

CHEESE ON THE MENU

FOOD TRENDS AND THEIR IMPACT ON
VARIOUS CHEESE APPLICATIONS



WHITEPAPER 2023

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**"IN THE END, IT'S ALL ABOUT
A QUALITY PRODUCT WITH
THE RIGHT CHEESE SOLUTION"**

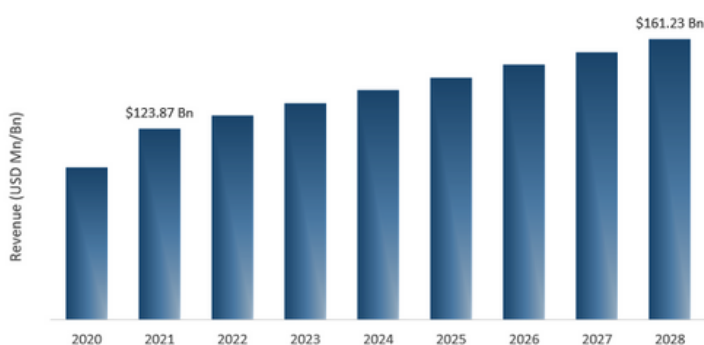


INTRODUCTION

The developments driven by trends and societal influences in the food industry are progressing rapidly. Consumers are changing, which has implications for production and distribution. Simultaneously, the entire industry is striving for sustainability while innovation continues to evolve. Naturally, these developments significantly impact cheese consumption and production.

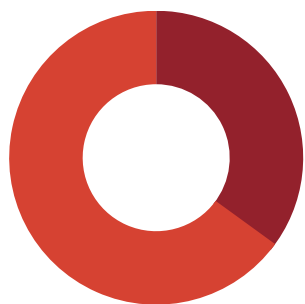
Definition of Cheese Application:

A cheese application encompasses all culinary uses in which cheese plays a prominent role. This ranges from using cheese as a spread for bread to melting, grating, gratinating, or incorporating cheese into sauces, snacks, salads, pizzas, pastas, and savory dishes.



Cheese is an integral part of many meals and is gaining increasing popularity. According to research by Zion Market Research, the global cheese market is projected to grow at an annual rate of 3.84%, from \$123.87 billion in 2021 to \$161.23 billion in 2028. This growth during the forecast period (2021-2028) is attributed to the rising demand for various types of cheese in diverse food products. For instance, the consumption of cheese in (vegetarian) fast food, such as pizza, pasta, burgers, and snacks, is on the rise. Additionally, consumers are opting for cheese as a replacement for fish or meat products.

Global Cheese Market Size 2022



Processed
Natural

Due to societal and economic shifts, along with the increasing demand for cheese products, the cheese market is evolving. Traditional cheese applications are becoming more versatile, and a new generation of discerning consumers with a strong focus on innovation and feel-good products is emerging. Flavor plays a significant role in this context, and consumption of animal fats, fish, and meat products is progressively being substituted by alternatives.

These developments require food producers, particularly cheese processors, to adapt their processes and innovate in product development. Anticipating the changing cheese market demands the right knowledge and experience to create tailored applications effectively. Apart from the challenge of maintaining quality standards across different cheese products, there are also practical considerations to ensure feasible production.

This whitepaper aids developers, purchasers, and (food) marketers in creating novel cheese applications. On one hand, by discussing the trends in the food industry (Chapter 1) and the resulting implications for the cheese market (Chapter 2), and on the other hand, by sharing the steps necessary for developing unique new products or applications using the appropriate cheese (Chapter 3). Because ultimately, that's what it's all about!



1 DEVELOPMENTS IN THE FOOD INDUSTRY

These developments are driving a food transition: a transition towards a sustainable food system in which food is produced and consumed in a manner that nourishes current generations without jeopardizing the economic, social, and ecological foundations for feeding future generations. Before delving into how this translates to cheese consumption and applications, and how cheese solutions can respond to this, let's provide a brief overview of the impact of these developments on food consumption.

