

2024 US Dairy Situation & Outlook

Christopher A. Wolf

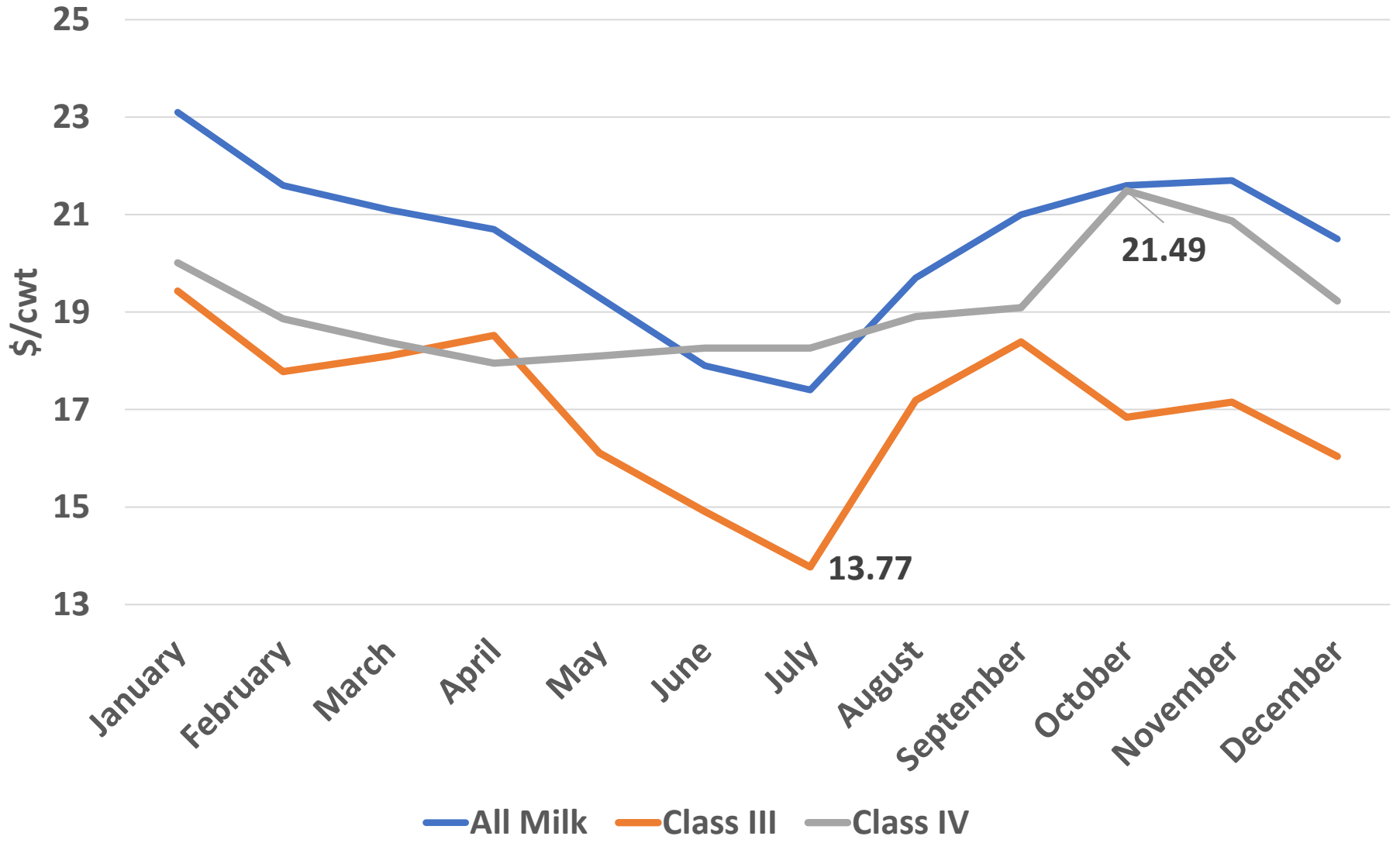
E.V. Baker Professor of Agricultural Economics

Dyson School of Applied Economics and Management

Cornell University

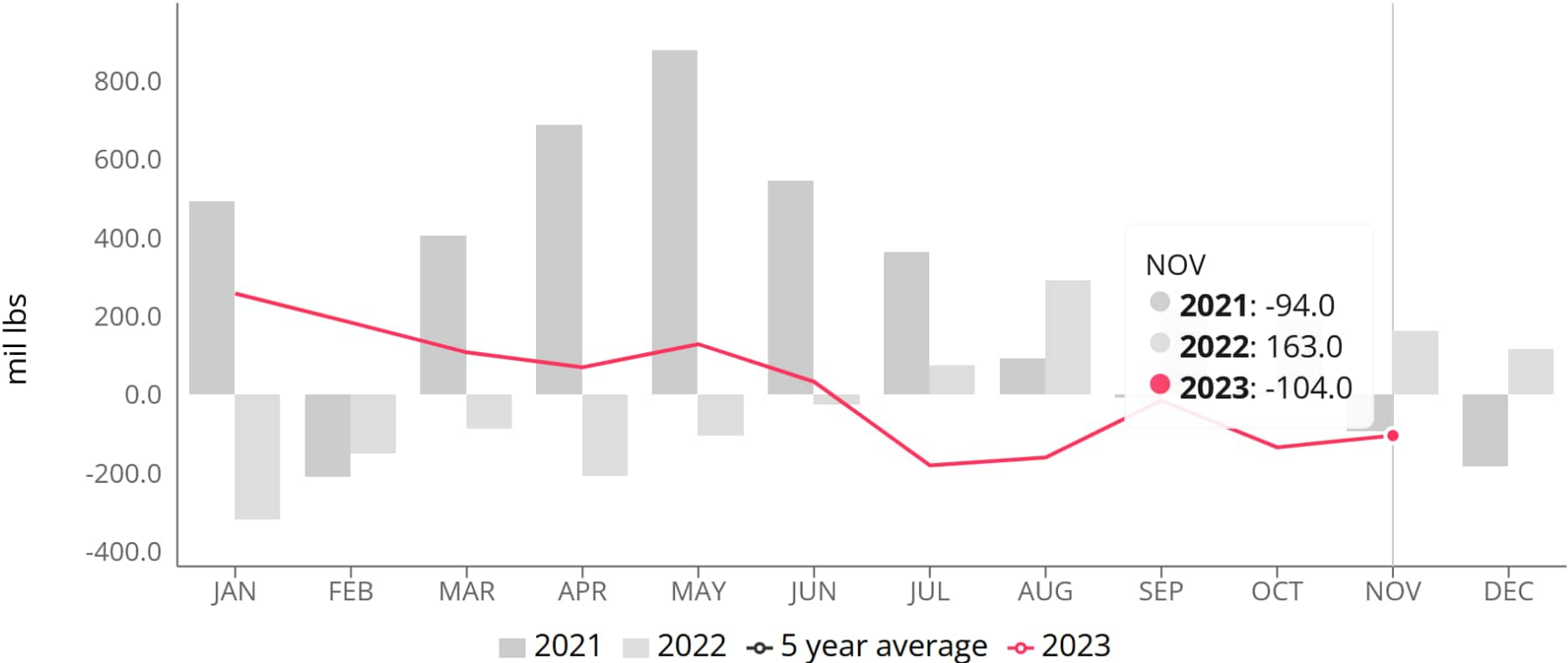
January 24, 2024

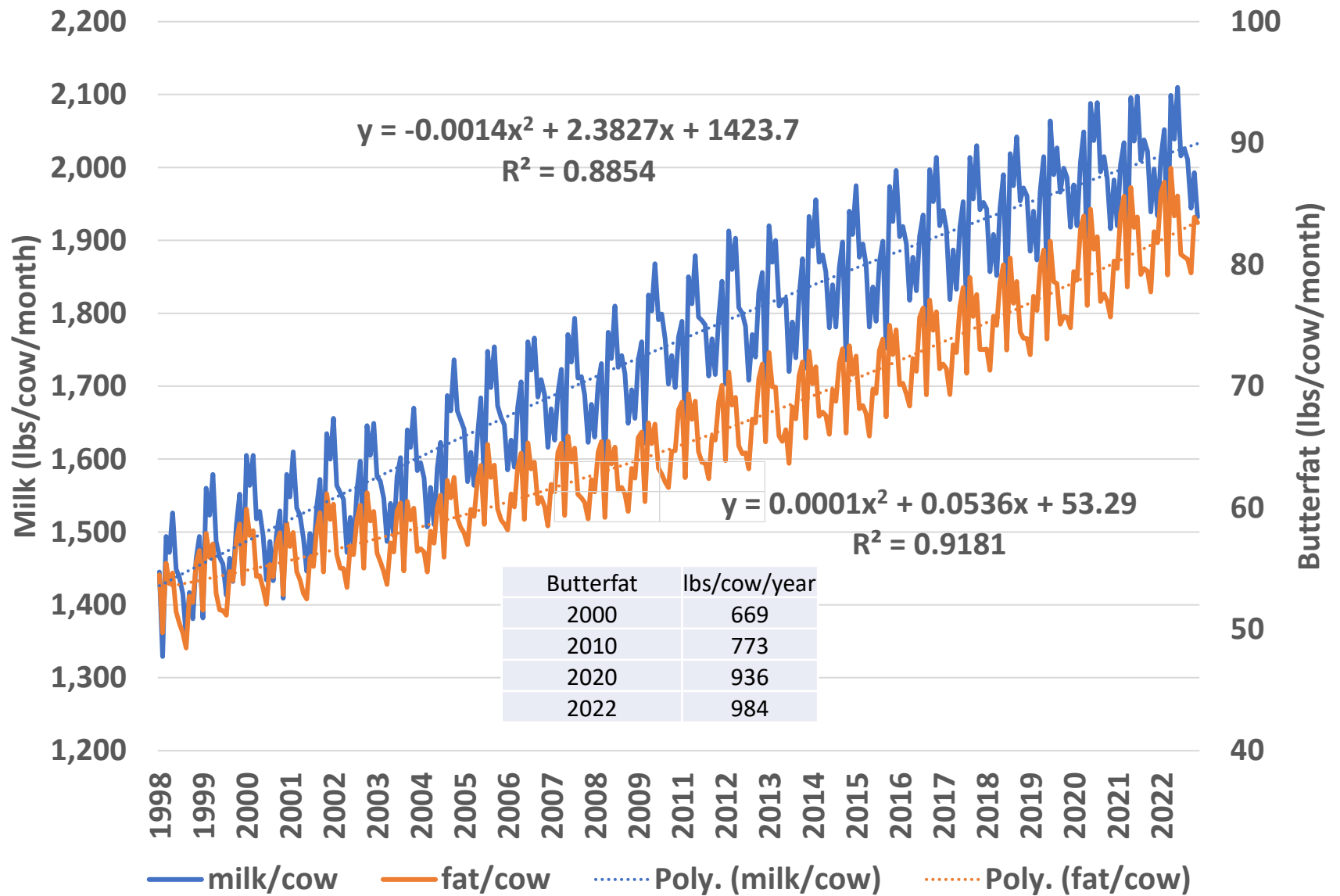
2023 Milk Prices



US Milk Production

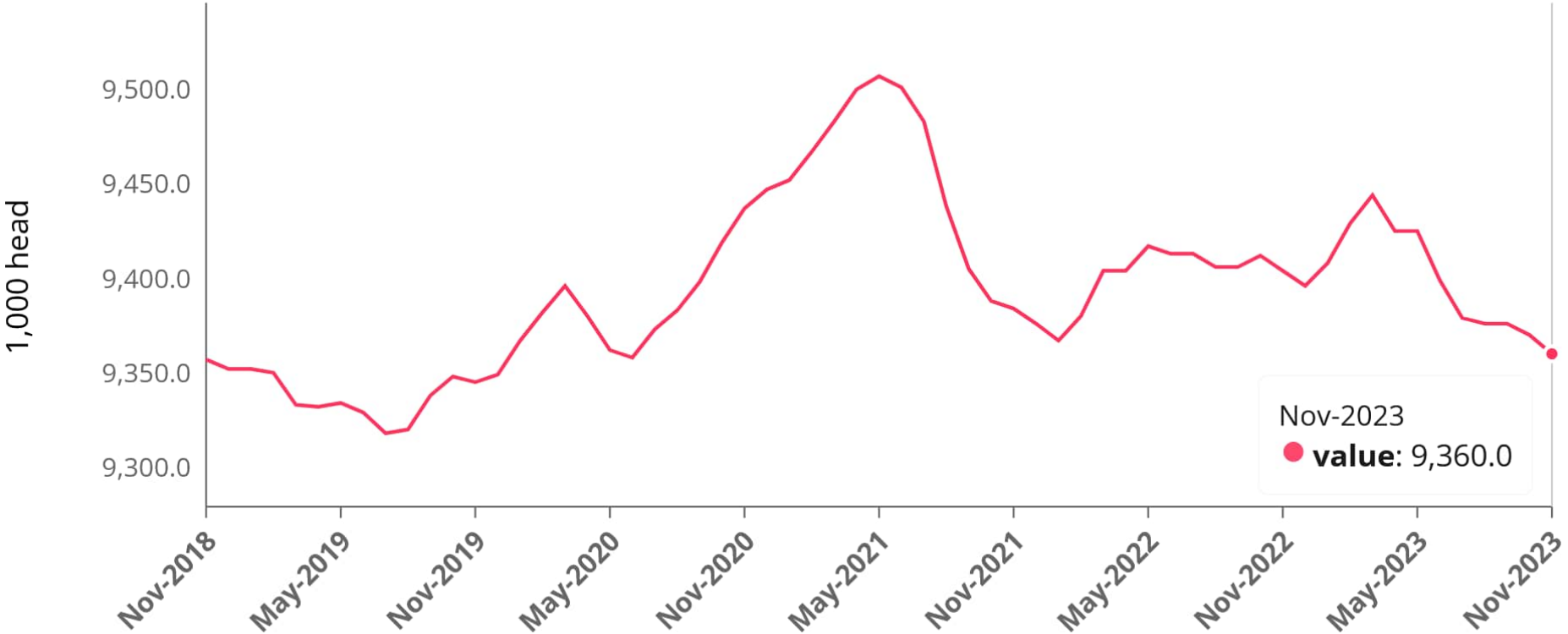
Milk Production - United States
Three Year Comparison





