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A tit-for-tat from China

'Anti-subsidy investigation' for dairy products from the EU



Ania Hoffrichter Editor IDM International Dairy Magazine ah@blmedien.de international-dairy.com

Following the EU Commission's recent announcement to impose punitive tariffs on electric cars from China, the Middle Kingdom promptly retaliated. The People's Republic announced an 'anti-subsidy investigation' for dairy products from the EU. The People's Republic now wants to take a closer look at this market - in 2023, the European Union exported dairy products worth 1.7 billion euros to China.

The investigation focusses on EU agricultural policy support measures, some of which are only applied at national level. In case of doubt, punitive tariffs are to be imposed; the amount of which is still questionable. This is already the third such action by China in recent months, following the investigations into EU pork and branded imports. The stumbling block, according to Beijing, is of course not the sanctions on e-cars. A 'formal complaint' from Chinese dairy industry representatives is being investigated. The Chinese Ministry of Commerce is taking offence at 20 different EU subsidies for the dairy industry in the European Union.

At a national level, China is targeting eight EU countries, including Austria, Belgium and Italy. According to the current status, the effects will particularly affect cheese products and cream once the investigation is completed next August.

The Commission recently submitted a request for consultations to the World Trade Organisation to challenge the initiation of an anti-subsidy investigation against imports of certain dairy products from the EU by China. These are the first step in the WTO dispute settlement procedure. If they do not lead to a satisfactory solution, the EU could request the establishment of a panel at the WTO to decide on this investigation.

The European Commission is confident that the subsidies targeted by China are WTO-compliant and will not harm the Chinese dairy industry.

Despite increasing milk production, China is an important importer of European dairy products. The ultimate aim should be to find a mutually acceptable solution so that the European dairy industry does not become collateral damage of the trade tensions between China and the EU.

Anja Hoffrichter

GEA

New valve technology

GEA introduces its patented CONTA dual block valve technology for spray dryers. Continuing its commitment to improving the safety, efficiency and environmental sustainability of food and dairy processing, this new system is designed to reduce microbiological risks, ensuring safer and more efficient processing opera-

The CONTA dual block valve receives feed from the feed supply system and distributes it to multiple atomizer nozzles, which then spray the feed into the drying chamber. Compared to traditional designs, this new design reduces the areas where feed can accumulate by up to 96 percent, allowing for more efficient cleaning in place (CIP) and reducing microbiological risks. The CONTA dual block valve system improves sanitary operation and provides greater process and product safety.

Each valve weighs approximately half the weight of traditional systems, making it easier and safer to handle. The design eliminates the use of external welded manifolds, allowing manual inspection and maintenance with simple tools. This simplified inspection and maintenance supports 24/7 operation and reduces plant downtime.

The standardized CONTA dual block valve unit can be easily configured for both new and existing spray drying systems. This ensures minimal disruption and guick installation, allowing plants to resume operations quickly. Retrofitting to existing spray dryers is straightforward, often requiring only minor programming changes.





Elopak has announced that it will further accelerate growth by expanding its capacity at its new U.S. production plant.

ELOPAK

Investing in further capacity for U.S. market

Elopak has announced that it will further accelerate growth by expanding its capacity at its new U.S. production plant. The new plant, situated in Little Rock, Arkansas, USA is under construction and will now include two production lines.

When announced back in June 2023, the production plant included a significant investment of around USD 70 million covering land, building and equipment. State-of-the-art technology will produce Pure-Pak cartons for liquid dairy, juices, plant-based products and liquid eggs. Over 100 permanent jobs will be created and the new production facility is expected to start production in H1, 2025.

Since this first announcement, the company has sold out the full production capacity for the first production line and is experiencing continued demand. The announcement of a second production line will contribute with up to USD 110 million in revenues for an incremental investment of around USD 25 million. The second production line is expected to be in production in 2026. "We have sold out the full production capacity for the first production line in the new plant, further strengthening and de-risking the investment case for our expansion into the US. With the construction progressing according to plan and with a continued strong demand for our products, it is time to add more capacity to better serve existing and new customers in the Americas," said Lionel Ettedgui, EVP North America

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Sweetening the deal

Latest developments in the use of stevia



Author: Helen Hook, Growth Platform Manager Sugar Reduction for Europe, Middle East, and Africa at Ingredion

s more people prioritise the nutritional value and sustainability of the food and drink they consume we have seen growth in dairy categories such as yoghurts and flavoured milks. The challenge for manufacturers is to provide the right balance of taste and performance demanded by today's health-conscious consumers.

Clean-eating dairy consumers

Yoghurts and flavoured milks are recognised for the nutritional benefits they offer, not only in terms of protein and calcium but also other nutrients such as vitamin D and potassium. The increasing demand also for clean label products, has seen many dairy



products enjoying a growth in popularity. In Europe, the yoghurt market is projected to grow by 5.50% (2024-2028) resulting in a market volume of US\$45.79bn in 2028.

With these products being sought for their health benefits, demand for reduced sugar or even sugar-free versions has understandably risen in parallel. However, meeting consumer demand in this respect comes with two big challenges — the first being how to accurately replicate the flavour profile and two, sourcing ingredients sustainably and ethically.

Another consideration is that consumers may be wary of any modifications to the natural composition of dairy products. As a staple in many diets, there is a desire to keep these products as unaltered as possible. The challenge lies in reducing sugar content while maintaining the perception of a natural, minimally processed product. Step forward stevia...

Stevia's breakthrough

In the past, it had often been a case of compromising one of flavour profile, nutritional value or sustainable sourcing when looking at sweetening dairy products. Whilst it might seem like entirely new solutions were needed to address this, at Ingredion we looked more closely at how stevia sweeteners are used and have developed new possibilities from a familiar name.

