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# Dairy Outlook

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## **OUTLOOK FOR U.S. DAIRY**

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The U.S. dairy sector enters 2024 facing lower feed prices, a smaller dairy herd, but broadly strengthening prices for both dairy products and fluid milk production. The January 1 dairy cow inventories in 2024 were 41,000 head lower than the previous year, at 9.357 million head. Additionally, there were about 14,000 fewer dairy replacement heifers in the herd. Cow numbers in milk production are expected to stabilize in 2024, ending the year at about the same level as the beginning of the year. The expected number of cows combined with milk per cow expected to continue growing, but at a slower rate than historical averages, as well as one additional milk day, result in milk production in 2024 growing at an annual rate of 0.7 percent.

Exports are projected to grow at a faster rate than imports, on both a fat and skim-solids basis, as tight supplies in global dairy markets make U.S. prices relatively more competitive for international consumers. Domestic use is projected to increase on a fat basis, but decline slightly on a skim-solids basis as domestic users compete for products that have strong export value. Stocks are projected to tighten further, both a fat and skim-solids basis, due to the continued pace of usage and milk production.

Milk prices are expected to be higher in 2024, as modest increases in production, coupled with robust demand for dairy products from both domestic and global markets support the values of most dairy products. Tighter supplies from major dairy exporters will support global dairy prices and support U.S. prices, as well. Strong rates of usage and tighter stocks of fat and skim-solids basis are projected to underpin Class III and Class IV milk prices and, in turn, raise the all milk price from 2023 levels.

### **Milk Cow Inventories Lower to Start the Year, Projected to Stabilize in 2024**

For 2024, U.S. dairy producers are expected to face lower feed costs and relatively improved forage supplies from the past several years. Milk cow inventories have been steadily declining since the beginning of 2023 and growth in milk output per cow continues to be lower than historical trends. In 2024, projected prices for milk and dairy products are lower than the recent peaks of 2022 and 2023, but they remain at higher levels compared with the years prior to 2020. Additionally, resilient domestic demand for dairy products and relatively tighter global dairy product markets are expected to encourage U.S. milk production levels. Milk production growth is projected to be constrained however, by the availability of cows and bred heifers to bring into the domestic milk herd.

On January 1, 2024, the dairy herd was 0.4 percent lower than the previous year. Furthermore, dairy heifer replacements were also 0.4 lower and the number of heifers expected to calve in 2024 was down more than 1 percent. The dairy cow herd has been trending lower since reaching a peak in 2021, as feed prices have risen and squeezed margins for milk producers. In 2023, average milk cow inventories steadily declined from 9.427 million cows in the first quarter to 9.360 million cows in the fourth quarter, largely driven by lower margins in the first half of the year and strong cull cow prices due to tight U.S. beef markets.

Improved margins in fourth-quarter 2023 are expected to be a stabilizing factor for the dairy cow herd in 2024. Slaughter rates of dairy cows fell in the second half of 2023, with the trend continuing into January 2024. Given the relatively tight availability of dairy replacement heifers, the lower slaughter rates suggest that the industry is likely to maintain close-to-current inventory levels for much of 2024. As a result, the projection for number of milk cows in 2024 is lower than 2023, but the quarterly projections have inventories during the fourth quarter at the same level they are projected to be during the first quarter.

### **Milk Per Cow Growth Continues To Be Slower But With Higher Component Rates**

Milk production is projected to increase 0.7 percent in 2024 to 228.2 billion pounds. The growth in production is due to higher output per cow, projected to increase 0.9 percent relative to the previous year, taking into account the extra milking day in 2024. In 2023, growth in milk per cow was just 0.1 percent higher than 2022. This was largely due to lower milk production levels in the second-half of the year, at least in part due to extremely hot summer conditions in several key milk-producing regions of the country. The 2024 growth rate is projected higher than 2023, but is lower than the longer-term average, reflecting the recent slowdown in the rate of growth seen in recent years.

While growth in milk output per cow has been slowing, this has been somewhat offset by higher fat test levels seen over the last decade. This likely reflects producers' shifting productivity focus from total milk production to the production of components contained within milk. The higher fat and skim-solids contents would dampen the impact of slower growth on a milk-per-cow basis for many processed dairy product markets. This shift is consistent with the long-term trends of milk production tilting more heavily toward the production of processed dairy products—such as cheese, butter, and whey-containing products- rather than fluid milk.

### **Tighter Global Milk Production Expected to Support U.S. Exports**

Global dairy markets are expected to be an influential factor in the U.S. dairy outlook for 2024. Overall, global dairy trade is expected to be constrained by lower milk production in several key exporters—notably the European Union and New Zealand. Lower milk production in these markets is expected to translate into lower exports of several dairy products, in particular: butter and nonfat dry milk (NDM). This is expected to help support global dairy prices in 2023. The reduced production in Europe and Oceania would provide opportunities for other dairy exporters to meet global demand, with the United States well positioned to ship product to key markets.