US Milk Cows

9.36 million November 2023
-44,000 YoY

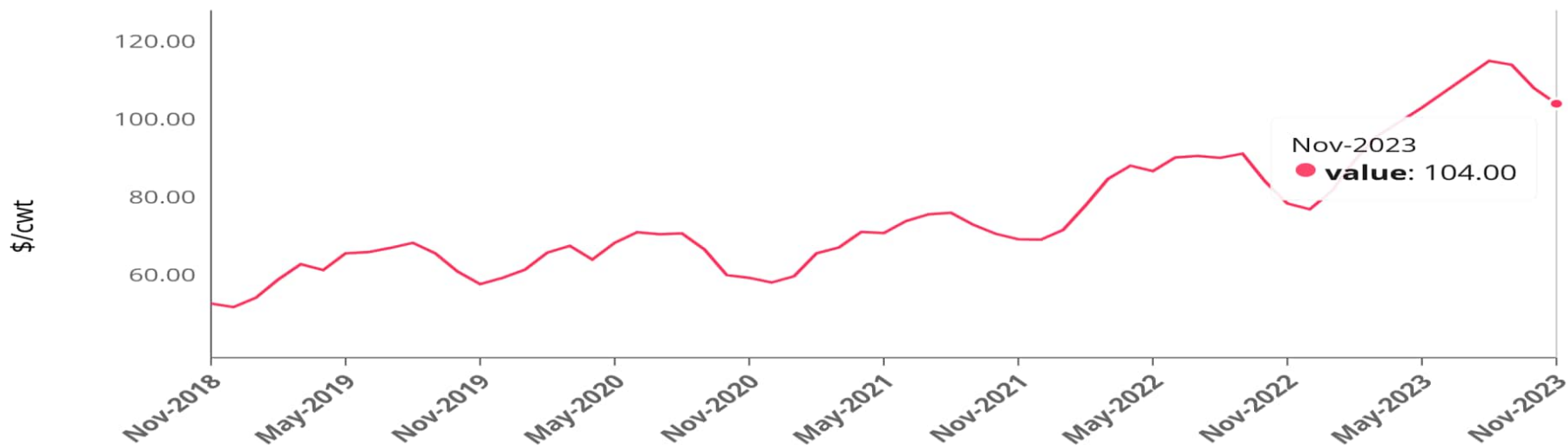


Livestock Slaughtered Under Federal Inspection, By Class, Dairy Cows - United States

