

Evolution

The endless evolution of cheese – how biosolutions are shaping its future

Around the globe, cheese is a household staple. It is cherished for its diverse flavors and textures that have allowed it to adapt to countless culinary traditions, whether as a simple meal, a gourmet delicacy, or a key ingredient in recipes. In 2023, global cheese production amounted to 22.15 million metric tons¹ – a volume greater than the world's tea, coffee, and cocoa combined. The global cheese market has been steadily increasing by 2% in volume over the past five years and is expected to keep that momentum in the years to come².

Producing more with less

Crafting cheese is a complex process that demands considerable resources. Notably, depending on the cheese type, it takes ten kg of milk to produce just one kg of cheese, underscoring the critical need for efficient production processes to maximize yield and minimize waste. Even minor yield improvements can have substantial economic and environmental impacts, enabling producers to increase profitability while minimizing resource consumption.

This is a critical sweet spot to reach. Consumers increasingly demand cheese that not only offers appealing taste and texture but also features simpler labels and is made through more sustainable practices that reduce climate impact and waste. At the same time, economic pressures such as high inflation, uncertainty, and rising energy costs require producers to focus on improving cost efficiency and productivity by boosting yields and minimizing the use of raw materials, water, energy, and waste.

By using the right combination of biosolutions such as starter cultures, coagulants and functional enzymes, dairies can take a big step in the right direction and yield up to 3% more cheese. It might not sound like a lot, but if all dairies in the world yielded 3% more cheese, the world would need 1 million fewer cows to produce the same amount of cheese³, reducing greenhouse gas emissions, land use, and water consumption associated with dairy farming. This lightens the environmental footprint of cheese production and supports a more resilient food system.

At Novonesis, a trusted partner to the cheese industry since 1874, we understand the pressure modern cheesemakers are under, and we are committed to providing our partners with innovative biosolutions that deliver on all these parameters – from yield increase and process improvement to enabling product differentiation and shelf life extension, and, most importantly, enhancing taste and texture. Because in the end, taste and texture are king when it comes to satisfying consumers and standing out in a competitive market.

The fact that every other cheese in the world already contains a Novonesis solution bears testament to the worldwide impact of our dedication to advancing cheese production practices and transforming the industry. This also includes supporting the plant-based cheese segment with solutions that enhance quality and reduce additives to promote consumer appeal and label simplicity.

Next Level Dairy

With the most extensive enzymes and cultures range for cheese in the dairy world, we are uniquely positioned to make a positive impact through our biosolutions.

Our deep customer understanding and strong relationships provide the insights that drive our sharpness in innovation and execution, enabling us to lead the journey towards Next Level Dairy.



Cheese is always ripe for innovation. In 2024, Novonesis launched SPICEIT® M100 – the first fungus-based microbial lipase (enzyme) to match the sharp, piquant flavor of animal lipase and solve the challenge of soapy off-flavors. A strong example of the innovation synergies from the combination of the two legacy companies.

This is our commitment to unleashing the transformative power of biosolutions in the dairy sector – helping cheesemakers get more out of less while creating delicious products people love. We are also shaping the future in emerging markets, enabling producers to innovate and meet the growing demand from new cheese-loving consumer segments.

Cheese is one of the world's oldest known foods, yet it's constantly evolving. Novonesis leads the way by doing the same.

“It’s all about bringing biology back to make foods better. We have more than 100 years of scientific expertise and advanced biosolutions that can enable us to redefine the future of dairy for healthier lives and a healthier planet.”

Thomas Skaaning,
Senior Vice President – Dairy, Food & Beverage Biosolutions

¹ Global cheese production

² Cheese trends, global market overview

³ Novonesis Capital Markets Day 2024

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