A. Growing significance of sustainability in the food industry

A part of the consumers are increasingly aware of their food's ecological footprint and are critically assessing its impact on the environment, as well as on their own health and that of the animal world. As a result, consumers are making different choices and raising higher demands for how food is produced.

Reducing environmental, climate, and habitat impact

A distinguished brand or product alone is no longer suffices for consumers. They are primarily interested in the origin, processing, and transportation of their food. Environmental effects are becoming increasingly decisive factors in consumer decisions. In Europe, this has led to a shift from meat consumption towards the consumption of more sustainable products. Additionally, the food industry itself is actively engaged in optimizing production processes and clean labels. For instance, there's a critical assessment of circularity within businesses, product processing, packaging, and more sustainable distribution and transport.

We understand that consumer food preferences are continuously evolving. Food goes far beyond satisfying our hunger. Insights from three global surveys conducted for SIAL indicate that food-related issues are becoming increasingly complex. SIAL Insights 2022 highlights these findings, revealing that consumers still want to enjoy their food, but health and ethics are playing an ever more important role. For example, 67% of consumers have altered their behaviour towards healthier eating, and 63% view food as a reflection of the world they aspire to live in.

Animal welfare

Just as climate awareness has risen, attention to animal welfare has grown over the past decades. Consumers want to know where their food comes from, how animals are bred, fed, transported, and slaughtered. This surge in awareness for animal welfare has resulted in a notable increase in certifications that prioritize animal well-being, and sales of dairy products with these certifications are on the rise. Moreover, this heightened awareness of animal welfare leads consumers to consume less meat, fish, and dairy, while being willing to pay more for items with certification or for (local) products with traceable origins, such as products from local farmers.

Health & Welfare

Alongside animal welfare, there is a rising consciousness about personal health and well-being. More and more consumers are opting for healthy and tailored eating. Various reports and studies support this, such as a 2020 research by ADM (American agribusiness and food conglomerate) which states that 77% of consumers intend to lead healthier lives in the future. The 2020 Food & Health Survey by the International Food Information Council reveals that 54% of all consumers believe health in relation to food is more important now than it was in 2010. Consequently, there's an ongoing shift towards products with less sugar, less fat, and fewer unnecessary additives.



Reducing food waste

Both consumers and the industry or hospitality sector are becoming increasingly conscious of food waste. This awareness results in more customised production and consumption. This is evident in smaller packaging sizes or extended product shelf lives.

B. Consumers becoming more discerning

Consumers aren't eating more, but they are eating differently. In daily groceries, there's a greater emphasis on value for money, with consumers willing to pay more for products with a unique flavour. Moreover, there's substantial growth in niches and specialties such as organic, vegetarian, and vegan options. Lastly, consumers are seeking more convenience through home delivery, fresh ready-to-eat meals, and prepared items like pre-cut food.

Consumers also place increasing value on locally produced, artisanal food. They are becoming more adventurous with their palate, opening up to international flavours and unique exotic products, contributing to the growing popularity of fusion or global cuisine.



C. Technical innovation and digitalisation in the food industry

The food industry continues to invest heavily, leading to numerous innovations. There's a growing presence of robotics, automation, and digitalisation, which enhances production processes. This allows for more tailored responses to individual consumer needs, offering new flavours, smaller (single-serve) packaging, or alternative compositions. Additionally, alongside process optimisation, smart industry is emerging in the food sector. Smart industry encompasses a range of technical innovations and digitalisation, including artificial intelligence, mobile internet, cloud computing, the internet of things, and 3D printing. These advancements are leading to the rise of intelligent factories, where machines and robots communicate, detect errors, and self-correct. These developments have an impact on every company in the food sector.



2 THE FUTURE OF CHEESE CONSUMPTION & APPLICATIONS

Changes in the food industry naturally have consequences for cheese consumption. These manifest in several trends that can be categorised into three areas: lifestyle, product, and technology.

