

Can Dairy Match Population Gain

World milk production could reach 1.2 billion metric tons (MT) by 2050, an additional 700 million MT over the next 26 years, according to estimates from the IFCN Dairy Research Network. To put this growth into perspective, the equivalent of seven times the annual milk production of the United

States would need to be added to global output. At that level, global production would provide 10-13% of daily protein intake for the 9 billion people forecast to roam the earth by 2050. The question is whether the global dairy industry will be capable of adding that much production while using less land and water and milking fewer cows. With output in key exporting regions apparently reaching plateaus, the task appears daunting.

The assumption, however, is that most of the new production growth will come from China and India, and given that both nations have expanded milk production by 8-10% over the past few years, the expectation seems reasonable. In addition, both countries could benefit from greater output per cow, which is likely to occur as production migrates away from 1-2 cow farms to larger operations.

India's 61.5 million cows produce a paltry annual average of 3,600 lbs. of milk each. China's cows are more productive at 14,200

lbs. per cow annually. But per cow output in China and India pales compared to U.S. per cow productivity at 24,000 lbs. Instead of adding significantly more cows, countries are likely to focus on driving output per cow and component levels higher. Europe, New Zealand,

and the United States continue to focus on efficiency and more milk per cow for a variety of reasons. First and foremost, the global dairy industry and its contribution to greenhouse gas emissions has come under scrutiny. So instead of expanding, dairy producers are focused on

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Ken's Corner



*by Ken Meyers
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Cheese demand has been driving growth in the U.S. dairy industry for decades. Per capita cheese consumption in the United States has risen from 31.2 lbs. in 2020 to 41.8 lbs. in 2022. It has also risen globally, but to a much lesser degree.

To keep pace with this rapidly growing demand for dairy protein and the world's increasing population, U.S. cheese makers have been racing to add capacity. Over the past two years, additional capacity has been built in the United States to handle an extra 20 million pounds of milk per day, or 7.3 billion pounds per year. And there is more on tap for southern Texas, New York, Washington, and Georgia next year, which could push the total to 40 million pounds of milk per day. An additional 14.6 billion pounds of milk per year would require approximately 470,000 dairy cows producing an average of 85 lbs. of milk per day.

Currently, there aren't enough heifers in the United States to produce an additional 14.6 billion pounds of milk a year, so producers will be driven to increase both total output and components. If they are paid enough to invest in the inputs and technology necessary to increase per cow productivity, U.S. producers will once again prove they can meet almost any challenge. **MCT**

Cheese, Butter Stage Late-April Rally

For the first time this year, and likely not the last, the CME spot butter market reached \$3/lb. That sent

butter futures surging. The butter markets pulled back to the mid-\$2.90s, and bids quickly returned as the price abated. Butter was not alone. Cheese markets at the end of the month lifted to multiple-month high, likely on news of slowing milk production, less cheese in storage, and improving retail demand. As a result, milk and dairy product futures prices increased as buyers began to seek coverage and interest in selling slowed. **MCT**

MCT Forecast

	Block*	Barrel*	Class III	Butter*	Class IV	Whey**	NFDM**
Apr	1.6050	1.6125	16.11	2.9425	20.36	0.4350	1.1650
May	1.7100	1.7025	17.00	2.9675	20.27	0.4225	1.1425
Jun	1.7550	1.7900	17.68	3.0475	20.69	0.4275	1.1525
Jul	1.8500	1.8000	18.24	3.1250	21.26	0.4300	1.1800
Aug	1.8825	1.8550	18.70	3.1450	21.92	0.4325	1.2475
Sep	1.8650	1.8300	18.49	3.2175	21.56	0.4275	1.2850

* CME prices.

**NASS prices.

...more components, more products

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improving genetics, genomics, cow comfort, and other efforts aimed at producing more milk and components per animal. A study in the *Journal of Dairy Science* suggests that modern cows could produce up to 45,000 lbs. of milk annually—nearly doubling today’s productivity.

While the idea of cows producing up to 45,000 lbs. of milk annually may seem like a pipe dream, consider the following. In 2000, the Upper Midwest Federal Milk Marketing Order reported that the simple average butterfat test was 3.73 lbs. per hundredweight of milk and protein was 3.01 lbs. Last year, the Upper Midwest butterfat average was 4.16 lbs. and protein was 3.23 lbs. This reflects a compound annual growth rate of 0.5% for butterfat and 0.3% for protein. If this growth rate were to continue over the next 20 years, butterfat tests could reach 4.59 lbs. per hundredweight of milk and protein could hit 3.44 lbs. Given that 80% of milk is processed as something other than fluid milk, significantly more dairy products could be made even if milk production were to remain flat. This potential for increased efficiency could mean the industry is on track

to meet future demand sustainably.

However, milk production growth and added capacity rarely appear in incremental bites that the market can easily consume. It can take time for the market to regain balance following significant increases in milk volumes, and the milk supply can decelerate or plateau for a time before picking up again. World milk production appears to be at a plateau this year. In the first two months of 2024, China’s year-over-year milk production expanded by 0.6%, compared to 11% growth in 2023 vs. 2022. Similarly, India’s year-over-year milk production in the 2022-23 season was up 4.3%, but that was much lower than historical gains. U.S., European, and Argentine milk supplies lag last year’s pace. This could create an interesting dynamic later this year as processors—for the first time in years—contend with underused capacity. While the capacity exists to produce more cheese, the milk needed to make it may not be available.

Regardless of the inevitable twists and turns that occur on the road to feeding the world’s growing population dairy product demand will loom large. **MCT**



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