Stevia, an ingredient extracted from the leaf of a South American shrub, boasts a long history as a plant-based sweetener. But despite the stevia plant (stevia rebaudiana) having naturally sweet leaves, its reputation for taste has let it down. This is largely due to a bitter aftertaste, associated with the first generation of stevia sweeteners, which has put many consumers off. In full sugar reduction scenarios, where higher dosages of stevia are needed, the bitter compounds typically present in the early stevia sweeteners became much more pronounced and overpowering, leading to an unpleasant taste profile.

However, following years of research, Ingredion have solved these problems to develop PureCircleTM Clean Taste stevia solutions. This research uncovered a wider array of steviol glycosides (stevia molecules) present in the stevia leaf, including Reb M, which has more glucose units than some other molecules found in the stevia leaf.

The Reb M molecule's unique structure gives it a more sugar-like sweetness profile, and importantly this comes without the lingering off-notes found in the early generations of stevia extracts. Reb M's combination of sugar-like sweetness and minimal aftertaste is key to the improved taste profile of PureCircle Clean Taste solutions, even at the high usage levels required for full or near-full sugar replacement. This is enabling food and beverage manufacturers to achieve higher levels of sugar reduction without compromising on flavour quality.

Beyond the isolation of Reb M, Ingredion's research also led to an understanding of the natural synergies between different steviol glycosides. This is allowing the development of bespoke sweetening solutions for multiple food and beverage applications including savoury products, confectionery, beverages, sports nutrition dairy and dairy alternatives.

As well as helping manufacturers address consumer preferences by replacing sugar, in the case of dairy alternatives, stevia sweeteners also offers a plant-based sweetening option.

Bridging taste and sustainability

The breakthrough in improved taste has also been matched by improvements in the environmental performance of stevia. The journey from research and development to the marketplace has not only been about refining its taste but also about understanding and improving its ecological footprint. Ingredion's peer-reviewed, 2022 Sweeteners Lifecycle Assessment (LCA) showcases stevia's sustainability benefits, and helps in its positioning as a greener choice compared to traditional sweeteners like cane sugar, beet sugar, and high-fructose corn syrup on a sweetness equivalence basis.

Advertising







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IDM | Ingredients

Innovative production methods, such as bioconversion, have enabled the manufacture of Reb M at a greater scale, making it more cost-effective. These technologies have also notably decreased the total cumulative energy required for Reb M production by a remarkable 81% compared to conventional sugars. These improvements reflect a broader commitment to meeting the latest consumer trends in nutrition, health and wellness, while prioritising sustainable and ethical ingredient sourcing.

Meeting all criteria

Changing consumer demands means that dairy manufacturers must continue to adapt their products to achieve up to 100% reduced sugar offerings without compromising other important

benefits — namely taste and sustainable sourcing. The evolution in the use of stevia can play an important part in meeting health and wellness demands in an ethical way.

Technological expertise has a crucial role to play here, unlocking the right sweeteners for different dairy applications and removing unwanted flavour characteristics. Importantly, our vertical integration, managing the growth of stevia seedlings right through to the finished product available to manufacturers helps to assure our customers that they can benefit from the latest sweetener innovations with ingredients that are produced in a sustainable, ethical manner.

1 Statista Market Insights, March 2024



Small tub, big effect

Project for more resource efficiency



ess material, lower weight, optimised logistics: the redesign of a private label tub for herbal quark cheese proves that even established packaging solutions offer potential for optimisation. The redesign of the tub, a joint project between the DMK Group and packaging manufacturer Pöppelmann FAMAC, has resulted in significant resource savings that contribute to greater climate protection.

As Germany's largest dairy cooperative, the DMK Group processes around 5.5 billion kilos of milk each year into a wide range of products and ingredients for everyday nutrition. As one of the largest suppliers to German food retailers, the group is one of Europe's leading companies in the food industry. The packaging for DMK's various dairy products has to meet stringent requirements. In addition to maximum product protection, good performance in machine processing and logistics, and convenience for the end

consumer, sustainability, and in particular the reduction of plastic, is playing an increasingly important role. This is not only increasingly demanded by customers and consumers, but is also firmly anchored in DMK's corporate principles.

Packaging specialist helps customers optimise their packaging

A joint project between the DMK Group and Pöppelmann FAMAC is now proving that even long-established packaging solutions such as the classic quark tub can be optimised. DMK took the first step some time ago by dispensing with the conventional snap-on lid on tubs for selected quark products. This has already saved a considerable amount of plastic. In a recent project, the dairy producer went one step further. The aim was to optimise the material use of the injection-moulded tub in order to save even more plastic.



DMK relied on the expertise of Pöppelmann FAMAC for the implementation. The division of the Lohne-based Pöppelmann Group develops and produces technical components, multi-component assemblies and packaging for the food and consumer goods industry as well as for the pharmaceutical and medical technology industries. Both companies have enjoyed a successful and professional partnership for many years, as Henning Götsche, Packaging Development of the Private Label Business Unit at DMK, emphasises: "The cooperation with Pöppelmann has intensified in recent years, which has also led to both companies developing an understanding of each other's requirements. One of the results of this excellent cooperation is our new herb quark tub, which was developed in cooperation between numerous departments at DMK and Pöppelmann."