A. LIFESTYLE

Making more conscious food choices

The growing realization that consumers can positively contribute to the climate and their own health through their lifestyle has resulted in more Dutch individuals making conscious food choices.

A progressively expanding group of consumers are seeking food options that reduce their environmental impact and minimize harm to their health. This has led to an increase in people aiming to reduce meat consumption and a rise of the number of vegetarians and flexitarians. As a result, the worldwide sales of plant-based "meat products" are projected to exceed \$35 billion by 2027.

Cheese as an alternative

The decline in meat and fish consumption also impacts cheese consumption. The demand for cheese and cheese-containing products continues to rise. Cheese is seen as a viable alternative to meat and fish due to its versatility and the availability of various cheese varieties. There is often a product that aligns with the preferences of flexitarians or those who seek mindful choices.

Analog and hybrid cheeses

Significant growth is anticipated in the realm of hybrid cheeses or dairy products, which combine at least one traditional animal-based dairy component with one plant-based component. This trend is driven by consumers making more mindful food choices. Analog cheeses are also gaining popularity. Analog cheeses mimic the texture, flavour, and appearance of real cheese. Additionally,

they are often more cost-effective to produce and possess superior melting and grating properties. In contrast, hybrid cheeses offer the advantages of both real cheese and plant-based ingredients, allowing consumers to enjoy the taste and texture of real cheese while benefiting from the sustainability aspects of plant-based components.

Rise of vegans

In addition to consumers making more conscious food choices, there has been a consistent increase in the number of people adopting a completely vegan lifestyle. This enduring interest is evident in recent research by [Thuisbezorgd.nl](https://www.thuisbezorgd.nl).

35% In 2023, over one-third of Dutch individuals (35%) intend to eat more or only vegan food.

15% For 15% of those with New Year's resolutions, the year began with a fully vegan dietary pattern.

63% For most Dutch people, their own health (63%) and animal welfare (63%) are the primary reasons for adopting a more vegan diet.

53% These reasons are followed by the desire to combat climate change (53%) and the belief that plant-based eating can help end world hunger (22%).

The growing demand for vegan food options is stimulated by global social movements such as Meatless Mondays and Veganuary – a worldwide challenge to eat vegan in January. In 2022, more than 629,000 people participated, an increase versus 400,000 in 2020 and 250,000 in 2019.

With the rising number of vegans, classic dishes are often given a new vegan interpretation – this is termed "veganizing." Animal ingredients are replaced with plant-based alternatives like meat and dairy substitutes.

Vegan cheeses; the trend of today! From mozzarella to feta and cheddar, vegan cheeses are the trend of the moment. Vegan cheeses are crafted entirely from plant-based ingredients, such as oils, proteins, and carbohydrates. Additionally, if needed, other plant-based alternatives can be incorporated to meet specific preferences. One notable trend in application is vegan chili cheese nuggets. These are being prominently promoted by fast-food chains like McDonald's and Burger King, and there's ongoing development to enhance their taste and texture, ensuring genuine cheese-like qualities in these products.

Increased attention and the rise of global cuisine

The food industry is witnessing a more critical and engaged consumer with a heightened interest in food and cooking. This has two global implications: increased attention to eating and cooking, and an increase in international sharing of dishes, also known as the rise of global cuisine.



The emphasis on eating and cooking is greatly driven by (social) media and the food industry (suppliers, hospitality, and retail). Food channels and magazines focus on specific foods, influencers and chefs concentrate on particular recipes, ingredients, or cooking methods. Social media facilitates the sharing of meals across borders, making them popular worldwide. Local dishes, such as Indian curry, Japanese ramen, or Italian pasta with mozzarella and a French cheese platter, are enjoyed worldwide. This trend translates to an increasing demand for international products in Europe, such as specific melting cheeses or mozzarella.