Simple Line Chart



Cows, Slaughter, Price - United States Simple Line Chart

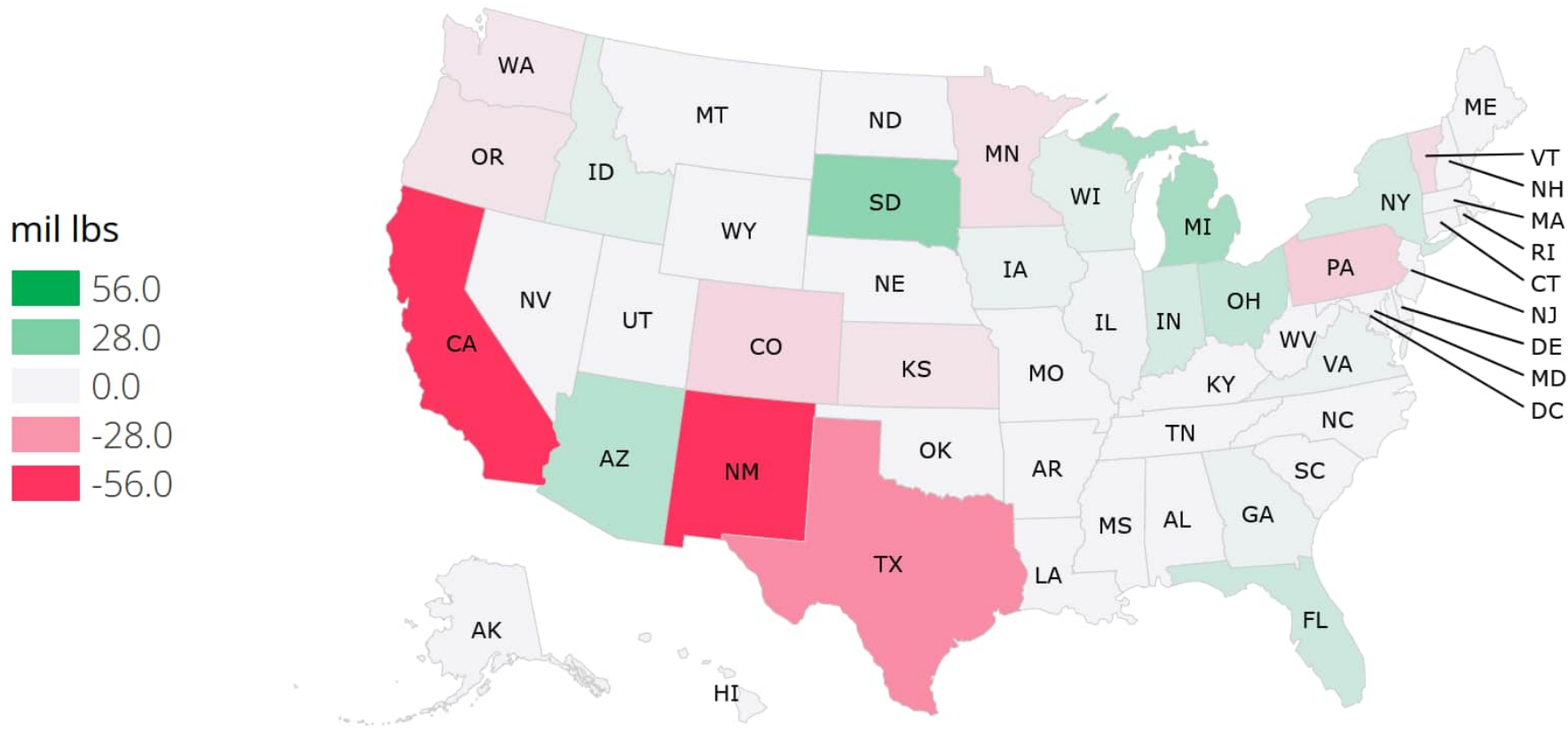


November 2023

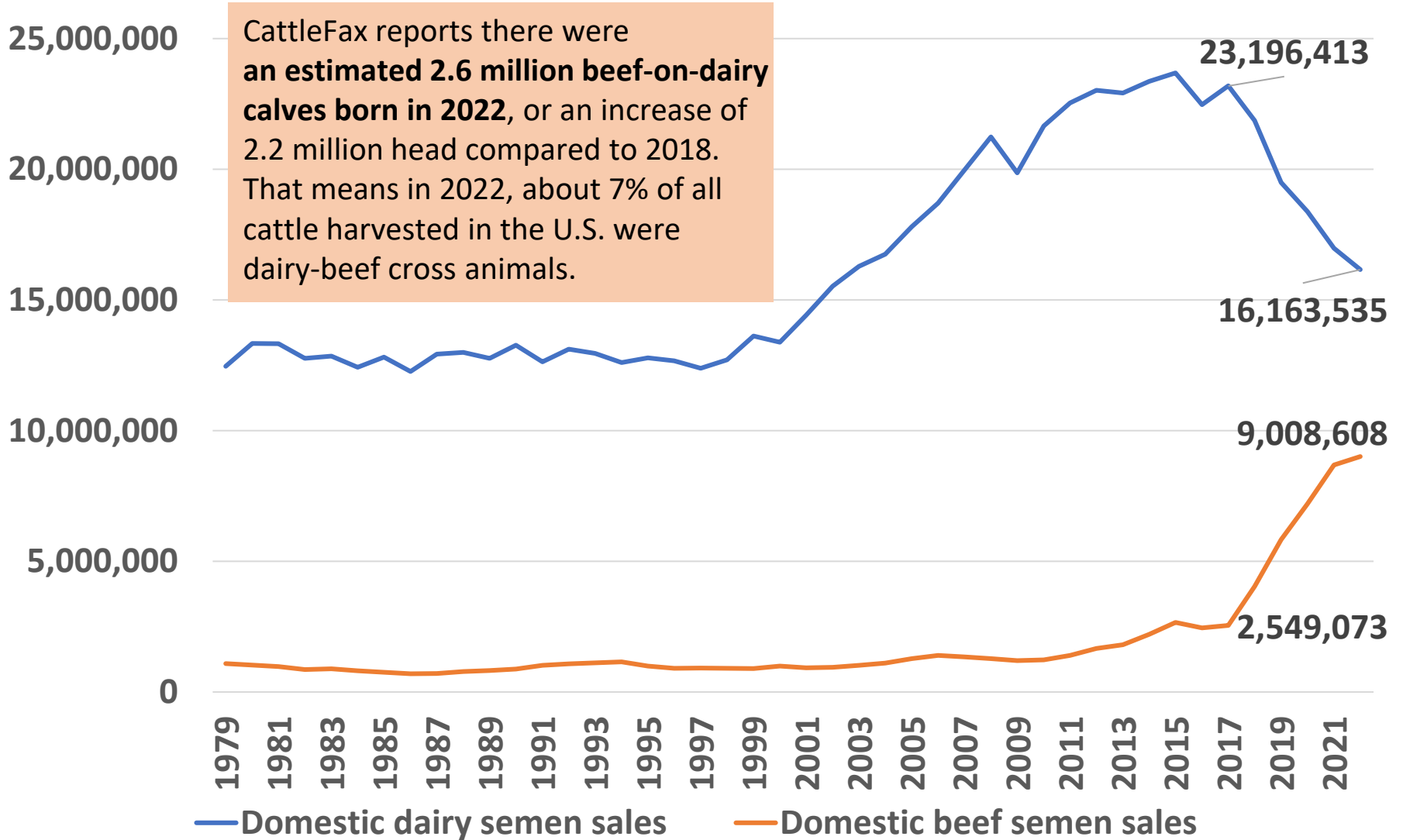
Year over Year

Milk Production - United States

U.S. States Map



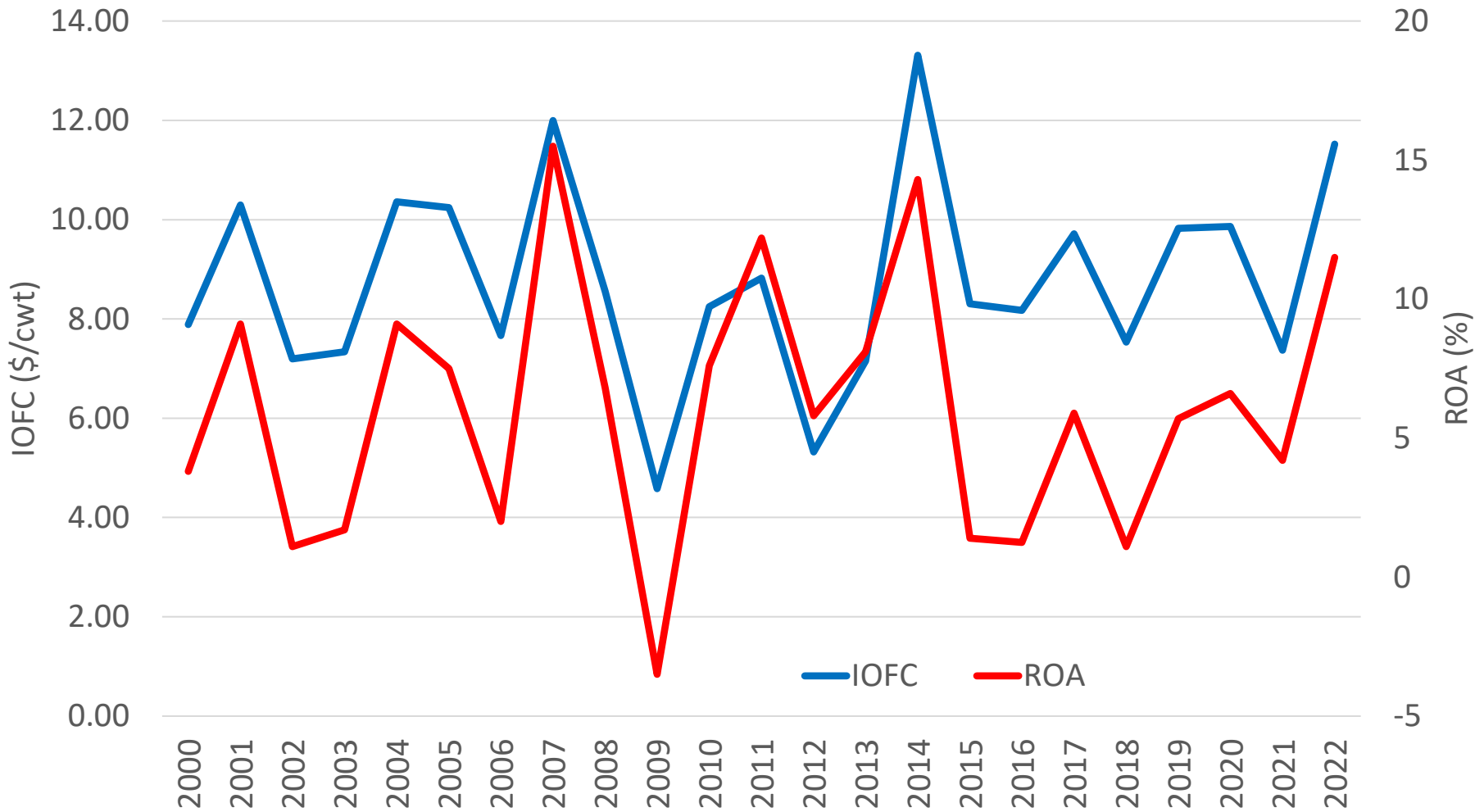
US Cattle Semen Sales



Dairy Farm Profitability by Year

Profit Category	Years	Average ROA	Dairy farm exits
Good: 8 years	2001, 04, 07, 10, 11, 13, 14, 22	10.9%	-2.8%
Average: 6 years	2005, 08, 12, 17, 19, 20	6.4%	-4.0%
Poor: 9 years	2000, 02, 03, 06, 09, 15, 16, 18, 21	1.4%	-4.7%

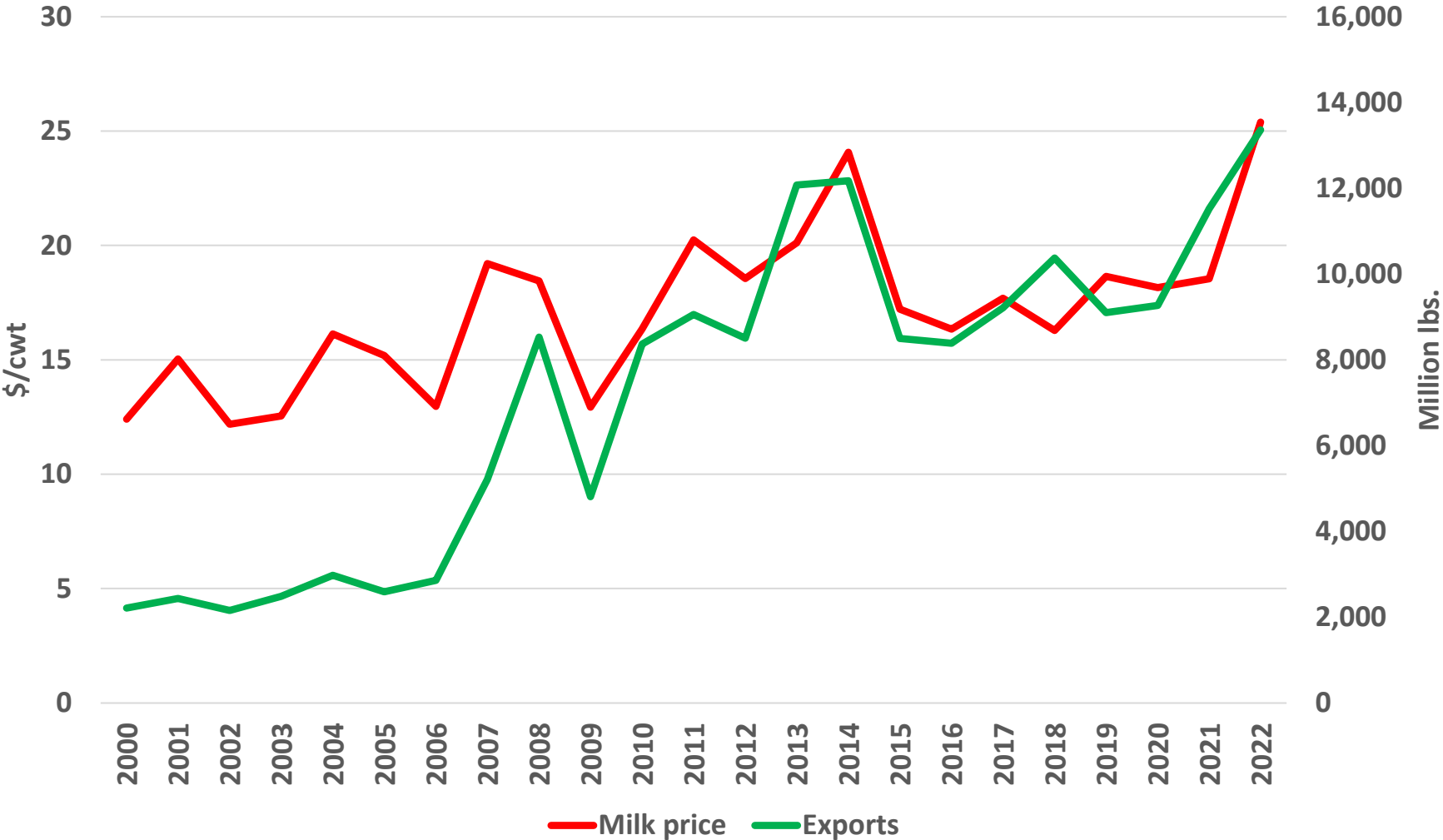
DMC IOFC and NY ROA



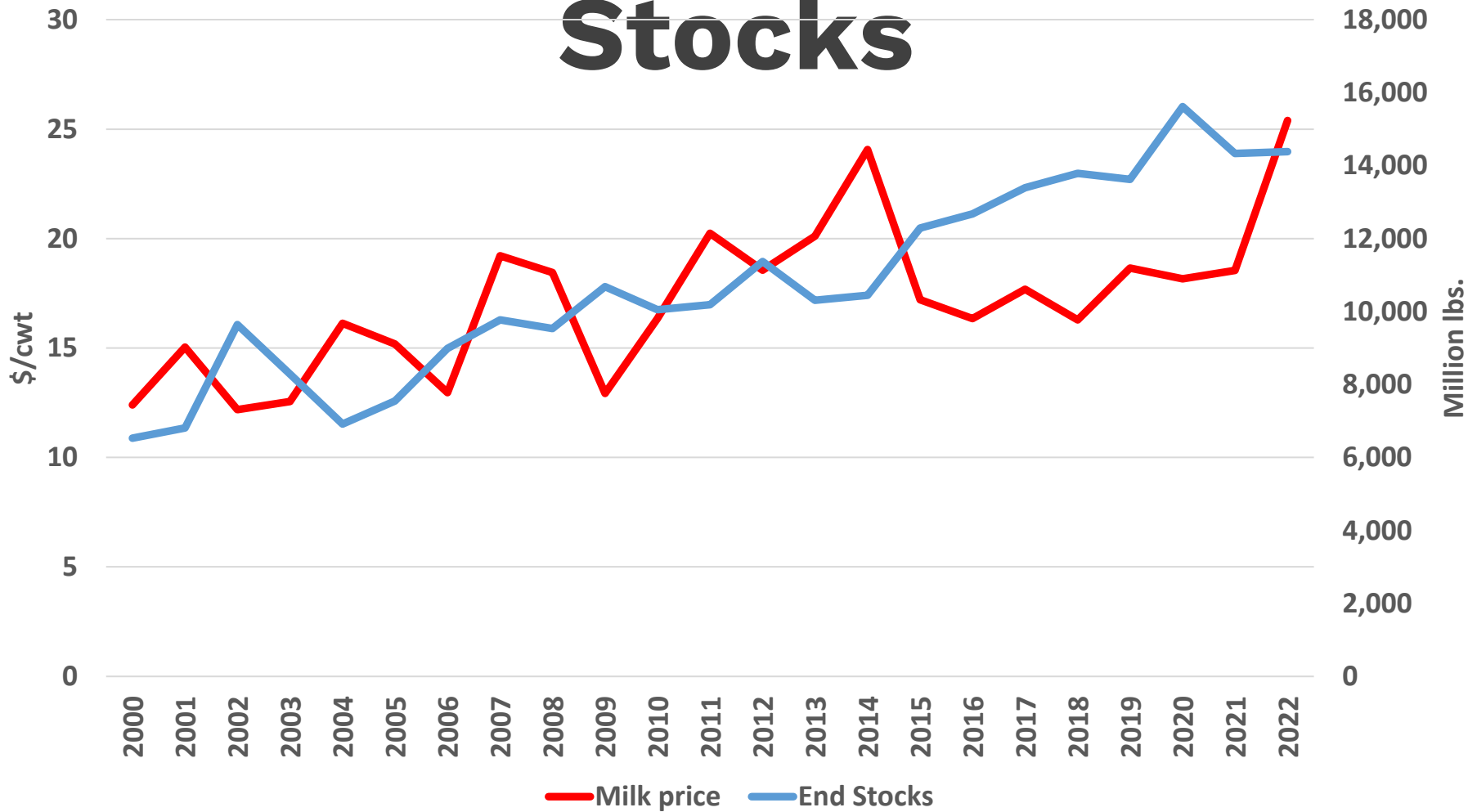
Supply and Demand Factors 2000-2022

Farm Profit	Milk Price	Milk Supply	Exports	End Stocks
	\$/cwt	% change YoY		
Good	19.57	0.95	31.58	-1.98
Average	17.78	1.76	7.36	6.25
Poor	14.60	2.01	1.41	9.66

