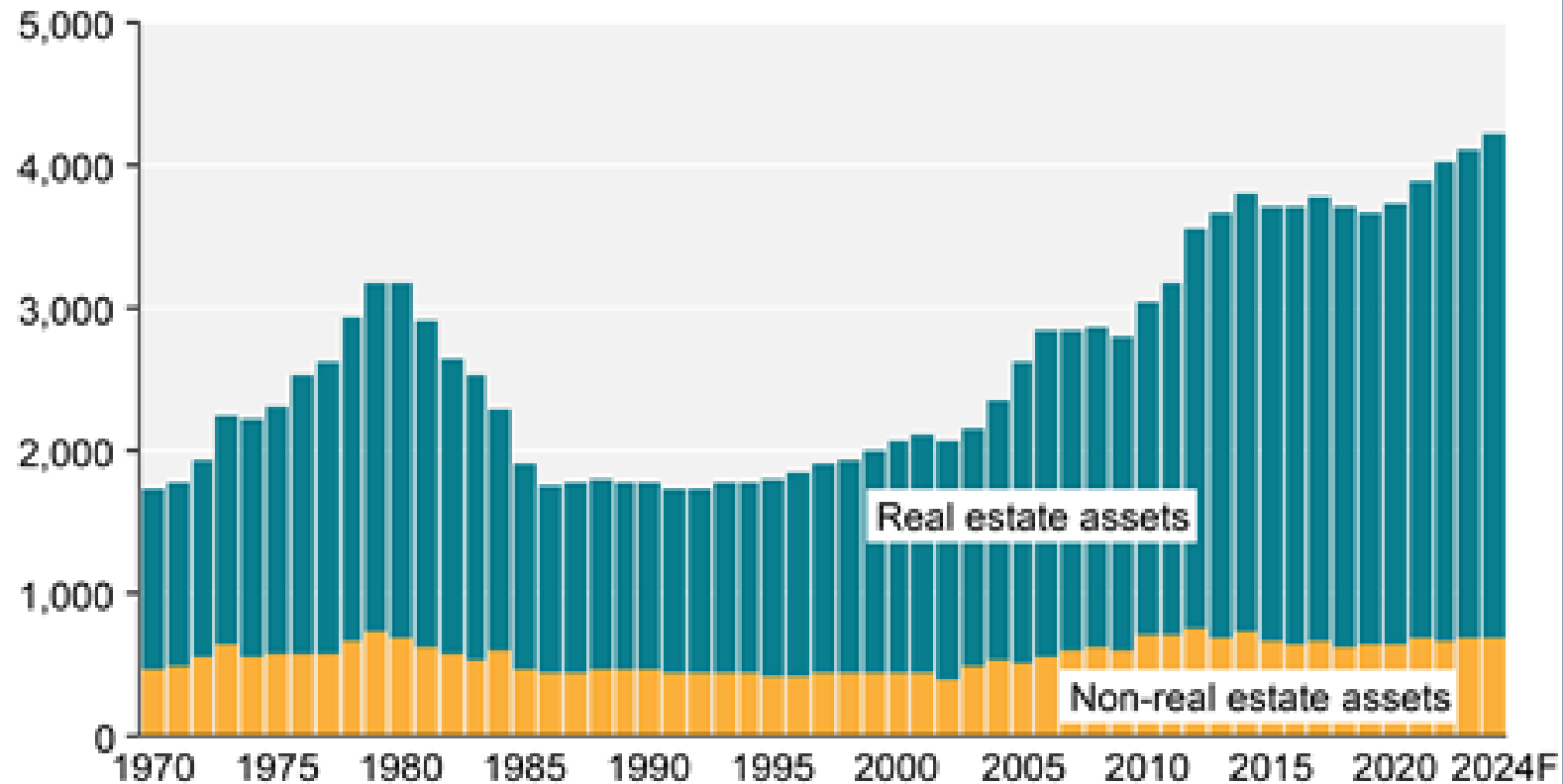
ND Cropland Prices Up 39.6% Since 2021, up 11.59% in 2024