Conserve resources

The packaging specialist and the food manufacturer worked together to achieve the goal of redesigning the private label tub. Both companies have been committed to making their products and business processes more resource and climate-friendly for years. As a food manufacturer, DMK requires its packaging not only to ensure that its various dairy products reach consumers safely, freshly, with high quality and a long shelf life, but also to generate as little packaging waste as possible. With its internal OCEAN project, the DMK Group has set itself the task of eliminating the unnecessary use of plastic and developing more sustainable packaging that is easier to recycle, for example. This is very much in line with the Pöppelmann Group's environmental and climate strategy. The company-wide PÖPPELMANN blue initative brings together all the activities of the four divisions with the

aim of conserving resources and protecting the climate. Product development at Pöppelmann is based on the concept of eco-design. This involves analysing the environmental impact of a product along the entire manufacturing and supply chain - with the declared aim of achieving maximum product protection in the most resource- and climate-friendly way possible. Reduce, reuse, recycle" is the motto: priority is given to product concepts that reduce the use of materials and energy during production without compromising the functionality of the product. Wherever possible, the focus is on multiple use and, ideally, full recycling to close the material loop. Logistics is another key factor: optimisations that lead to improved space utilisation during storage and transport reduce greenhouse gas emissions, among other things.

In addition, both Pöppelmann and the DMK Group have joined the Science Based Target initiative (SBTi), committing to climate targets in line with the Paris Agreement. Among other things, the Pöppelmann Group has calculated its Corporate Carbon Footprint (CCF), i.e. the amount of greenhouse gas (GHG) emissions of the entire group of companies. Based on this data, specific climate targets were defined for the period up to 2030, which were validated by SBTi experts in the autumn of 2023. In order to achieve these targets, Pöppelmann is relying on the circular economy as the demonstrably greatest lever in its product development: GHG emissions can be effectively reduced by designing products for recycling and - where possible and permitted - using recycled materials. In addition, Pöppelmann supports its customers in reducing the GHG emissions of their products and offers to calculate the GHG values for specific articles based on existing empirical values for the production technology used and to use the results for optimisation.

Optimising packaging

Pöppelmann FAMAC developed the new private label tub for DMK according to the eco-design concept with the aim of systematically combining all requirements for product protection, machinability, hygiene and convenience with greater sustainability. Philipp Hackmann, Product Manager at Pöppelmann FAMAC explains: The basic idea was to achieve greater conservation of resources along the entire value chain, including through significant material savings. Less material reduces the weight, less weight reduces the greenhouse gas emissions during transport and thus improves logistics in terms of its environmental impact. In order to provide the tub with the necessary stability and thus achieve unrestricted product safety, Pöppelmann FAMAC developed a tub geometry that requires less material for production thanks to reduced wall thicknesses. At the same time, a ribbed structure in the side walls provides improved stability. During the development process, flow simulations were used to determine the optimum rib structure for the tub. Pöppelmann FAMAC® provided various designs and a DMK project group from packaging development, engineering, production, purchasing and marketing evaluated the proposals. DMK used Pöppelmann's rapid prototyping service for the project in order to find a suitable solution quickly. Using 3D printing on our in-house printers, we can produce detailed prototypes in a variety of materials and even complex structures within a few hours. This makes our designs 'tangible' and facilitates decision-making - a real added value for our customers," says Philipp Hackmann.

Small, lightweight, machine-compatible and recyclable

The result is a small tub that is over 20 per cent lighter and has reinforced longitudinal ribs for dimensional stability. The ribbed structure is designed to ensure even distribution of material during injection moulding. At the same time, the ribs are so discreet that the quark tub is easy to empty and the attractive appearance of the packaging is retained. In-Mould-Labelling, a pre-printed plastic label is applied to the container during production, which is inseparably bonded to the moulded part during injection moulding to form a single unit. This also adds to the stability of the tub. As moulding and labelling take place in a single operation, there is no need for intermediate storage. The process also has environmental benefits, as the tub and label are made from the same base material, making the packaging easy to recycle after use. We immediately used the project to make further improvements. The tub dimensions were adjusted to make even better use of the pallets,' explains Philipp Hackmann. When unfilled, the stacking distance between the tubs is also smaller. This not only optimises storage and transport processes, but also benefits the filling line at DMK, as the tub magazine can now hold more packaging and requires less manual refilling. The format of the 240 ml tub is also the same as an existing 500 ml tub, differing only in height. This means that it can be integrated into DMK's production process without any additional effort. This has optimised the system's set-up times and increased its performance. Finally, the redesigned tub saves space on pallets and trucks en route to food retailers: instead of 8,736

tubs, 13,440 tubs now fit into one transport box. This reduces the number of boxes needed each year by around 35%, cutting transport costs.

Successful project

For the project, Pöppelmann FAMAC carried out a cradle-to-gate analysis of GHG emissions to calculate the environmental impact of the new private label tub compared to the previous packaging. The reduction in material led to a saving in GHG emissions of around 27 per cent (18.4 instead of 23.09 kg CO2eg/1,000 tubs). Philipp Hackmann says: "As the carton packs a lot more tubs, there are further savings on transport from Lohne to DMK in Zeven, which are not even included in this calculation. Looking back, Lia Rebettge, head of packaging development at DMK's Private Label business unit, is delighted with the successful collaboration. 'We have succeeded in developing a tub that offers advantages in many areas at the same time. It is a great success for the team that not only the use of packaging material but also the efficiency of logistics has been improved. The result is an all-round solution that is positive in terms of sustainability for both our food retail customers and the end consumers of our products.

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Optimal production processes

Use of verified infrared instruments

•he challenge for process operators is to produce dairy products that meet certain specifications such as protein and fat percentages. Infrared spectroscopy (IR) is an analytical technique commonly used to determine these parameters. This technique relies on correlating reference analysis results with an infrared spectrum. Although the data from IR instruments is quickly available and crucial to the production process, the question arises: are these results always accurate? The Dutch company Qlip has made a name for itself in the dairy industry as an expert in the calibration of IR instruments.

The use of IR instruments has become indispensable at dairy processing locations. The analysis results generated by the instrument guide production lines and therefore play a crucial role. But how do you ensure the reliability of your instrument and the analysis results? "To begin with, it is important to recognize that using an IR instrument is impossible without the internationally recognized and accredited reference analyses performed in the lab," says Alexander Snijders, Sales Manager Germany at Qlip.