Milk Price and Exports



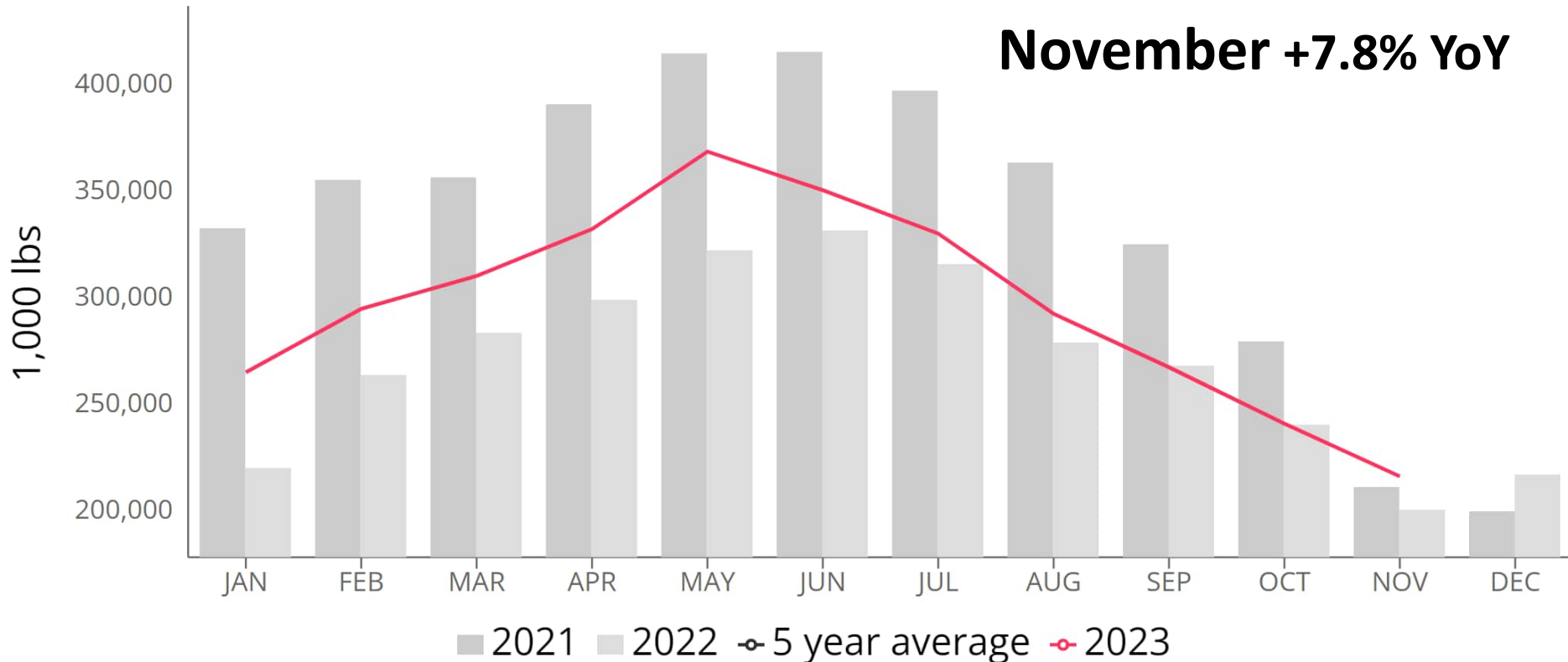
Farm Milk Price and Stocks



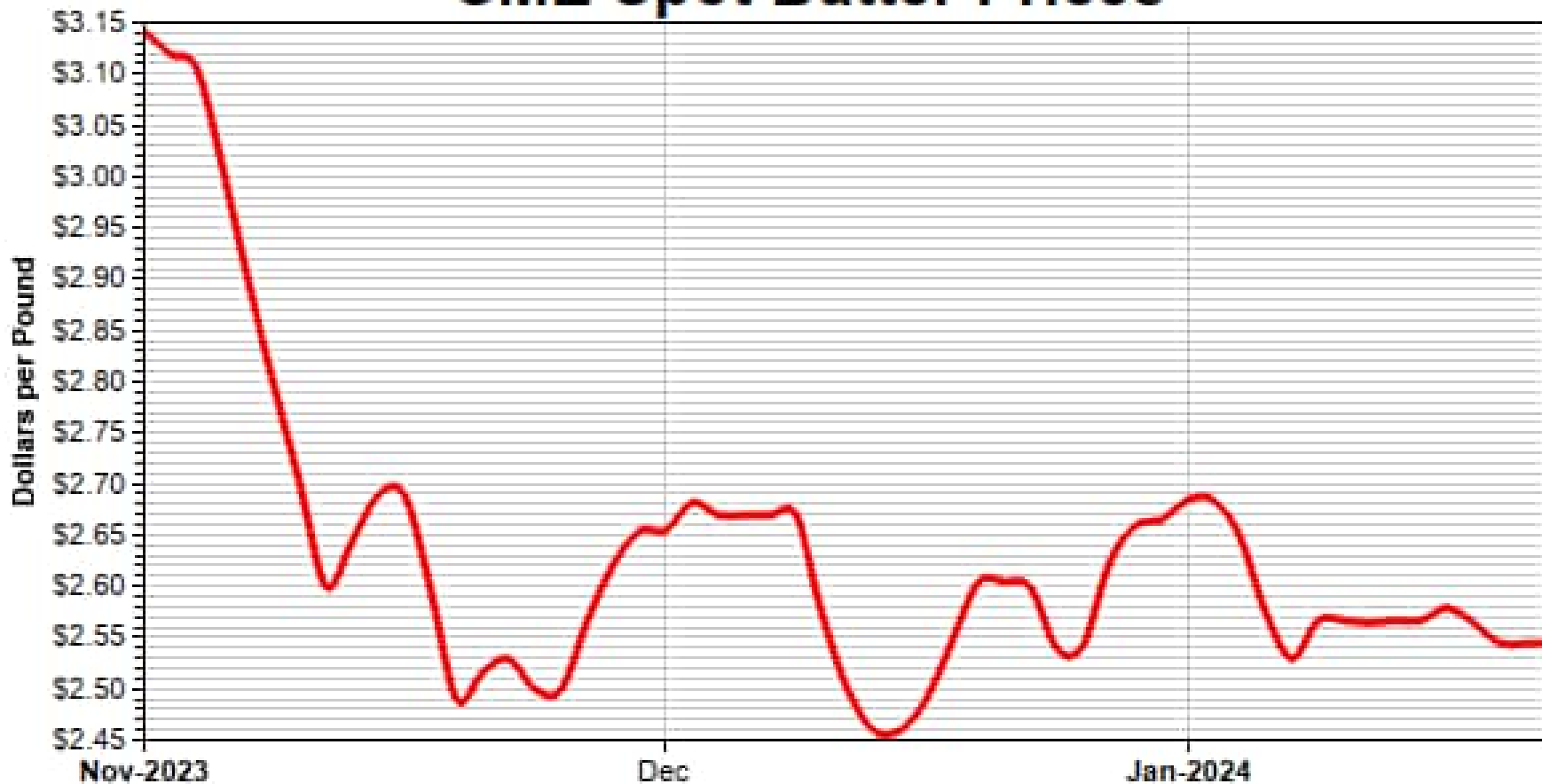
Butter Stocks

Butter, Stocks in All Warehouses - United States

Three Year Comparison



CME Spot Butter Prices

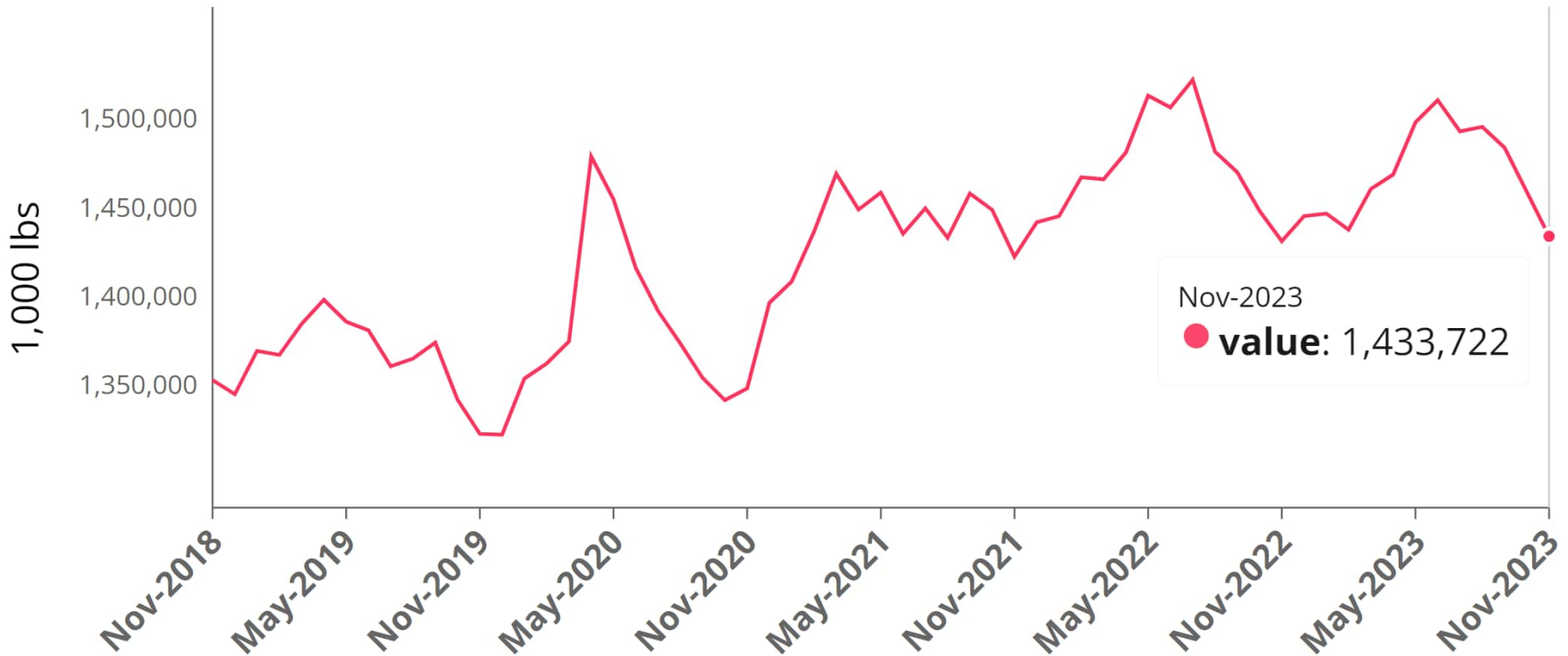


Updated 1/23/24

Natural Cheese Stocks

Total Natural Cheese, Stocks in All Warehouses - United States

Simple Line Chart



CME Spot Cheddar Cheese Prices



■ 40 lb Blocks

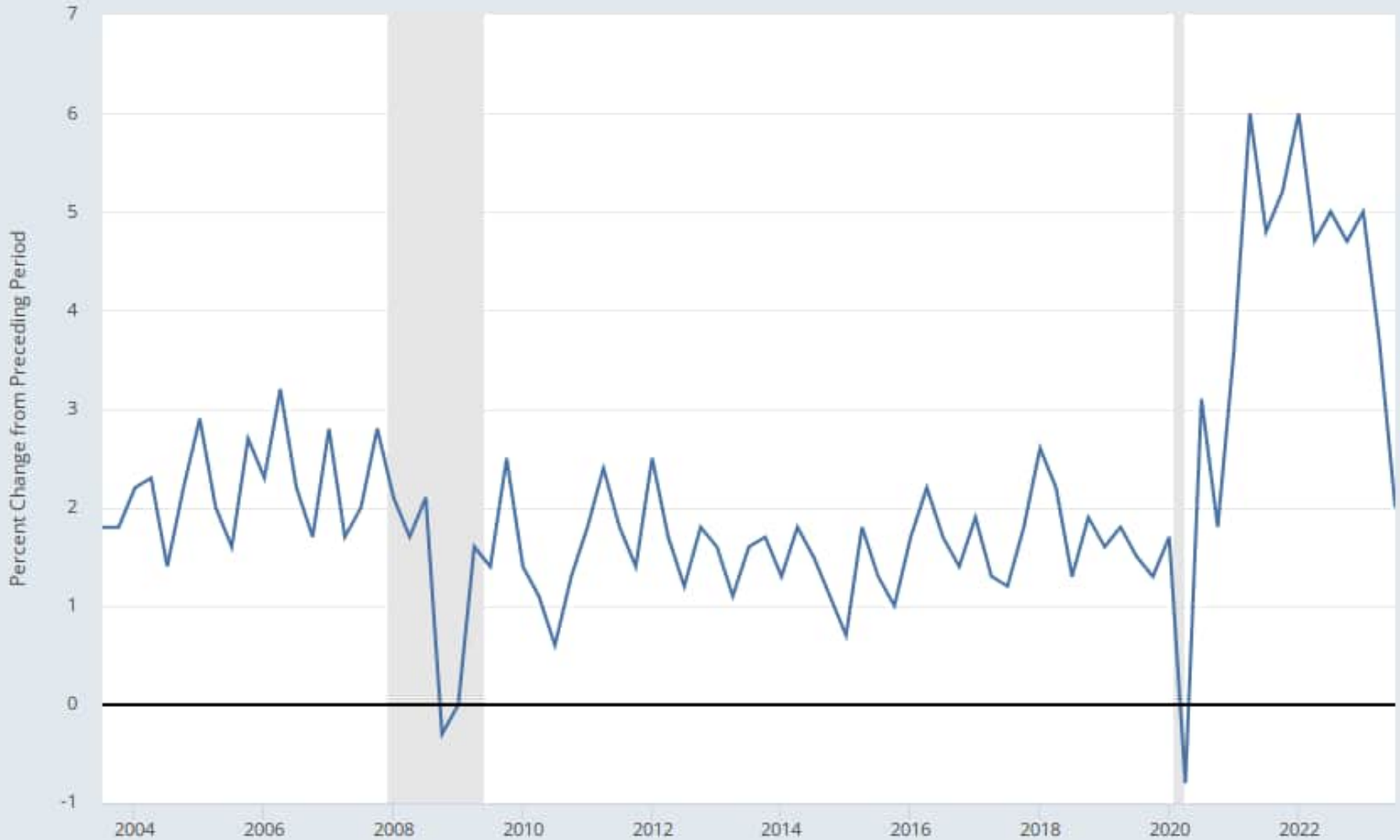
■ 500 lb Barrels

Updated 1/23/24