Beyond media and consumer attention towards food, the hospitality sector is becoming trend-sensitive and more discerning. More and more often, there are niche restaurants that choose to center their concept around one signature product offering top quality and focus such as the Avocado show and the "de Kaasbar" (The Cheese bar). This trend will give specific product groups a major stage to become more popular towards the consumer.

B. PRODUCT

Inherent to the shifting consumer demand are changes in the product offerings. We outline the developments that are driving new cheese products or an increased demand for these products.

Global Cuisine

As consumers become more open to different types of dishes and cuisines from other countries, the demand for various (unfamiliar) types of cheese or cheese products is also rising.

6,4% Mozzarella

The mozzarella segment dominated the market in terms of revenue share and is expected to grow annually by 6.4% in the forecast period of 2022-2030, according to the Grand View Research's Cheese Snacks Market Report. This surge is due to the increasing demand for mozzarella in the food sector for the production of various food products. Furthermore, mozzarella is rich in protein, containing 28 grams per 100 grams. Mozzarella is as versatile as it is nutritious, finding extensive use in Italian and American snacks due to its easy melting, satisfying stretch, and popular taste.

Cheese sauce

A prime example of international culinary influences spreading across different countries is cheese sauce. Influencers, chefs, and enthusiastic consumers share recipes for this beloved cheese application on social media, along with creative ways to incorporate it into dishes. This culinary trend has gained traction as a dip for nachos, a sauce over burgers and fries and an essential ingredient in Tex-Mex dishes like tacos and wraps found on menus, including those at Taco Bell, Burger King, and McDonald's.

The American trend of "loaded fries," where premium fries are generously covered with cheddar cheese sauce and more, is gaining



popularity in the fast-food sector and the hospitality industry. History has shown us that trends originating in the United States quickly make their way to Europe and the United Kingdom. Therefore, it's not a matter of if the use of cheese sauce will catch on in other markets, but rather when.

6,7% Cheddar kaas

In Amerika zien we de 'meltmania'; een rage waarin gerechten met smeltkaas enorm populair zijn. We kenden al diverse burgers, maar zien nu ook gerechten als loaded nachos en melted tuna's. Deze smeltrage is naar Europa overgeslagen. Cheddar is een veelzijdige kaas, die perfect binnen deze smelttrend past. In het onderzoek van Grand Review Research komt naar voren dat het cheddarsegment naar verwachting de hoogste jaarlijkse omzetgroei van 6,7% zal laten zien in de verwachte periode (2022 tot 2030). Het gebruik van cheddar kaas is een van de eenvoudigste manieren om een romige en kaasachtige smaak aan snacks toe te voegen. Daarnaast biedt cheddar kaas verschillende gezondheidsvoordelen. De smaak, het feit dat de kaas eenvoudig en op een smeùige, zachte manier smelt en de gezondheidsvoordelen van deze soort, verklaart de enorme toenemende populariteit.

Explosive growth of cheese snacks

Gouda pucks, camembert bites, cheddar bites, cheese croquettes, cheese pillows, mozzarella sticks, (vegan) chili cheese nuggets, and cheese soufflés – this list of cheese snacks requires no explanation. Cheese snacks are in high demand.

The global cheese snack market was valued at USD 64.68 billion in 2021 and is projected to grow at an annual revenue growth rate of 6.3% from 2022 to 2030, according to research by Grand Review Research. The primary reasons for this global growth include changing urban consumer lifestyles, evolving tastes, and the increasing Westernization worldwide. Cheese has evolved into a must-have for snacks due to its specific mouthfeel and the extra salty dimension it imparts to food. Moreover, cheese snacks have proven to be an alternative to meat-based snacks such as croquettes or meatballs. The popularity of cheese snacks has also amplified the demand for cheese varieties like mozzarella, Gouda, and cheddar, as these types are particularly well-suited for use in cheese snacks.