North Dakota Land Values - State Average



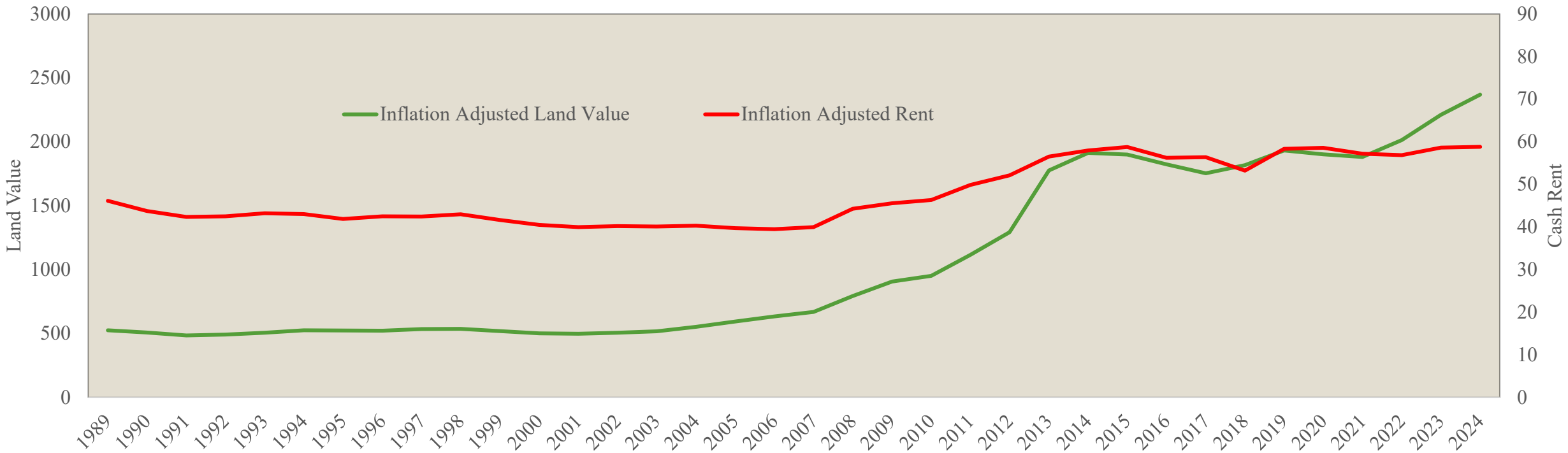
U.S. farm sector assets, inflation adjusted, 1970–2024F

Billion 2024 dollars

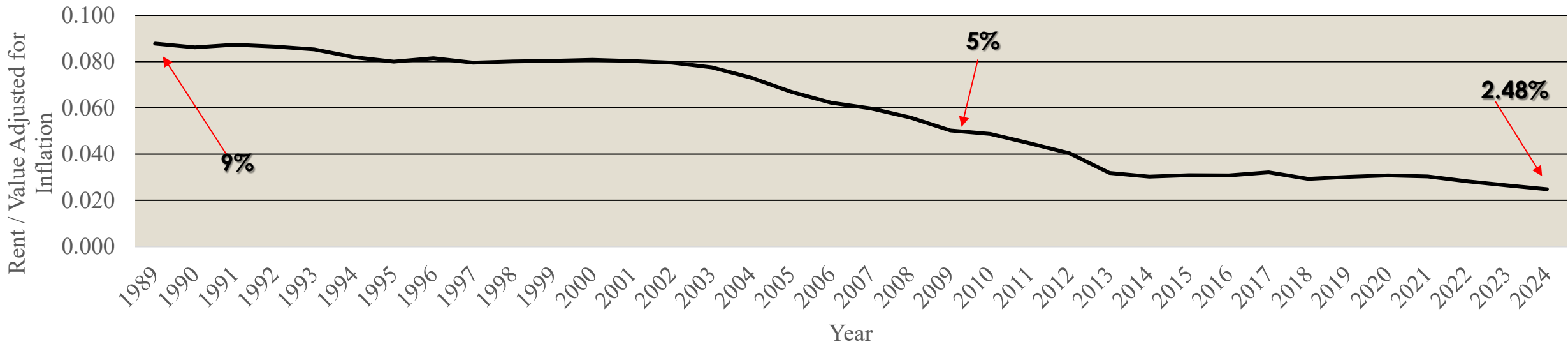


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ND Cropland Values and Cash Rents 1989 - 2024 in 2012 Dollars



North Dakota Cropland Rent To Value Ratio in 2012 Dollars





Concluding Remarks

- ▶ The ag economy continues to trend downwards with the fall in most major crop commodities
 - ▶ Production costs have come down some, but remain elevated relative to a few years ago
 - ▶ Livestock income has helped support the decline overall, but that comes as little help for crop farmers
 - ▶ While assets have increased, that is almost entirely due to land price appreciation
- ▶ Land prices have move upwards sharply but have shown some signs of weakness recently
 - ▶ Rents continue to climb but at a much slower pace over the years



Thank You!

Bryon Parman

701-231-8248

Bryon.Parman@ndsu.edu



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