Source: U.S. Bureau of Economic Analysis

myf.red/g/1eypO



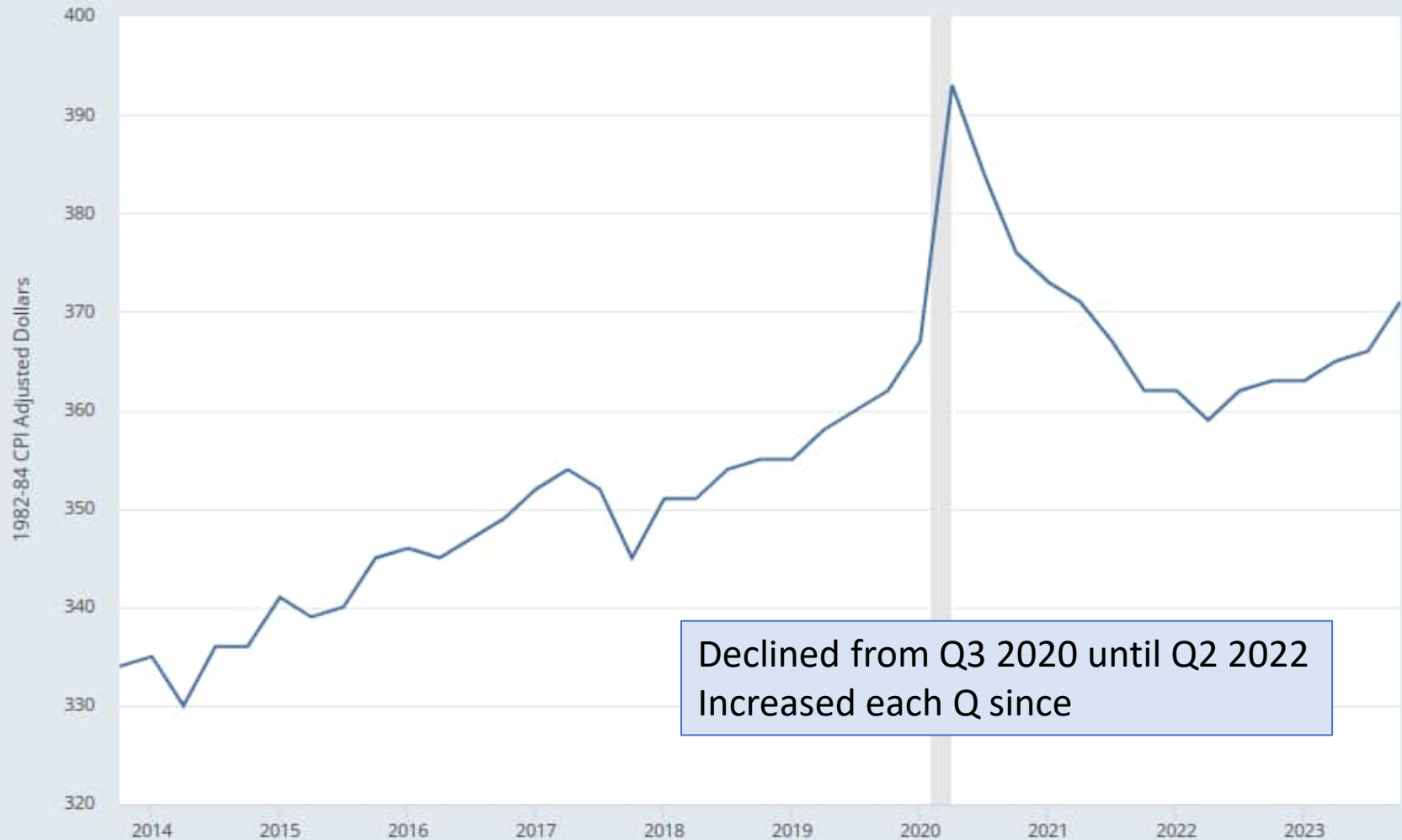
Source: U.S. Bureau of Economic Analysis

myf.red/g/1eyoq

US Real Weekly Earnings

FRED

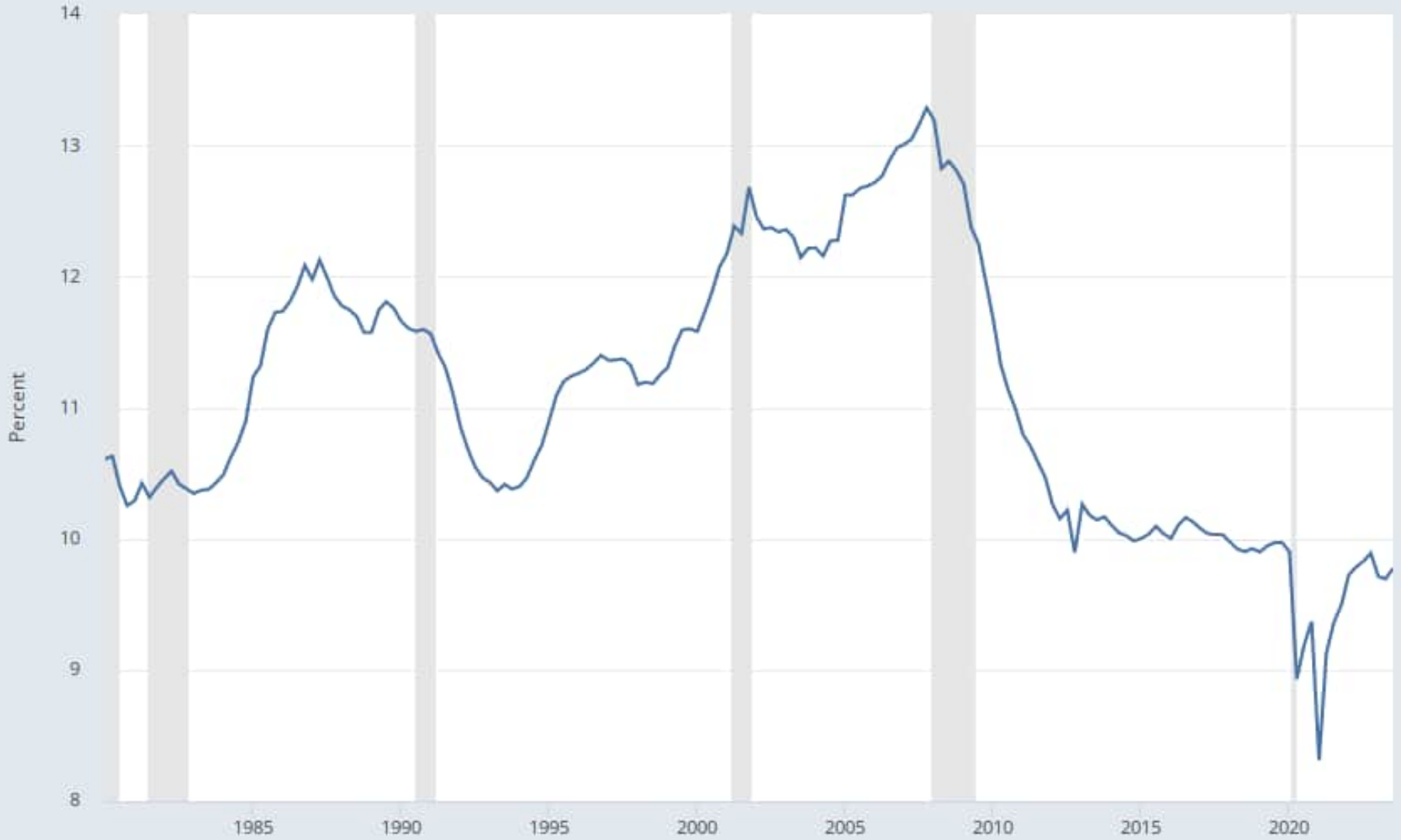
— Employed full time: Median usual weekly real earnings: Wage and salary workers: 16 years and over



Declined from Q3 2020 until Q2 2022
Increased each Q since

Source: U.S. Bureau of Labor Statistics

myf.red/g/1exgN

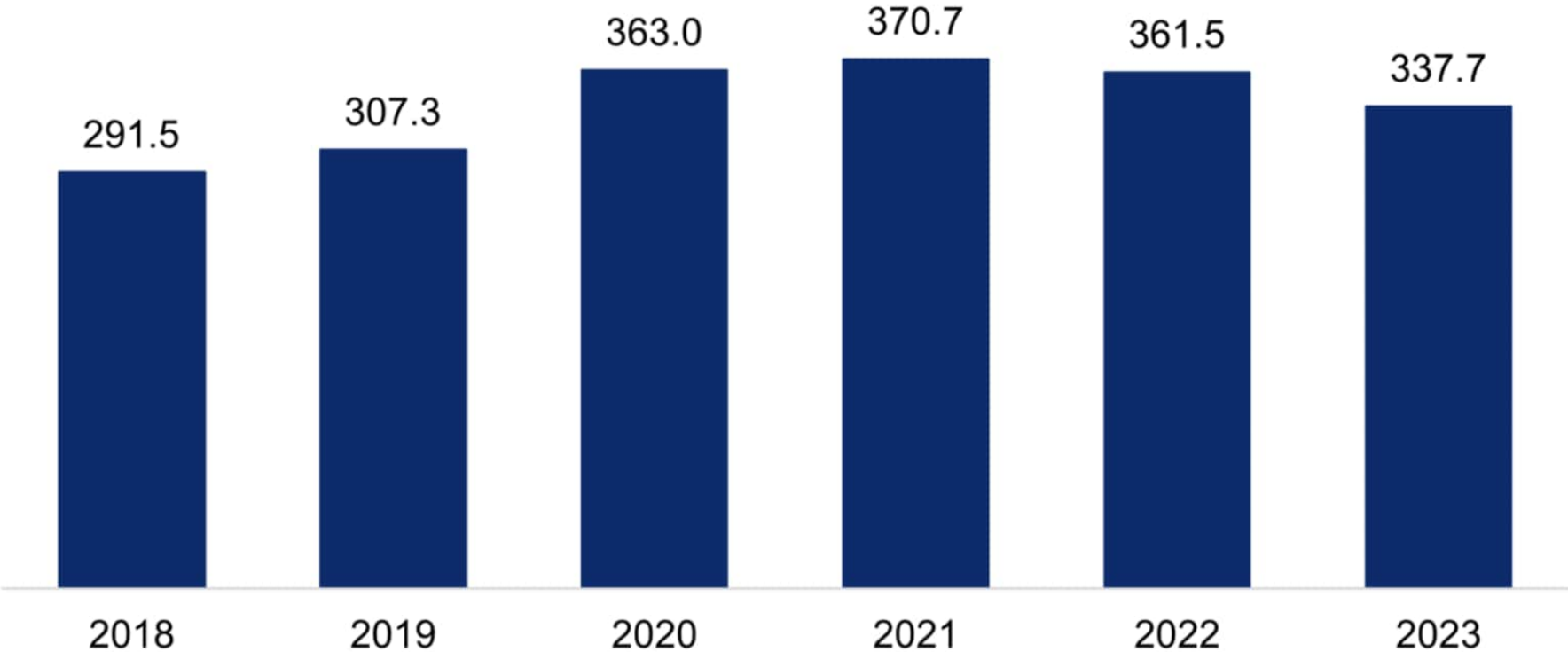


Source: Board of Governors of the Federal Reserve System (US)