Only through the daily use of control samples can the performance of the entire analysis process, including the performance of the instrument, be monitored and thus ensure that the measurement results remain consistent and accurate. If deviations occur, they can be quickly detected and resolved. External conditions such as temperature, humidity, shocks and vibrations can cause the instrument to malfunction. Regular calibration of IR instruments (2 to 4 times a year, depending on the product) minimizes these effects and ensures that measurements remain accurate and reliable.

Furthermore, making decisions based on insufficiently reliable analysis results can have significant financial implications. Improving the accuracy of analysis results by just 0.01 % for protein and fat content can easily translate into thousands of euros for large volumes. In the case of high-quality milk products such as milk powder or whey concentrates, the financial impact is likely to be even greater.

The Human Factor

The most common error in using IR instruments is the human error, particularly during the sample pre-treatment process. This process is crucial for obtaining reliable measurements. For example, the sample must be heated to the correct temperature and swirled correctly to ensure accurate results. Improper pre-treatment can lead to significant analysis deviations and reduced accuracy. To minimize this issue, Qlip offers user-friendly control samples and calibration sets. These samples are designed to simplify the pre-treatment process and reduce the chance of human error, thereby improving the reliability and consistency of measurements.



Training and Education

Using IR instruments and interpreting the results requires corresponding knowledge and experience. In practice, this knowledge is often insufficient among many dairy producers, and existing experience is often lost due to staff turnover. Training and education are therefore crucial. Process operators must be well-informed about the analysis process, including the operation and correct use of IR instruments. Specific IR training helps operators understand how an IR instrument works, and where and how it can be best used. This is useful not only for newcomers but also for experienced employees. By providing continuous training, the dairy industry can reduce errors, increase efficiency, and guarantee product quality.

Qlip offers on-site calibration training, where production employees, laboratory technicians and laboratory managers are directly trained by experts. This practical training helps to calibrate IR instruments accurately and efficiently, ensuring that staff are well-prepared to identify and resolve any issues in a timely manner.

Quality assurance across the entire dairy chain

As part of quality assurance systems and recognized product safety systems, inspections and audits are carried out at dairy farms, dairy factories, processors, and transport companies. Qualified auditors inspect and certify various internationally recognized quality systems such as IFS, BRC, FSSC22000. They also offer chain certifications such as Meadow Milk, VLOG, Proweideland, and QM-Milch.

In addition, this accredited milk laboratory, which is also the largest in Europe, analyses products such as cheese, whey, infant formula, semi-finished products and plant-based dairy alternatives.

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Personalized Nutrition Solutions

Future of Healthy Eating?



Author: Nandini Roy Choudhury, Client Partner for Food & Beverages at Future Market Insights

ith the changing landscape of various industries, the scope of different sectors is expected to change. The developments in such sectors lead to the foundation of different trends and beliefs

As far as the post-pandemic period is concerned, various industries have been seriously affected due to the disruptive changes in the industry. With constantly changing consumer trends and demands, key players were forced to implement several changes.

In the case of the global dairy industry, the same can be witnessed. Owing to key influencing factors like the growing population, proliferating infrastructure, and many more, the competitive landscape is expected to observe several changes.

The fundamental aspect is personalized nutrition. With the growing consumer demand for better nutrition, a niche market is expected to flourish in the future. The personalized nutrition market is likely to drive different sectors, including the dairy industry.

Let us dive deep into various factors that will drive the concept of personalized nutrition, and how it affects the future of healthy eating from the context of the dairy industry.

Changing Consumer Preference: The Foundation of the Change

Various factors are responsible for the changing consumer perspective toward eating. The fundamental factor associated



with this is the background of the COV-ID-19 pandemic.

Although it has been a long time since the pandemic, eating habits changed since that period. Owing to the different results that people got during the period, the roots of changing food trends can be observed in that period.

The focus on the trend of eating healthy, balanced, and nutritious food has risen. which was pushed further with the help of social media trends. This has been a key influencing factor that changed consumer perspectives toward food.

Dairy products, moreover, experienced a surge of changing consumer choices. More consumers are observed to be inclined toward healthy food products, and demand for such products would vary, depending on individual requirements.

As a result, tailored solutions for consumers were designed, and this trend is the foundation of the shifting consumer preferences toward persona.lized nutrition, which is expected to augment the future of healthy eating.

Trending Health and Wellness Concerns Drive the Demand

Coupled with the changing eating habits, health and wellness trends have been changing recently. With the influence of many factors, like lifestyle changes, changing perspectives toward nutritional food, demographic changes, and the emergence of key social media platforms, consumer awareness for personal health is spurring.

Consumers have started to focus on maintaining personal health through many initiatives. Such initiatives include using gyms, exercising equipment, changing food habits, and many more.

Wellness trends also include more frequent medical check-ups and designing better dietary plans to control different body health parameters. As a result, the demand for personalized nutrition is expected to surge in the future, which will drive the future of healthy eating.

Along with this, the growing prevalence of chronic diseases is a major factor that influences personalized nutrition. With the rising number of patients suffering from illnesses like high blood pressure, diabetes, cancer, and other disorders, a spike in the demand for healthy dairy products is increasing.

This demand varies, depending on the medical conditions of all patients. As a result, tailored nutritional solutions must be designed, and hence, this is driving the demand for personalized nutrition. With the elevation of such trends, subsequently, the dairy industry will likely contribute to shaping the future of healthy eating.

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Increasing Disposable Income: A Key to the Rising Personalization

Another important demographic factor that influences the rising demand for personalized nutrition is the increasing disposable income levels of consumers. This factor increases the buying power of consumers, creating more prospects for key players in the dairy industry.