However, consumers are also becoming aware of the less healthy aspects of cheese, such as high salt content and saturated fat, which can lead to high blood pressure and cardiovascular diseases. This has led to increased demand for low-fat cheeses and lactose-free cheeses. Cheeses with added health benefits, such as probiotics, are also becoming more popular. An example of a healthy alternative is the use of Edam cheese, which is often used as a low-fat substitute for mozzarella on pizzas.

Diversity in flavours and textures

A prevailing trend is that consumers are increasingly seeking melted cheese with diverse flavours and textures. The demand for lower-fat and vegan versions is growing, and consumers expect top-quality taste and texture even in these variants. In addition to traditional flavours like cheddar and mozzarella, opportunities lie in the realm of melted cheese with a range of flavours such as jalapeno, truffle, onion, and garlic. Diverse textures and varying colours also present opportunities.

Healthier cheese products

Contrary to the immense popularity of cheese sauce and cheese snacks, we previously discussed the growing attention to healthy eating and healthier cheese varieties. Many view cheese as a nutritious source of energy and essential nutrients, such as calcium, magnesium, zinc, and vitamins A, B12, and D.

Rise of hybrid and vegan cheese solutions

The more conscious lifestyle of many consumers is driving the search for more sustainable cheese alternatives. As previously mentioned, hybrid cheese solutions are gaining popularity. They offer the advantages of both real cheese and plant-based ingredients. The expectation is that hybrid cheese solutions will capture a significant share of the market due to their ability to maintain taste while being a fully-fledged healthy alternative to 'real cheese'.

The demand for cheese without animal ingredients is also on the rise. For those pursuing a vegan lifestyle, those avoiding animal products, or those who are lactose intolerant, vegan cheese is an ideal product.

C. TECHNOLOGY

The innovations we witness in the food industry and the changing consumer food preferences also lead to innovations in the production process of cheese products.

Technological advancements in cheese snack production

Cheese-making is a process in which proteins (with casein being the major component) clump together and form a gel, which is then pressed. Microorganisms in different types of cheese are an essential component and play a crucial role in both cheese production and aging. Processing technology is diverse, the structure of the microbial community is complicated, and cheese flavour varies significantly. Over the last decade, the technology for cheese processing (machinery) and technology for imparting functionality (such as baking stability) to cheese has been refined and significantly improved. This has resulted in stable quality and standardized production to preserve the taste of cheese. Enhanced extrusion technologies (shaping techniques) and cutting technologies have, for example, enabled cheese snack forms to be even better tailored to customer preferences.

Technological advancements for vegan cheese have also significantly improved. This is crucial as achieving the right taste and texture for its production is the primary challenge.

Knowledge shortage

In general, similar to many other sectors, the food industry is unfortunately facing labour shortages. Some production companies are investing in automation and software to supplement their existing workforce, meet production demands, and attract new talent. Additionally, there's a looming knowledge shortage as employees rapidly switch to other employers. Employees in salaried positions now change employers almost twice as quickly (external mobility) as they did in 2015.



This insight is derived from the latest Talent Monitor by labour market data specialist Intelligence Group and HR tech provider HeadFirst Group. Consequently, knowledge also exits organizations at twice the previous rate.

In a niche industry, retaining knowledge and experience within a company is exceedingly important. Only when these are present can you continue to innovate and stay ahead of trends, which is crucial in the food sector. Moreover, at all production companies, maintaining adequate technical expertise is of vital importance. The current labour market thus constitutes a significant focal point throughout food technology.



**“KNOWLEDGE, RESEARCH &
DEVELOPMENT, QUALITY, AND
PRODUCTION TECHNIQUES
ARE THE KEYS TO SUCCESS.”**



3 TAKE CONTROL OF CHEESE... AND COME TO POWER!

Developing cheese products and applications is a complex process. Each type of cheese has different flavors, textures, characteristics and maintaining consistent quality is crucial. Now that the key developments in cheese (applications) have been identified, it's time to take control and provide customers with the best cheese experience possible! Cheese knowledge, research & development, constant quality, and production techniques are the keys to success in this endeavor.