myf.red/g/1dCJa

Retail Plant-based Alternatives Volume

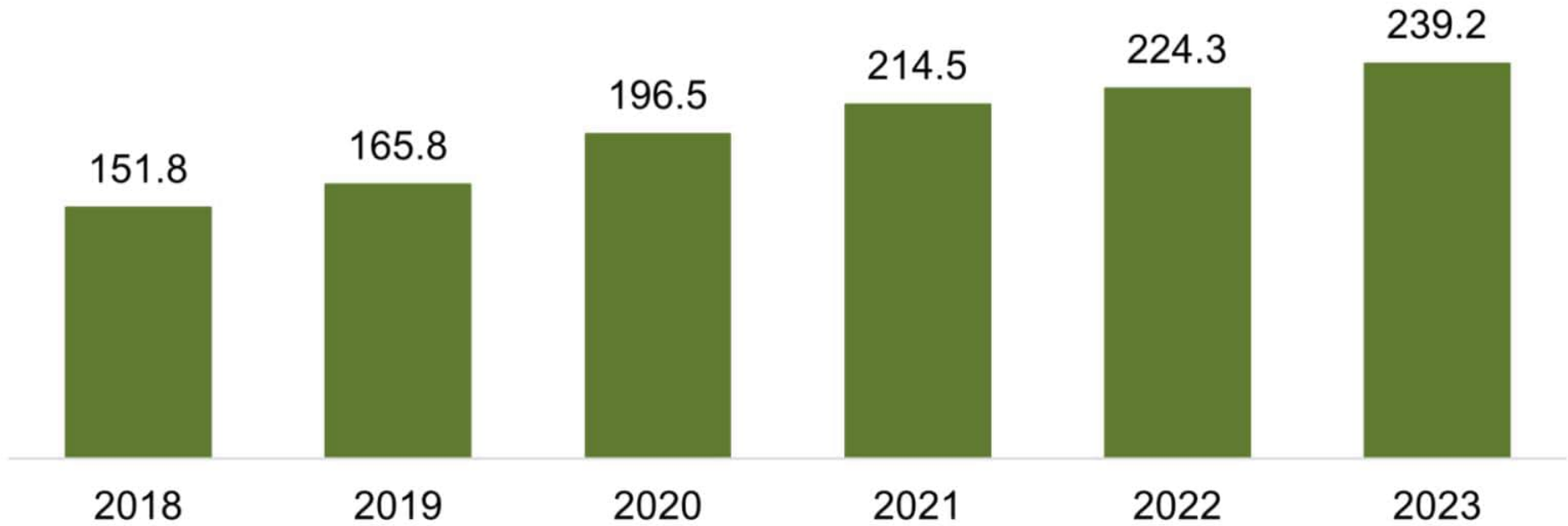
MIL GALLONS



Source: Circana

Lactose-free Retail Milk Volume

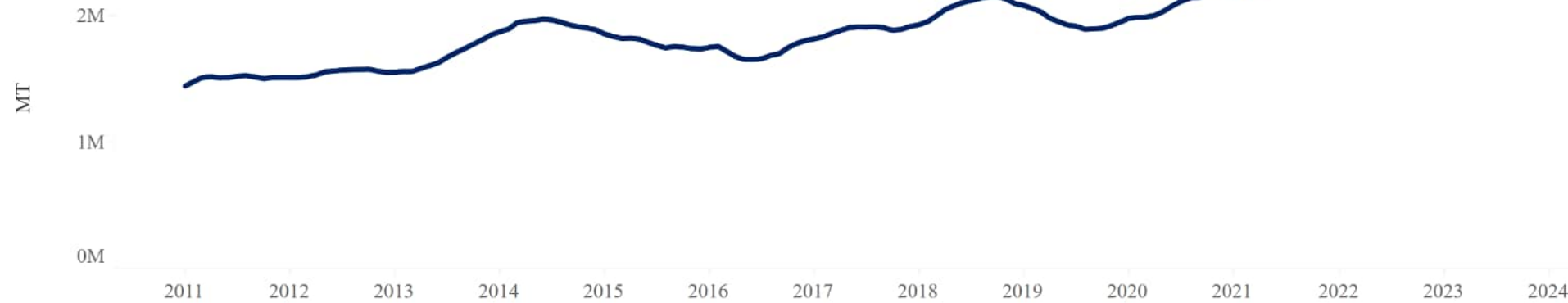
MIL GALLONS



Source: Circana

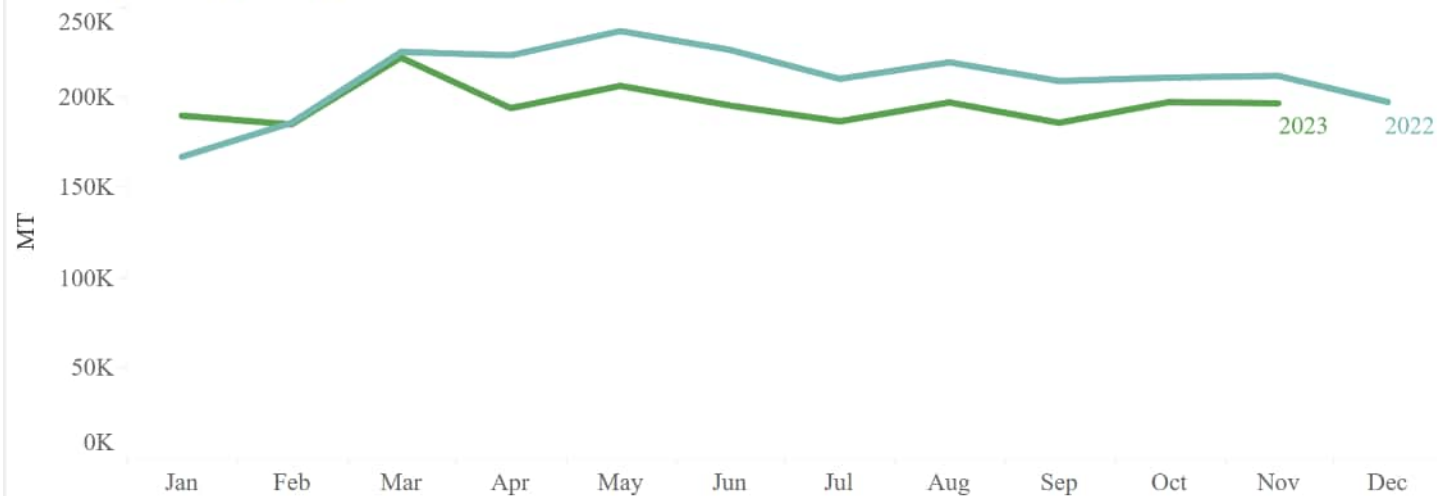
All US Dairy Product Exports

All Exports by Volume (Rolling 12-Month)



US Dairy Export Volume

Monthly All Exports by Volume



November 2023

196,469 MT

▼ 15,178 MT / ▼ 7.2% YoY

2023 YTD (November)

2,153,850 MT

▼ 169,636 MT / ▼ 7.3% YoY

US Product Export Share

Product	Share of Production Exported (%)	US Share of World Trade (%)
Cheese	6	16
Butter	2	
NFD/SMP	71	37
Whey Products	50	36
Lactose	74	

Results of Increased Exports

US dairy product prices highly correlated with world prices for major products exported

- Dry whey 94%
- SMP/NDM 93%
- Butter 48%
- Cheddar 78%

China	2022				
MMT	Fluid	WMP	SMP	Cheese	Butter
Production	40,350	1,050	25	20	13
Imports	1,050	750	350	155	140
Consumption	41,400	1,800	375	175	153
% imported	2.5	41.7	93.3	88.6	91.5

US Dairy Exports to China



China Looks Cheap—but It Has Burned Investors Before

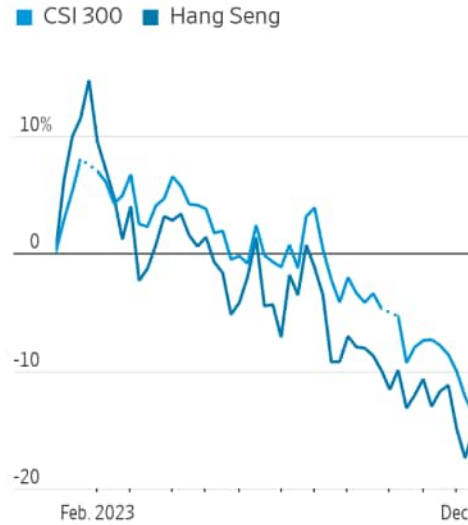
World's second-largest economy was a terrible place to put your money this year

By [Matthew Thomas](#) [Follow](#)

Updated Dec. 26, 2023 12:04 am ET

Chinese Shares Dived at Home...

Index performance so far this year



Desperate Chinese Property Developers Resort to Bizarre Marketing Tactics

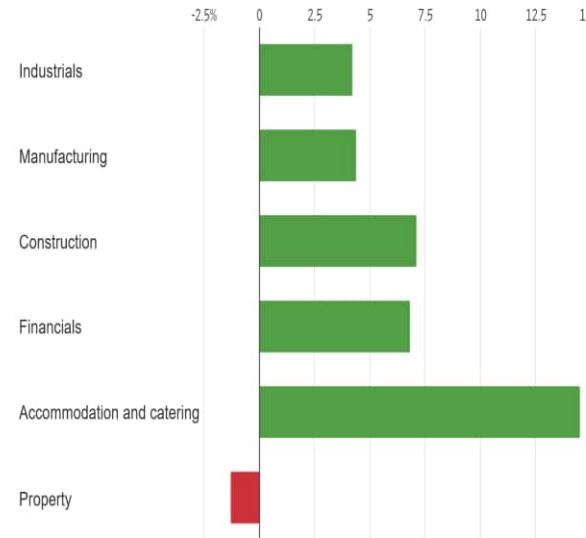
The country's real-estate slump is getting worse—and looks set to drag on for years

By [Rebecca Feng](#) [Follow](#) and [Cao Li](#) [Follow](#)