Leveraging the negotiating power available with consumers, manufacturers are forced to augment products pertaining to the requirements of consumers. As a result, tailored nutritional content can be included in products.

The rising per capita income helps consumer trends to shift toward the premium product segment. With the rising number of such consumers, a substantial spike in the preferential shift can be observed.

Premium brands are expected to observe better prospects, which will eventually shape the future of healthy eating. Different sectors, like the hospitality market, will demand premium dairy products, augmenting the landscape of personalized nutritional products. This rising demand will likely provide more choices of healthy food products to consumers, shaping the future of healthy eating.

Technological Advancements = **Innovative Formulations**

With the proliferation of the technology, various leading manufacturers in the dairy industry might benefit. To cater to changing demands, the augmentation of the product can become easier.

Pertaining to different requirements, product formulations can be designed. To cater to this demand, firms have installed equipment that provides cutting-edge solutions that can alter product formulations.

Vegan content, protein composition, fat concentration, and many other factors related to dairy products can be augmented, which can help organizations serve consumers better.

Not only can the product formulations be innovated but also new products can be introduced in the industry, which can target niche consumer markets. Due to such advancements, the future of personalized nutritional solutions is expected to change, thereby influencing the future of healthy eating.

Scientific developments related to product formulations have also been a result of technological evolutions. Due to this, keen study can be made, tailored to key consumer requirements, and this can help firms develop new products.

Support to Research Drives Innovation

Another factor that supports technological innovation is the growing research and development activities. The proliferation of such initiatives is helping many manufacturers evolve in terms of nutritional product composition.

Investments in research organizations and academic institutes help such firms drive extensive research on product development. Due to this, the optimization of products can be ensured, benefitting key players in the industry.

Reducing fat concentration in milk and other key dairy products, improving the protein-richness of products, and other developments can be achieved through research processes. As a result, consumers can have more choices for nutritional food.

Coupled with the rising personalization trend, such research activities can help leading manufacturers design products with altered product specifications. Also, more emphasis can be placed on increasing the shelf-life of such products.

Governments have also been investing more in fueling research activities, which is a key sign of progress in research and development. Due to this driver, more opportunities can be created for consumers to select their desired product.

Regulatory Landscape: A Governing Factor

Governments have imposed strict regulatory policies for different ecosystems, including the food and beverage industry. Due to such policies, manufacturers in the sector are required to closely monitor product specifications.



Along with this, food packaging standardization has been fostered, developing stringent norms for labeling, packaging material, and the disclosure of the nutritional content in the food product. This encourages dairy producers to meet the production criteria, elevating production standards.

Catering to the health requirements of consumers, governments have been mandated to follow strict guidelines regarding manufacturing processes. As a result, more focus is placed on the development of high-quality personalized nutrition solutions.

Such norms act as an industry driver, assisting the production of premium and highquality products. Consequently, the future of healthy eating will likely be influenced, elevating the scope for personalized nutrition solutions.

Progressing Dairy Industry and Changing Future of Healthy Eating

The overall growth of the global dairy industry will likely be a key attributing and driving factor for the surging demand for personalized nutrition products. As the size of the competitive landscape

increases, the scope for proliferation within the sector spurs.

Key players in the industry are augmenting products, which is another reason for the growing dairy industry. This advancement raises the supply of nutritional products in the market, leveraging the costs of individual products.

Due to the reduced costs, more consumers are driven to the industry, which will drive the industry further. Brand awareness can be generated better, and this drives awareness regarding personalized nutrition solutions.

With the effect of this influencing force, more consumers will shift toward better eating habits, spurring prospects for healthy eating. As a result, the driver will spur personalized nutrition, thereby affecting the future of healthy eating.

Do Collaborations and Partnerships Spur the **Personalized Nutrition?**

Along with the advancements in the dairy industry, key players in the market are observed to increase their participation in the competition in the sector. Due to this, more choices for personalized nutrition

solutions are seen to have emerged in the dairy industry.

Collaborations and partnerships among existing players and new entrants are driving innovations in the industry. Sharing expertise and resources in the sector is leveraging efficient production of dairy products, serving consumers better.

To mitigate changing consumer demands, such initiatives among key players have been a boon for the upgradation of existing products and the introduction of new goods.

Across varying price ranges and demographic segments, personalized nutrition solutions can be placed in the market through such initiatives. As a result, this is another crucial influencing factor that drives personalized nutrition solutions, determining a bright future for healthy eating.

Conclusion

Concerning many key market drivers, the global dairy market will experience a great push from changing consumer habits. As the eating habits of consumers are on the verge of embracing newer practices, more lucrative prospects for the dairy industry.

More emphasis is placed on healthy and nutritional eating, which is governed by various social media influencers. Due to this, a significant shift will be observed in the future that will augment the future of healthy eating.

Technological infrastructure has been a key factor, which is catering to the rising demand for consumer-tailored solutions for nutritional diets. Based on varying body structures and types, such formulations can be altered, driving the demand for personalized nutrition.

With the growing investments in the dairy industry, the advancement of the said sector is likely to create a wider landscape for key players to expand. Along with this, efforts like regulatory policies for labeling and product standardization will likely benefit personalized nutrition, shaping the future of healthy eating.



Weber appoints Brandt as Managing Director Technology

On July 1, Michael Brandt was appointed to the executive board of Weber Food Technology GmbH as Managing Director for Technology. The trained automation technician has been part of the Weber Group since May 2017 and initially started his career there as the division manager of Packaging. In 2020 he took over responsibility for technology at the company location in Breidenbach and has been globally responsible for technology at Weber since 2023.