CHEESE KNOWLEDGE

Planning to develop a new cheese product? It might seem obvious, but cheese knowledge is essential! Without it, you can't innovate or develop new products. Cheese is more than just an ounce of cheese. It's a natural product that requires specific knowledge about taste, texture, and processing. It's important that the right knowledge is available at the start of a product development project. Having both basic and in-depth knowledge about cheese processing will make your work much easier. It's crucial to know what's possible and what's not when developing a cheese product. If the necessary knowledge isn't within your organization, seek information or the right partners. There are various ways to enhance your own knowledge through courses or knowledge-sharing events. Additionally, specialized companies can assist in the cheese product development process. Once the knowledge is in place, proceed with researching the preferences and needs surrounding the new product.

RESEARCH & DEVELOPMENT

During the development of a new product or application, the research and development phase is crucial. This is where the idea takes concrete form. There are many factors to consider: taste, practical feasibility in the factory, processability of an application (for example, cheese filling should be easily pumpable), etc. If you have solid knowledge of cheese combined with production

techniques, your company can handle research and development on its own. Determine the necessary processing steps to achieve the desired end product. Defining the ingredients and nutritional values of the product is essential. Aspects like taste, texture, nutritional value, food safety, and specific dietary requirements (such as gluten-free, vegan, etc.) play a significant role. Creating prototypes of the new product proves useful in this process. It allows developers and manufacturers to evaluate and adjust aspects like taste, texture, appearance, and technical elements. These prototypes can be tested internally and then presented to product developers/panels to gather feedback and make any necessary adjustments to the product. Companies with this capability is St. Paul.

Alongside an R&D center, a full-fledged (snack) production line for testing and further developing products is present.

QUALITY & TASTE

When developing a new product or application, maintaining consistent quality should be a priority for every producer. The price may be low, but ultimately, quality and taste are what consumers will judge the product on. However, with a natural product like cheese, this presents a challenge. The taste of milk, the base for cheese, varies in summer or winter due to cow feeding. It's essential to anticipate these varying raw materials by constantly monitoring taste through smart parameters in the production process.

Whitepaper

There's significant growth in the cheese market in general, with a rapidly growing demand for cheese melt products in particular. St. Paul sees opportunities for the industry and has therefore developed this whitepaper.

Innovation center

St. Paul has an innovation center with a complete production line for testing and developing new products. Worldwide, no other cheese application producer has this. As an idea takes shape in the research & development phase, practical feasibility might prove challenging with existing production lines. In such cases, St. Paul may decide to build a new line in collaboration with a client. This recently occurred with the mozzarella production line. The client conceptualized the product with St. Paul, and then a production line was created to make mozzarella according to Italian recipes in various applications, flavors, and shapes: sticks, grated, ropes, etc.

Cheese academy

The whitepaper highlights the importance of the right product knowledge and experience in product development. Often, the required knowledge isn't available within an organization. In such cases, St. Paul can provide a solution by "educating" employees through the St. Paul cheese academy. Here, professionals can learn all the essential aspects of cheese functionalities and applications. It starts with the basics—milk—and covers dairy products and everything related to cheese, the characteristics, and the product's potential. Processing techniques and new cheese products like hybrid and vegan cheese solutions are also covered.

Production techniques

With the development of a new investment program for 2024 at St. Paul, the use of the 30,000 m² company space will be optimized. Innovative production techniques will be introduced to elevate products and processes

to a higher level. To the extent possible, processes are further automated to limit the risk of human errors and maintain stable quality.

The Dutch production plant has the capacity to produce 100 million kilograms per year. This enables St. Paul to achieve the ambitions of being a market leader in cheese melt production and all cheese applications in a short time.