Updated Jan. 23, 2024 12:17 am ET

What a Drag

2023 year-on-year change in economic output, by sector

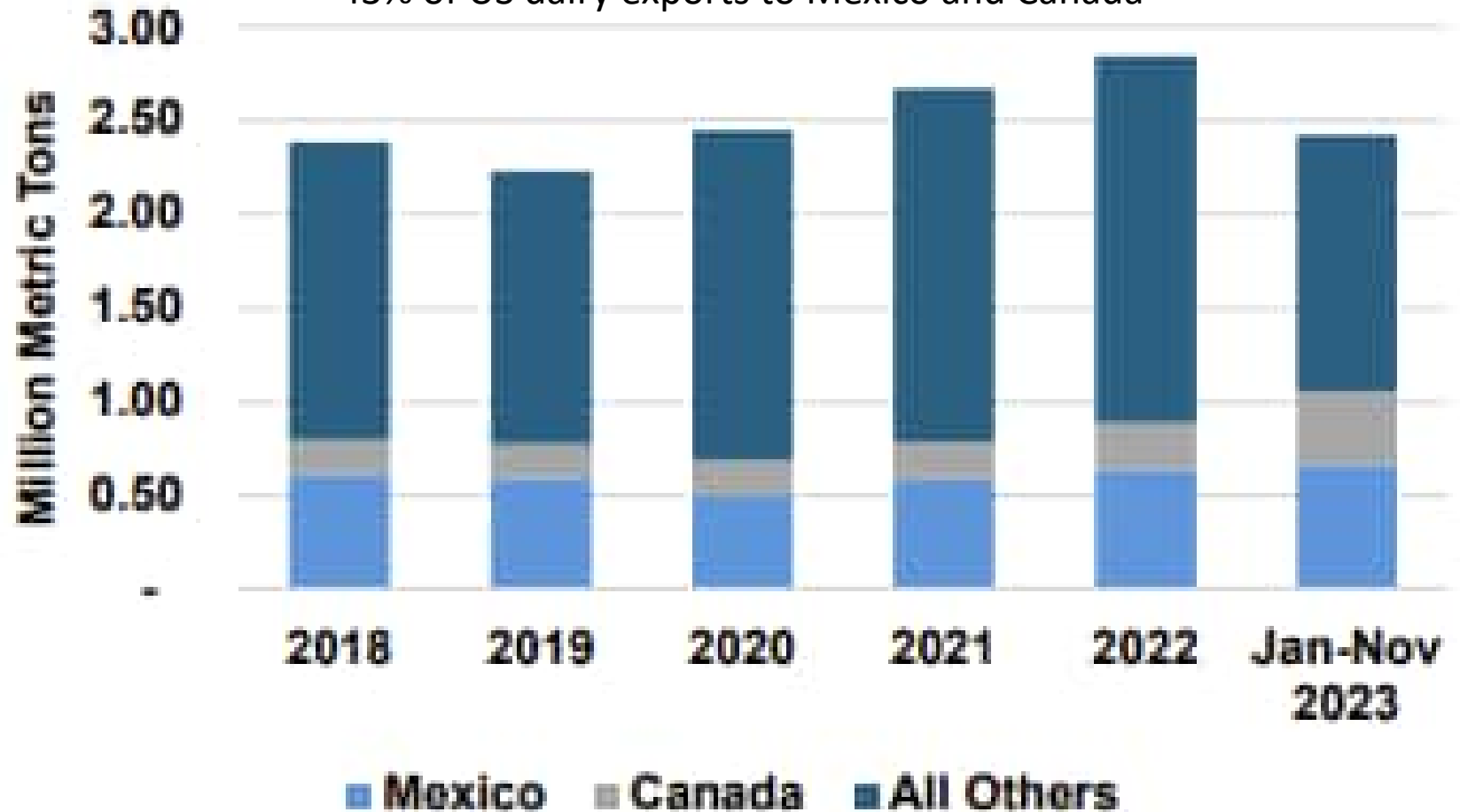


Source: Wall Street Journal

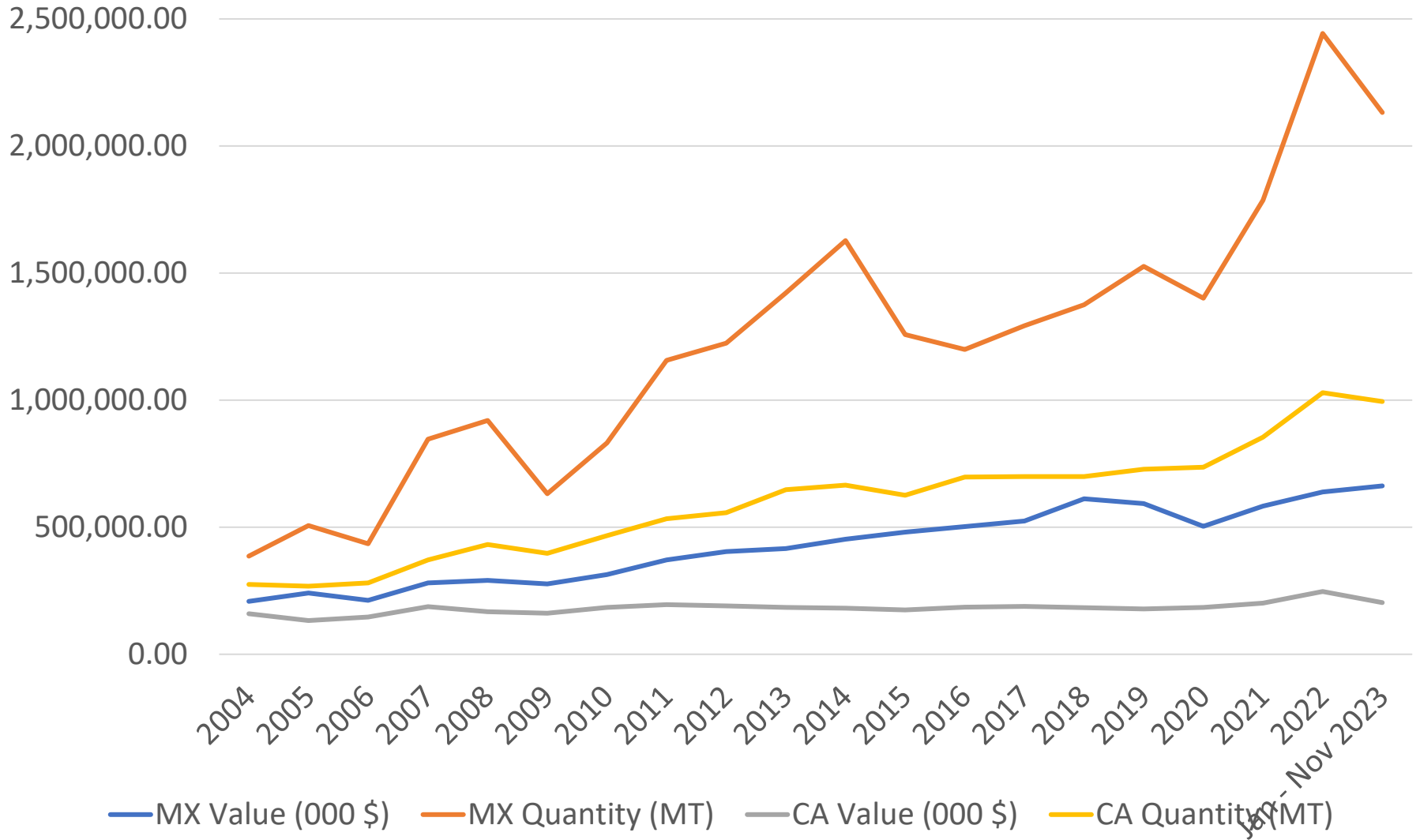
Source: National Bureau of Statistics of China

U.S. Dairy Exports

43% of US dairy exports to Mexico and Canada



US Dairy Exports in North America



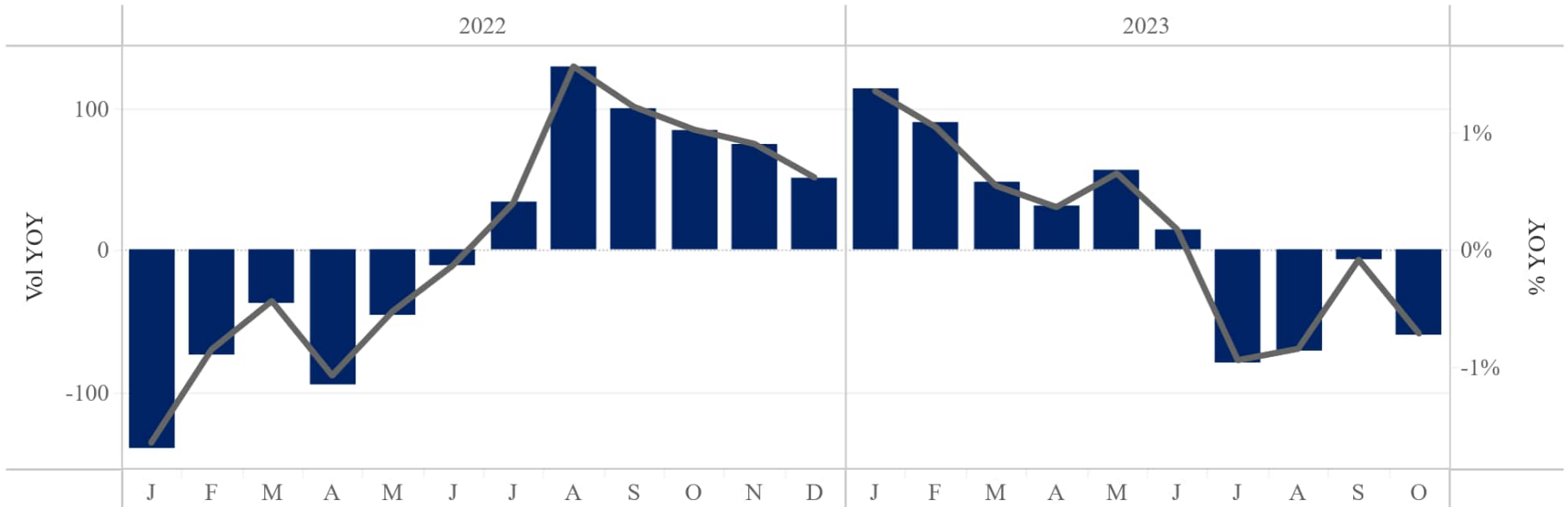


Source: Board of Governors of the Federal Reserve System (US)