## **Strong Domestic Use of Dairy Products in 2023 Tighten Inventories**

The United States dairy market begins the year with sharply lower beginning stocks of dairy products, both on a fat and skim-solids basis. At the end of 2023, fat basis stocks were 4-percent lower than the previous year, while skim-solids basis stocks were 15-percent lower. For skim-solids basis products, there was a particularly strong decline in dry whey products and whey protein concentrate, which historically have been more oriented toward export. In 2023, however, these products saw substantial increases in domestic use, in part spurred by the relatively low whey prices through much of the year. On the fat basis side, butter stocks were 9 percent lower at the end of 2023 compared with the previous year, as growth in domestic use outpaced production during the year, helping support butter prices. American style cheese was a notable exception in 2023, as stock levels increased relative to 2022. This may be in part due to the increased cheese production capacity that has occurred over the past decade which has resulted in production outpacing use. In 2023, uncompetitive cheese prices for much of the year resulted in substantially lower exports, and inventories built. Overall, domestic use increased 2 percent on a fat basis and 3 percent on a skim-solids basis in 2023.

For 2024, domestic use on a fat basis is projected to increase 1 percent. On a skim-solids basis, domestic use is projected to decline about 1 percent, as domestic use is expected to have to compete with foreign demand. However, at 182.0 billion pounds, the skim-solids basis use is higher than the 5-year average, indicating continued strength in domestic demand for many skim products.

## **U.S. Dairy Exports Projected Higher in 2024 for both Fat and Skim-Solids**

U.S. price competitiveness was an important factor in trade in 2023. High domestic prices for cheese and butter resulted in higher imports and lower exports than in 2022 on a fats basis. Likewise, weaker foreign demand for skim products resulted in low international prices. Skim-solids basis exports in 2023 were lower than the record amount shipped in 2022.

For 2024, fat basis exports are projected to grow at a higher rate than imports; at 10 percent and 1 percent, respectively. This reflects improved price competitiveness for U.S. products given relatively tight supplies among competing exporters. Skim-solids exports in 2024 are also projected to be 4 percent higher than 2023, although international demand is expected to compete with U.S. domestic use.

## **Strong Demand Projected to Support U.S. Dairy Prices in 2024**

Strong domestic and international demand is expected to be supportive for U.S. milk and dairy product prices. The all milk price is projected to be \$20.95 per cwt in 2024, up from an estimated \$20.48 in 2023.

The 2024 Class IV milk price is projected to be \$20.20 per cwt, up from the 2023 estimate of \$19.12 based on higher butter and NDM prices.

Butter prices in 2023 witnessed a strong surge in pricing in the fall and winter, leading up to the peak holiday demand period. While prices fell after holiday demand was fulfilled late in the year, January 2024 prices are higher than they were a year ago due to tighter stocks. Additionally, strong international prices in early 2024 have made U.S. butter more competitive on the international market, further supporting the outlook for higher butter prices. U.S. butter prices are projected to average \$2.77 per pound in 2024, up from \$2.62 in 2023—although not as high as the \$2.87 reached in 2022.

NDM prices in 2023 fell sharply, down to \$1.19 per pound from the record high prices of \$1.69 in 2022. Lower prices led to lower production of NDM products and ultimately sharply lower stocks at the end of the year. For 2024, NDM prices are projected to be \$1.24 per cwt due to improved domestic and international demand.

The 2024 Class III milk price is projected to be \$17.10 per cwt, up from the 2023 estimate of \$17.02 per cwt. Class III prices are not expected to increase as much as Class IV due to a projected fall in cheese prices that will offset the projected increase in whey.

Cheese prices fell nearly 17 percent in 2023, to \$1.76 per pound. The United States has seen a dramatic increase in cheese production since 2018, as additional production capacity has been added. American-style cheese exports fell in 2023, after a substantial increase in 2022. As a result, inventories of American-style cheeses were larger than the previous year heading into 2024. This is expected to put downward pressure on domestic prices. For 2024, cheese prices are projected at \$1.69 per pound, a 4 percent decline from 2023.

Whey prices fell sharply in 2023, from \$0.61 per pound in 2022 to \$0.36 per pound. Weak export demand during the second half of the year resulted in sharply lower prices. The lower prices seemed to have spurred increased domestic use for whey products, however. For 2024, whey prices are projected to be \$0.48 per pound—up strongly from the previous year, but still lower than 2022. The projected price increase is due to improved global demand for whey, which has seen prices steadily improve since the September 2023, as well as continued firm demand from domestic users.

Additional information about the 2024 dairy forecasts is available at:

World Agricultural Outlook Board (WAOB)  
World Agricultural Supply and Demand Estimates  
[www.usda.gov/oce/commodity/wasde/index.htm](http://www.usda.gov/oce/commodity/wasde/index.htm)

Economic Research Service (ERS)  
Livestock, Dairy, and Poultry Situation and Outlook  
<https://www.ers.usda.gov/publications/pub-details/?pubid=108311>

Foreign Agricultural Service (FAS)  
Dairy: World Markets and Trade  
<https://www.fas.usda.gov/data/dairy-world-markets-and-trade>