The variety of production techniques and processes at St. Paul can be summarized as follows:

- Slow cooking (thermization of products with a long structure)
- Medium cooking (typical pasteurization process for cheese melt)
- Sterilization (UHT) (typical process for cheese sauces, short structure, long shelf life)
- High shear (typical process for pumpable cheeses and vegetable or vegan cheese alternatives)
- Grating of cheeses
- Extrusion (forming cheeses under high pressure combined with IQF)
- Production of Enzyme Modified Cheese (EMC) natural cheese flavors (process to guarantee consistent cheese flavor)
- Various types of packaging techniques

The goal is to achieve a shorter turnaround time between developing new product concepts and their eventual market introduction. With more flexible and faster production lines, St. Paul can respond better to changing market trends and customer demand. Furthermore, a fully automated warehouse is being invested in. The aim is to double the company's capacity with the same number of employees in 2024.



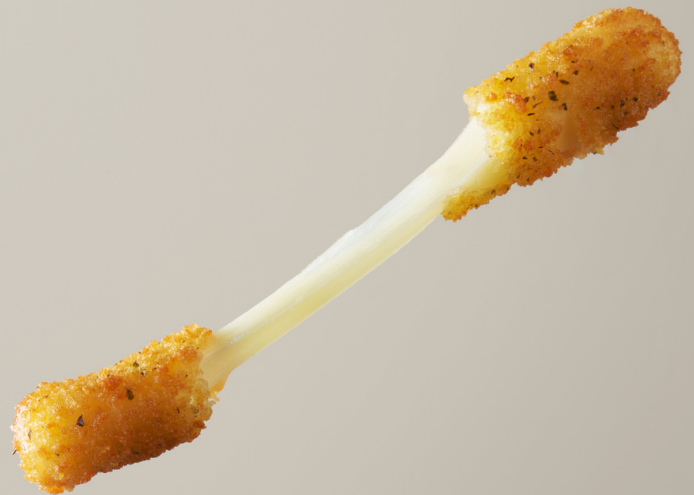
CHEESEWIZARDS

This whitepaper has been developed by St. Paul. The company was founded in 1985 by Dieter and Margo Kuijl, siblings from a family with a strong tradition of cheese. In fact, the passion for cheese has been passed down for more than nine generations in this entrepreneurial family. Today, Dieter's two sons, daughter, and son-in-law ensure that the growth continues to the next generations. St. Paul has evolved into a specialized producer of cheese melt products and cheese solutions for the global B2B market, with Europe as its focal point. The company always strives to be a leader in the development of high-quality and functional cheese solutions that meet the highest quality standards.

At St. Paul, they call themselves "cheese wizards." And with over 38 years of experience in developing cheese applications, they've certainly earned that title. St. Paul always finds a (cheese) solution for every problem! Unique custom products are continually developed in collaboration with clients and suppliers. The interaction between cheese product and snack experts and St. Paul as a cheese producer consistently results in innovative, successful new products.

Products and applications


Scan the QR code for more information about the products and applications that St. Paul can bring to life with you.





WE ARE HERE TO ASSIST!


At St. Paul we are ready to assist you in developing new cheese products. Curious about what we can do for you? Take a look at www.st-paul.com or contact us at info@st-paul.be
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REFERENCES