myf.red/g/1eyie

Change in US Milk Production

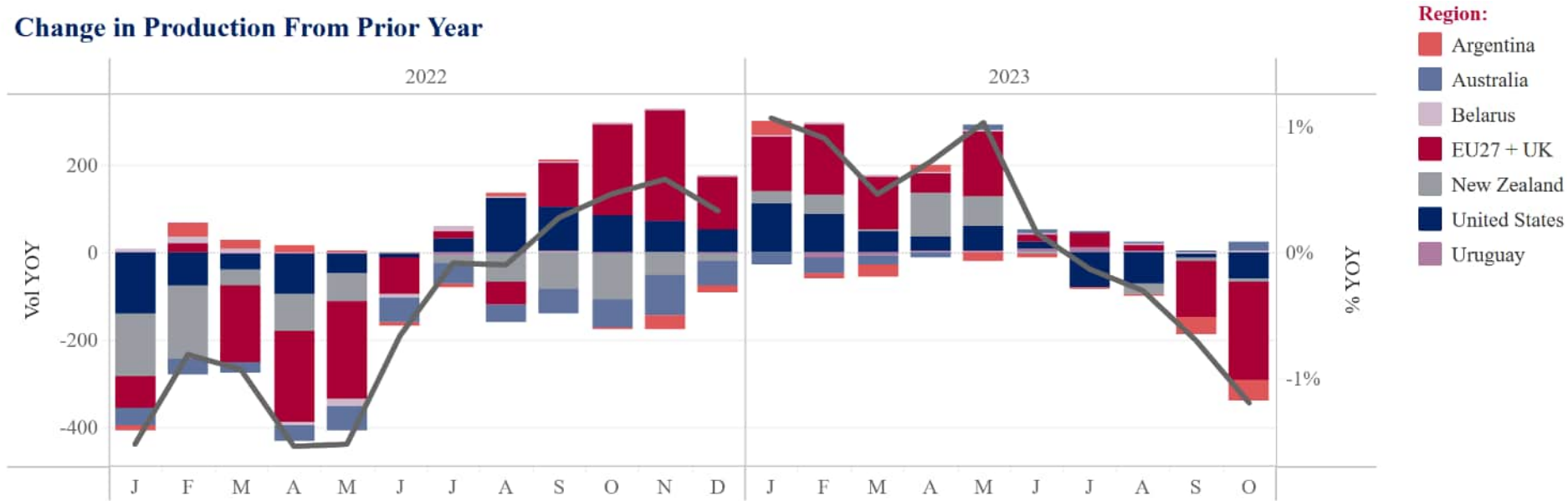
Change in Production From Prior Year



Source: USDA, Eurostat, Understanding Data & Markets

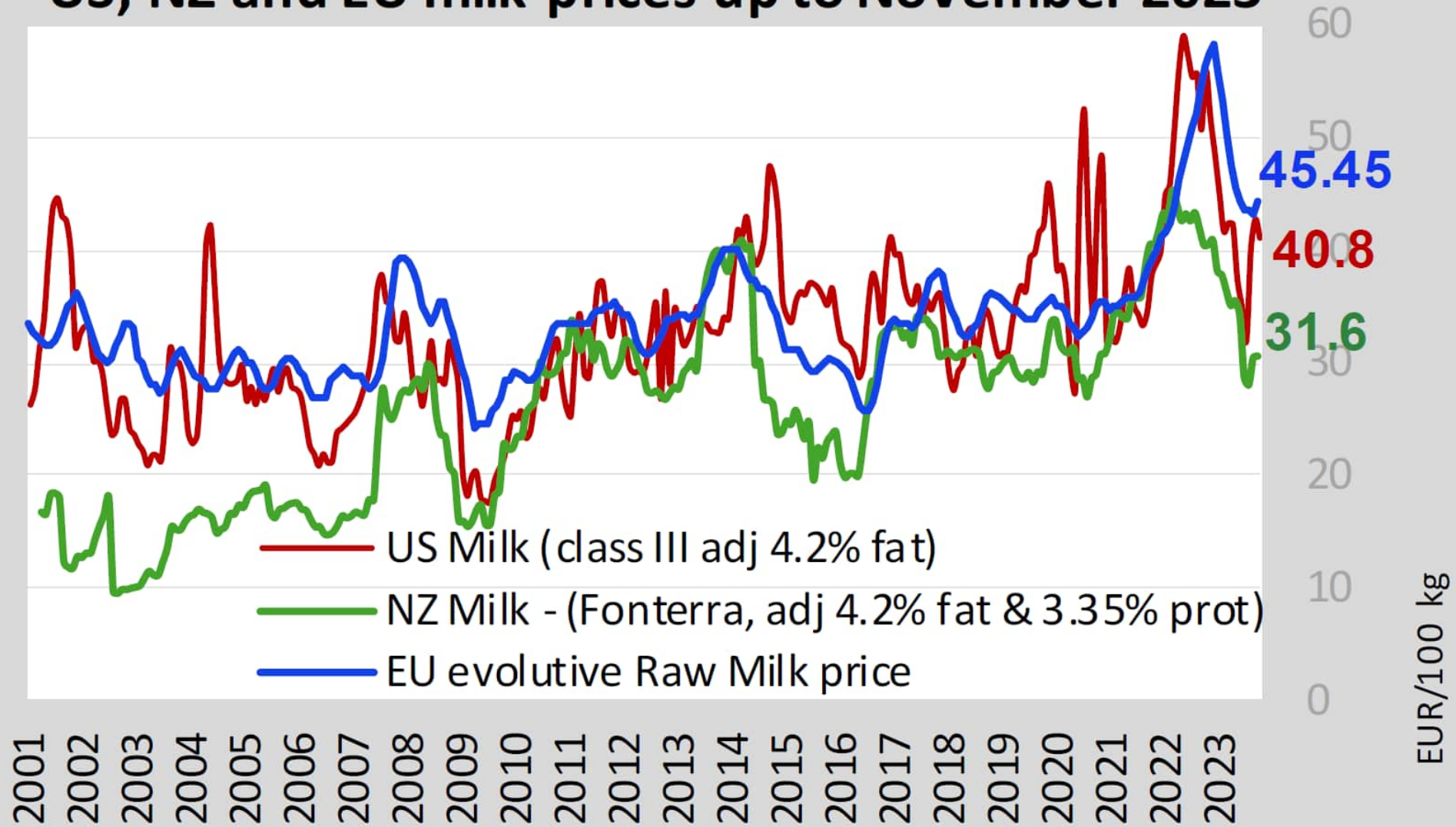
Major Exporter Milk Production

Change in Production From Prior Year



Source: USDA, Eurostat, Understanding Data & Markets

US, NZ and EU milk prices up to November 2023



CME Class III & IV Futures Values

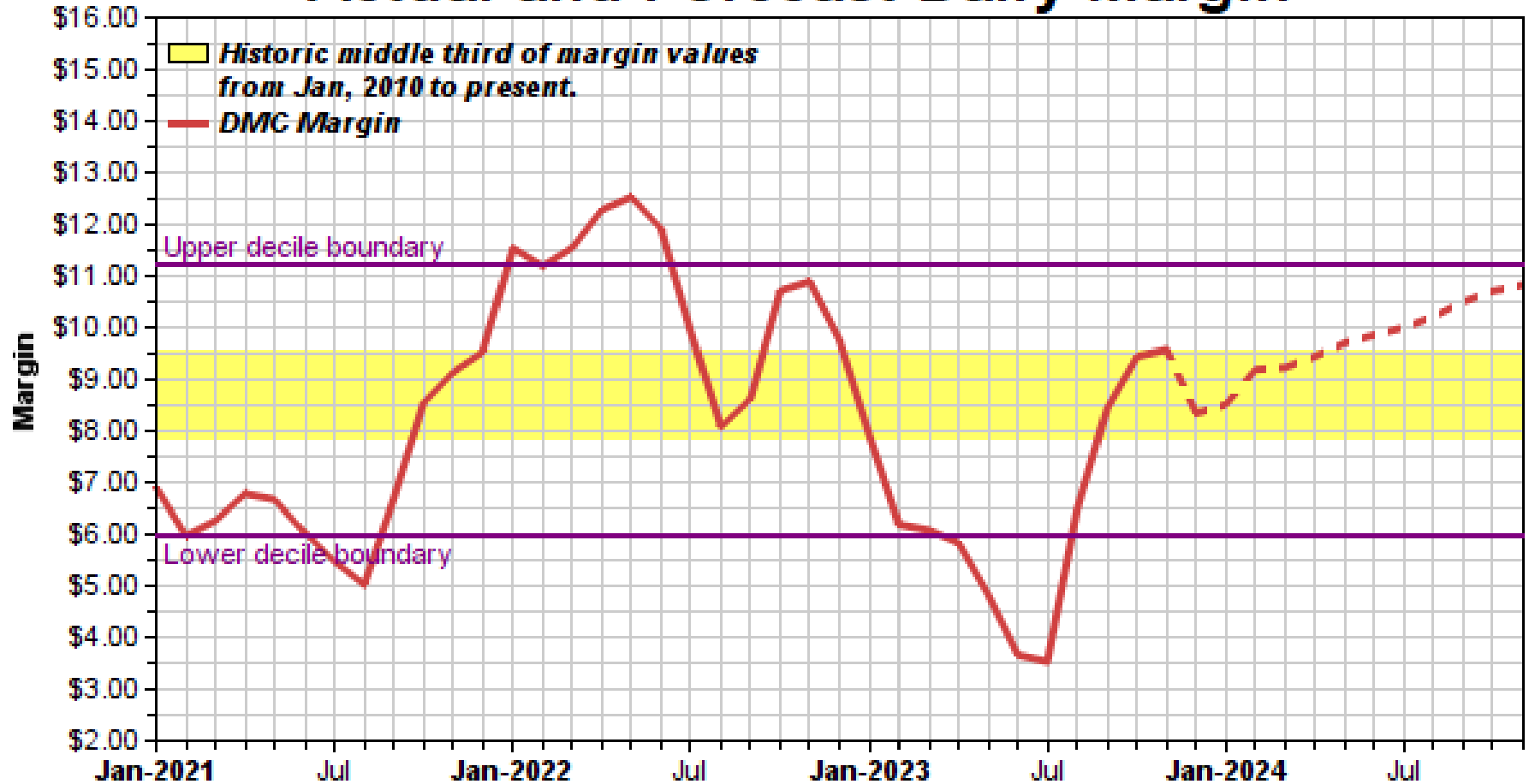


■ Class III Futures

■ Class IV Futures

Updated 1/23/24

Actual and Forecast Dairy Margin



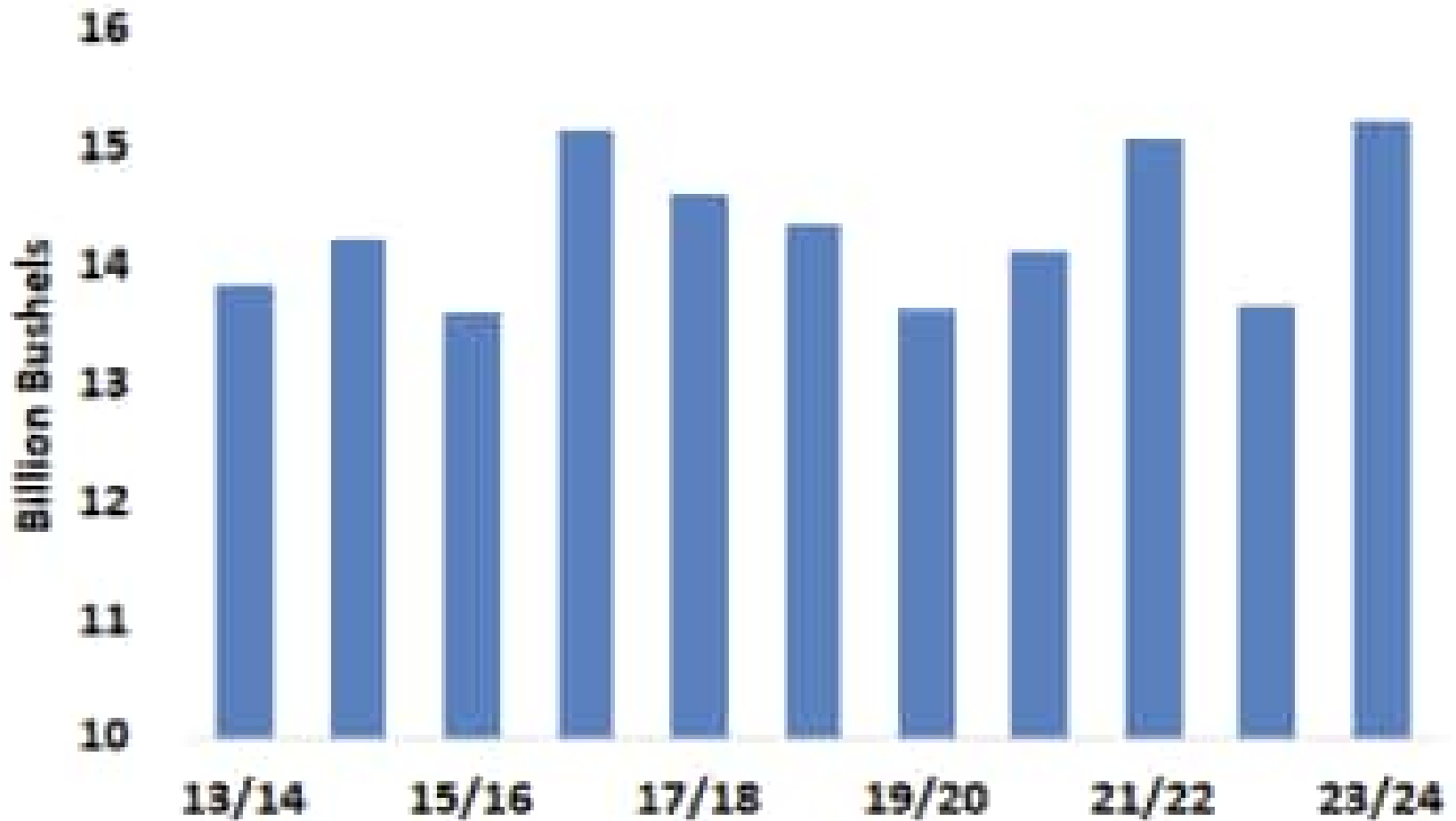
Updated 1/23/24

USDA Prices

January 2024 WASDE

Commodity	2021/22	2022/23	2023/24
Corn	\$6.00/bu	\$6.54/bu	\$4.80/bu
Soybeans	\$13.30/bu	\$14.20/bu	\$12.75/bu
Soybean meal	\$440/ton	\$452/ton	\$380/ton
	2022	2023	2024F
All Milk	\$25.34/cwt	\$20.60/cwt	\$20.00/cwt
Class III	21.96/cwt	\$17.02/cwt	\$16.10/cwt
Class IV	\$24.47/cwt	\$19.12/cwt	\$19.35/cwt

U.S. Corn Production



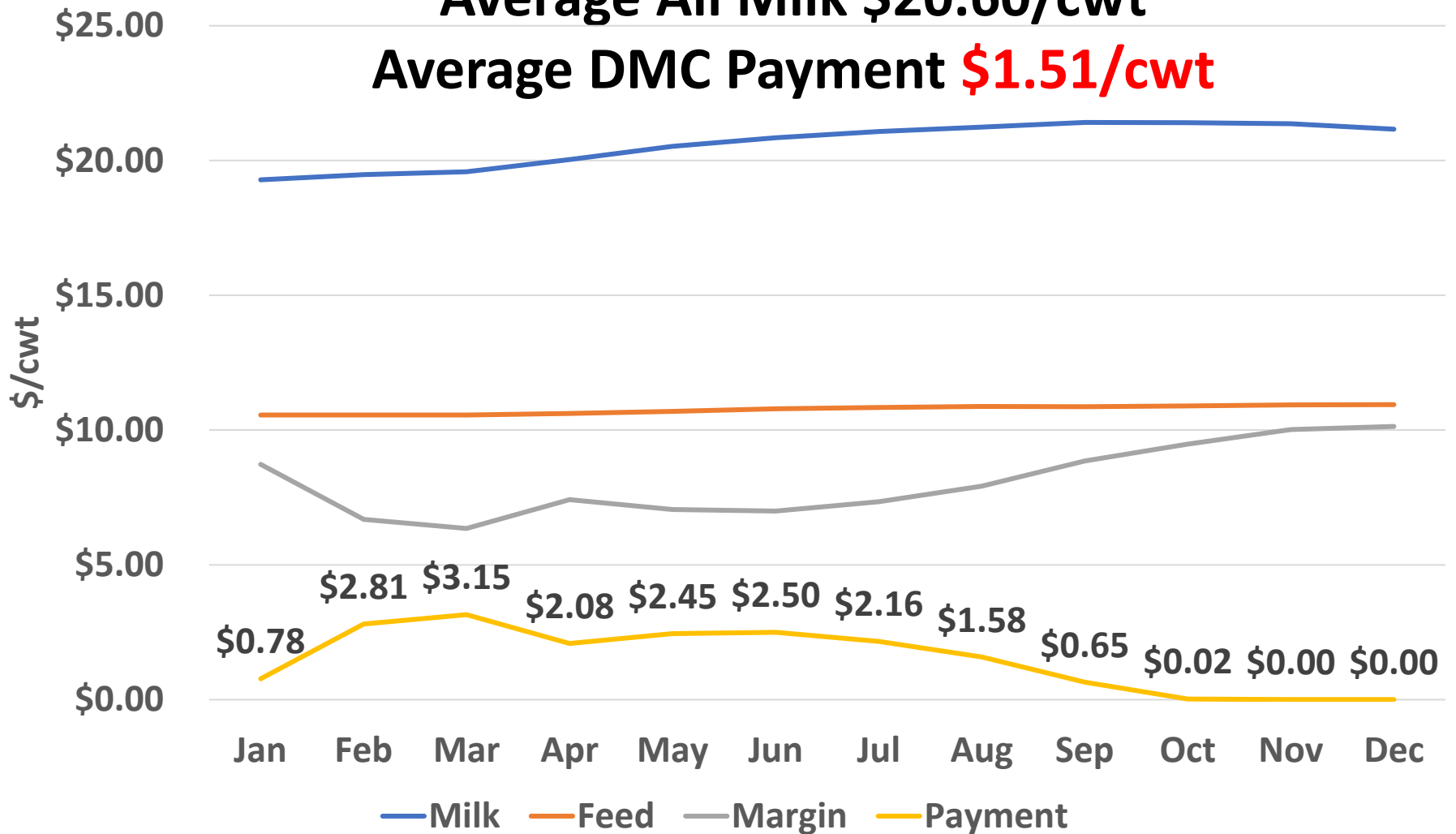
2024 Current Forecasts

	Class III	Class IV	All Milk
WASDE	16.10	19.35	20.00
Futures	17.45	19.55	
DMC forecast			21.04

2024 DMC Forecast

Average All Milk \$20.60/cwt

Average DMC Payment \$1.51/cwt



Thank You

Chris Wolf

cwolf@cornell.edu