NEW MULTIVAC SITE IN BUCHENAU

Center of Excellence for slicing solutions

MULTIVAC recently officially opened its new Center of Excellence for slicing solutions in Buchenau (Dautphetal) after a construction period of around two years. The investment amounted to approx. 15 million euros. The MUL-TIVAC Group has been developing and designing highperformance slicers for the food industry at its Buchenau site since 2017. Following strong growth since then in its Slicing Business Unit, the new building will now expand the current capacity. Built over a surface area of around 4,700 square metres, the new building complex comprises a Customer and Application Center, as well as production areas and warehouse facilities. The new building creates a second Application Center, in addition to that at the company's headquarters in Wolfertschwenden, and this new facility offers even greater opportunities for customer tests and demonstrations at the Buchenau site. As part of the building's sustainable infrastructure, a number of measures have been taken to reduce greenhouse gases: The heating for the building is provided by air-heat exchangers combined with a photovoltaic system, and this is assisted by the waste heat from the air compressors, so that no fossil-fuel energy is used.

"We have built up a range of MULTIVAC slicing equipment in record time, and this comprehensive range includes all output categories. Thanks to the new Buchenau site, we can now react even more flexibly to our customers' requirements, as well as providing yet more complete lines as tailored solutions for food processing and packaging," said Dr Tobias Richter, Director and CSO of the MULTIVAC Group. "And with the additional Application Center in particular, we can now offer our customers an even better and more accessible consultancy service in that wider region."

Bernd Höpner, Director and CTO of the MULTIVAC Group, added: "The investment is an important milestone in



The new building will now expand the current capacity (photo: MULTIVAC)



MULTIVAC officially opened its new Center of Excellence for slicing solutions in Buchenau (Dautphetal) (photo: MULTIVAC)

our growth strategy, and it is a clear recognition by the company's owners of their long-term commitment to the Marburg-Biedenkopf area. Thanks to the expanded development and production capacity, we now have the best conditions for continuing to develop the Slicing Business Unit successfully and sustainably."

The new building also creates additional jobs at the Buchenau site. "With this first expansion phase up to 150 staff members will be working in the state-of-the-art building complex," said Jochen Ertl, Site Director at Buchenau.

Smart Design

Mastering the challenges of checkweighing in plastic cup applications



Author: Jörn Migge, Head of Product & Market Management, Mettler-Toledo Product Inspection

he integrity of dairy products, especially those packaged in plastic cups such as voghurt, cream cheese and ice cream, relies heavily on precise and hygienic weighing processes. Facilitating accurate weights while maintaining stringent hygiene standards presents unique challenges for manufacturers.

Challenges of weighing plastic cups in the dairy industry

Weighing plastic cups filled with dairy products presents unique challenges, primarily due to the diverse filling processes employed. There are two main types of filling processes: linear fillers and rotary fillers. Linear fillers process cups in groups, often in multi-lane applications, where cups exit the system in groups of four or six.

To minimise packaging waste, some manufacturers use checkweighers before sealing the cups and then again afterward to comply with pre-packaged goods legislation, which mandates strict adherence to weight and labelling standards.

Proper sealing is critical to prevent contamination, as improperly sealed cups or those that break during production and transportation can compromise product safety and quality. If cups break, they can create a mess that contaminates other products on the line, necessitating frequent pauses in production to clean and maintain a sterile environment.

Additionally, the fragile nature plastic necessitates regular cleaning to prevent contamination both inside and outside the product. Balancing the need to reduce packaging waste while adhering to product safety and compliance with regulations remains a critical challenge in the dairy industry.





How smart design plays an important part in the process

Smart design is crucial to facing these challenges head-on, and to the efficiency and hygiene of the checkweighing process. A key aspect for any dairy manufacturing line is the washdown design of a checkweighing system. Manufacturers should look for solutions that offer temperature-resistant load cells, which allow for quick re-zeroing after cleaning, significantly reducing downtime. Easy-to-remove belts can also help to facilitate fast cleaning, meaning that equipment can be swiftly sanitised to prevent biological contamination.

Another key element of any good checkweighing solution is its "Poka Yoke" design – dairy manufacturers should look for one that offers easy reassembly, making it easy for even less experienced personnel to reassemble the equipment correctly.

Advanced load cell technology, such as the FlashCell Electro-Magnetic Force Restoration (EMFR) load cell, can offer high accuracy and can handle throughputs of up to 250 packs per minute. This is essential for maintaining product integrity and compliance, as well as maximizing production throughput.

The placement of the checkweigher on the production line is also a critical design consideration. Early detection of weight deviations allows for immediate feedback to the filling machines, meaning that any errors are quickly corrected. This feedback mechanism is vital in high-speed production environments, where maintaining consistency and quality across large batches is challenging.

The C33 PlusLine and PlusLine WD checkweighers from Mettler-Toledo, for instance, are designed to support challenging weighing applications in environments prone to product spillage, such as those involving dairy products. These systems offer features that cater specifically to the needs of the dairy industry, including resistance to frequent wet cleaning routines and quick re-start capabilities after cleaning.

Benefits of smartly designed washdown wolutions

Washdown solutions offer several benefits that are particularly important for dairy manufacturers that use plastic cup packaging formats. These solutions provide easier and more effective cleaning processes, reducing the risk of biological contamination. The durability of washdown designs under harsh cleaning conditions, such as those involving butter or ice cream, means that the equipment can withstand rigorous cleaning routines. This design also minimises product waste by facilitating the guick

removal and washing of conveyor belts, allowing for fast reassembly and reducing downtime.

The ability to quickly re-zero temperature-resistant load cells after cleaning allows manufacturers to restart production almost immediately, maintaining high productivity while adhering to strict hygiene standards. This efficient design also helps in complying with regulatory requirements, meaning that products meet all necessary health and safety standards. Monitoring and feedback capabilities also supports real-time adjustments to filling heads, efficiently correcting any filling errors and minimising product giveaway.