- ADK Insights. (N.d.). Food Trends: How Do They Affect Business Today? Retrieved from <https://adk-insights.com/food-trends-how-do-they-affect-business-today>
- Dairy Reporter. (2023, January 26). FrieslandCampina's 2023 Trends: From Weastern Cuisine to Low-Fat Cheese and Milkfat Replacers. Retrieved from <https://www.dairyreporter.com/Article/2023/01/26/FrieslandCampina-s-2023-trends-from-Weastern-cuisine-to-low-fat-cheese-and-milkfat-replacers>
- Exploding Topics. (N.d.). Food Trends. Retrieved from <https://explodingtopics.com/blog/food-trends>
- Fortune Business Insights. (N.d.). Cheese Market Size, Share & COVID-19 Impact Analysis, By Source (Cow, Goat, Sheep, and Others), Product (Natural, Processed), Type (Firm, Soft, Hard, and Others), Distribution Channel (Supermarkets/Hypermarkets, Specialty Stores, Online Retail, and Others), and Regional Forecast, 2020-2027. Retrieved from <https://fortunebusinessinsights.com/cheese-market-104293>
- Glanbia. (N.d.). What's New in the Snack Aisle in 2023? Retrieved from <https://www.glanbia.com/our-stories/whats-new-snack-aisle-2023>
- Grand View Research. (N.d.). Cheese Snacks Market Size, Share & Trends Analysis Report By Product (Natural Cheese, Processed Cheese), By Distribution Channel (Supermarkets/Hypermarkets, Convenience Stores), By Region, And Segment Forecasts, 2022-2030. Retrieved from <https://www.grandviewresearch.com/industry-analysis/cheese-snacks-market-report>
- Harvard Health Publishing. (N.d.). Becoming a Vegetarian. retrieved from <https://www.health.harvard.edu/staying-healthy/becoming-a-vegetarian#:~:text=People%20become%20vegetarians%20for%20many,excessive%20use%20of%20environmental%20resources>
- Industry EMEA. (N.d.). Automatization in the Food Industry: An Answer to Labour Shortage. Retrieved from <https://www.industryemea.com/market-overview/64164-automatization-in-the-food-industry-an-answer-to-labour-shortage>
- Melkvee100plus. (N.d.). Ontwikkelingen in plantaardige kaas gaan hard. Retrieved from <https://melkvee100plus.nl/markt/ontwikkelingen-in-plantaardige-kaas-gaan-hard>
- Nederlandse Vereniging voor Veganisme. (2020). Forse Groei Vegetariërs en Veganisten: Onderzoek Vegatrends 2020. Retrieved from <https://www.vegetariers.nl/organisatie/pers/persberichten/forse-groei-vegetariers-en-veganisten-onderzoek-vegatrends-2020>
- Pizza Today. (N.d.). Cheese Trends Right Now: What's Hot in Cheese. Retrieved from <https://pizzatoday.com/topics/cheese-trends-right-now-whats-hot-in-cheese>
- Randstad. (N.d.). Why There's a Global Labor Shortage. Retrieved from <https://www.randstad.com/workforce-insights/talent-acquisition/why-there-a-global-labor-shortage>
- Rijnconsult. (2021, September). Whitepaper Voedseltransitie.
- SIAL. (2022). SIAL Insights 2022 Whitepaper.
- The Washington Post. (2023, January 2). Cheese is Nutritious and Good for You. Retrieved from <https://www.washingtonpost.com/wellness/2023/01/02/cheese-nutrition-good-for-you>
- Wageningen University & Research. (N.d.). Animal-Free Cheese: From Technology to Societal Integration. Retrieved from <https://www.wur.nl/en/article/animal-free-cheese-from-technology-to-societal-integration.htm>
- ZuivelZicht. (N.d.). Hybridezuivelproducten Kunnen Sector Vooruithelpen. Retrieved from <https://www.zuivelzicht.nl/achtergrond/hybridezuivelproducten-kunnen-sector-vooruihelpen>
- Zion Market Research. (2022, March 7). Global Cheese Market is likely to Spur Indefinitely With a CAGR of 3.84% During 2022-2028. Retrieved from <https://www.zionmarketresearch.com/news/global-cheese-market#:~:text=The%20global%20cheese%20market%20size%20is%20likely%20to,healthy%20CAGR%20of%203.84%25%20during%20the%20forecast%20period>
- Zipconomy. (2023, May). Werkgevers zetten onvoldoende in op behoud van personeel. Retrieved from <https://www.zipconomy.nl/2023/05/werkgevers-zetten-onvoldoende-in-op-behoud-van-personeel>