By using checkweighers with at least IP65 ingress protection, manufacturers can enhance operational efficiency, reduce contamination risks and garner consistent product quality.

Compliance and Quality Control

Compliance with pre-packaged goods regulations is another critical concern for dairy manufacturers. Weighing closed cups accurately is essential for maintaining product weight accuracy and meeting these regulatory requirements. The E-mark, which can only be applied if the package has been weighed after sealing, is a part of these regulations, making sure that products are weighed and sealed correctly before they are marked. This process verifies the product weight and, if all parameters are met, the products receive the E-mark, indicating compliance with pre-packaged goods legislation.

The role of additional systems, such as x-ray inspection and metal detection solutions, in quality control is also significant. These systems identify contaminants that might otherwise go unnoticed, providing an additional layer of safety and quality assurance. Integrating these systems with washdown checkweighers offers a comprehensive approach to contamination detection and weight verification. This integration helps to see that products leaving the production line meet the highest standards of safety and quality, thereby

enhancing consumer trust and maintaining regulatory compliance.

Conclusion

Smart design, particularly in washdown checkweighers, plays a crucial role in overcoming the challenges associated with weighing plastic cups in the dairy industry. By facilitating easier cleaning, reducing contamination risks and improving compliance with regulations, advanced checkweighing systems can help to enhance overall operational efficiency and product quality, ultimately helping to achieve peace of mind and robust performance in even the most demanding production environments.

Advertising



Fermentation as the key to gut health

Novonesis webinar



onsumers are increasingly recognising the important role that gut health plays in their general well-being. This is certainly not least due to the sound scientific research in this area. Balance and diversity in the gut microbiome is important for healthy digestion. Supporting a diverse and balanced gut microbiome can have a positive impact on digestive health. For Nathalia Edwards, Business Development Manager at Novonesis and fermentation





enthusiast, fermentation is the little everyday microbial "magic" that can transform simple ingredients into delicious and safe foods with higher nutritional value, such as vitamins and other important micronutrients. But how does eating "live" fermented foods compare to the processed staple foods we've become so accustomed to? How does what we eat affect our gut microbiome (and our gut health)? A topic that Novonesis addressed in a webinar on 27 August. Here, David Zilber, world-famous chef, fermentation expert and co-author of the bestseller "The Noma Guide to Fermentation" and Nathalia Edwards discussed the topic "Foundations of the gut: How fermentation is the key to our gut health." They discussed what fermentation really is, how it has brought the planet and people to where we are today, and how the proven fermentation practices of the past can be applied to everyday life today and proactively improve gut health.

Fermented food

Most fermented foods contain bacteria that may have a probiotic effect. This means that these bacteria can help to restore the balance of bacteria in the gut, support digestive health and alleviate digestive problems. Probiotics build on a history of fermented foods. "So to understand the role of probiotics in our overall health, it makes sense to start with fermented foods," says Edwards. Fermentation changes the flavour and also the nutrients of a product, making it easier to digest the individual components. Even vitamins can be produced through the fermentation process.

Consumption of 'live' fermented foods

Edwards and Zilber discussed how eating "live" fermented foods compares to processed staple foods and how what is consumed affects the gut microbiome and ultimately gut health. "We can see that all living organisms have their own symbiotic partners that help them to digest. In simple terms, fermentation is the transformation of one food into another," says Zilber. That is why it is also too short-sighted to orientate oneself solely on the nutritional information on the product packaging. After all, it says nothing about how the product is ultimately processed and how many nutritional values are ultimately contained in the product. Fermentation ultimately offers advantages in terms of its impact on nutrition. Microbes pre-digest the food and thus ensure better availability of nutrients. "All the secondary nutrient metabolites that the microbes produce for their own food can be very good for our health. We are learning more and more which foods contain beneficial microorganisms that are good for us," Zilber continues.

This webinar was the first in a series on gut health. The next one will focus on the topic "Foundations of the gut: How your microbiome influences you."

HYDROSOL at GULFOOD MANUFACTURING 2024

Soft-serve ice cream solutions and vegetable fat creams

Worldwide sales of soft-serve ice cream have grown continuously for the last five years. According to Innova Market Insights, annual growth has been a good 7.3 percent and rising. Soft-serve ice cream is a popular and trendy category. Accordingly, at Gulfood Manufacturing in Dubai Hydrosol is presenting an established stabilizing system for the production of soft-serve ice cream. What makes it special is its simple handling. The final product can easily be made on site in the desired amount, by simply preparing a few basic ingredients and the functional system in a soft-serve ice cream machine. The result is a high-quality ice cream with creamy texture and authentic vanilla taste. The flexible recipe enables a wide range of soft-serve specialties in many different flavors.

Another highlight is a vegetable fat cream that is particularly suitable for warm regions. A new stabilizing system from the Stabimuls ICR series makes it possible. The system and of course the final product store well even in warm temperatures. The whipped vegetable fat cream features a very high 400 percent whip volume. Another plus point is the foam stability.



In Dubai Hydrosol is presenting an established stabilizing system for the production of soft-serve ice cream (photo: Hydrosol)

CO₂ certificates in the milk value chain

Results of a survey of German dairy companies





Authors: Friederike Hansen, MSc., Research Fellow, Prof. Dr. Holger D. Thiele, University of Applied Sciences Kiel and ife Institut of Food and Food Economics Kiel

here are various ways of providing economic incentives to reduce CO_2 emissions in the production of food and milk. One option is to tax CO_2 emissions in raw milk production, as Denmark is currently planning to do. Other possibilities are economic incentives in the form of CO_2 certificates. These can have different characteristics in terms of origin, production, tradability and price.

There are many uncertainties in the milk value chain regarding the categorisation and handling of CO_2 certificates. In particular, it is unclear how reductions in CO_2 emissions can be kept in the value chain and positively credited to dairy products if at the same time dairy farms sell CO_2 certificates to companies outside the sector. An initial survey of dairies in Germany should therefore be used to determine what considerations there are for dealing with CO_2 certificates, what challenges exist for further steps and what initial recommendations for action can be derived.

Importance of and questions about CO₂ certificates in the milk value chain

To provide CO_2 certificates, climate protection projects are implemented at home or abroad that prevent new CO_2 emissions or store carbon. The installation of renewable energies, reforestation or forest protection projects, humus cultivation and peatland rewetting are examples of projects that can offset emissions that have already been generated. The quality of these projects can be ensured by various standards. Leading standards are the Gold Standard and the Verified Carbon Standard (VCS).

In addition to the characteristics of the project type and quality assurance through standards, a $\rm CO_2$ certificate can have further properties. The climate protection projects can have an additional social effect, for example through the installation of drinking water wells. Furthermore, these can be produced and marketed regionally. The location where a climate protection measure is implemented can also be taken into account when making a purchasing decision.

It is not only the characteristics that are decisive when buying CO_2 certificates, but also the price. This differs between providers with different project types. Nevertheless, the price is determined by supply and demand. Various market analyses show that market participants can have different preferences for the properties and willingness to pay for certificates. In order to analyse this for the dairy industry, a survey was conducted among dairies to determine the status quo.

The survey is based on various questions. On the one hand, the question arises as to how important the topic of sustainability in marketing and documentation is for dairies at present and whether the CO_2 footprint of production and that of the raw material milk is known. It is also questionable whether dairies are aware of their own emission reduction potential. Furthermore, it was investigated what preferences dairies have with regard to the characteristics, the place of implementation and the type of project. As the certificates are offered on the market at different prices, it was determined which price dairies consider appropriate.

Sample of the dairy companies surveyed

17 dairies from various federal states in Germany with very different product portfolios and sizes took part in the survey in May/ June 2024. The sample is not representative in comparison with the overall dairy structure in Germany, but provides initial insights into how the topic of reducing CO₂ emissions from dairy products is dealt with via CO₂ certificates.

The feedback from the 17 participating dairies already supports the thesis that the issue of sustainability is important to dairy companies. The majority have already analysed their own CO₂ footprint in processing and are aware of it. However, the situation is different for raw milk. Here, the CO₂ footprint is only partially known. The situation is similar for the emission reduction potential in the raw milk sector, which is also only partially known.

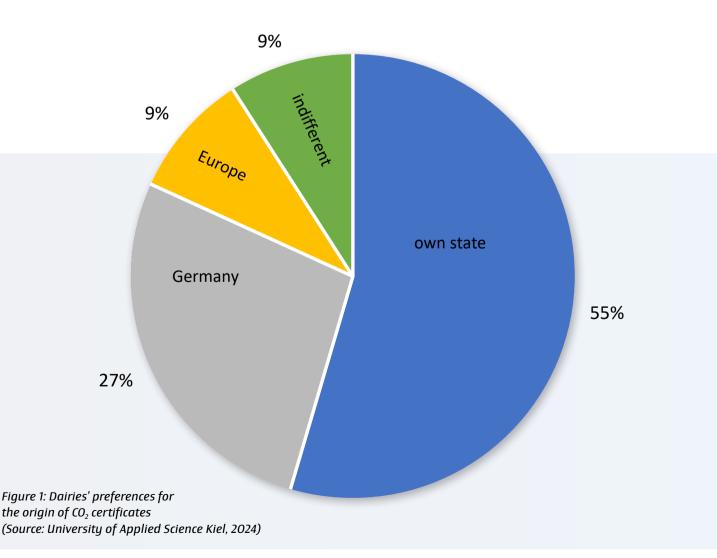
Only a few dairies have been dealing with the issue of CO₂ emissions for some time, i.e. for around 5 years. For most dairies, it has only become an important issue in the last year or two.

Dairies' preferences regarding the origin and type of CO₂ certificates

In order to achieve a reduction in CO₂ emissions, various measures were mentioned by the dairies. The dairies most frequently see CO₂ emission reduction potential in agriculture, which has a very high impact on the product carbon footprint of dairy products. In order to reduce CO₂ emissions in milk processing, the use of renewable energies, new technologies and increased efficiency are particularly favoured.

As in other market analyses on CO₂ certificates in other product areas, the dairies also stated that the quality of standards is an important feature. The characteristics of regionality and the production of the certificate by the dairies' own milk suppliers are also important for the dairies that took part in the survey. The additional social aspects play a lesser role here.

The implementation of a compensation measure for the production of a CO₂ certificate can take place at various locations. The dairies predominantly favour a location in their own federal state or within Germany. (Fig. 1).



IDM | Sustainability

However, there were no clear preferences for the project type. Projects in the field of renewable energies and underground CO₂ storage tended to be favoured. (Fig. 2). Under the item 'other', the optimisation of feeding, fodder production and manure management were mentioned as well as much proximity to real CO₂ storage as possible.

Appropriate prices for certificates from the dairies' perspective

In view of the very different marketing structures, it was to be expected that the willingness to pay for CO₂ certificates to reduce the PCF (product carbon footprint) would also vary for dairies. This was also confirmed by the results of the survey.

On average, the dairies surveyed would pay €33 per ton of CO₂ reduction in future, which corresponds to one CO₂ certificate. The figures ranged from €5-60 per certificate. In addition, the thesis was analysed as to whether there is a majority willingness to pay for regional certificates and certificates produced by their own suppliers. This was confirmed to the extent that the average price paid by the dairies was €54 or €60 per certificate. However, the price range for certificates from our own raw milk suppliers of €2 to €150 per certificate shows the very different needs for adjustment in marketing and the dairy customers' willingness to pay.

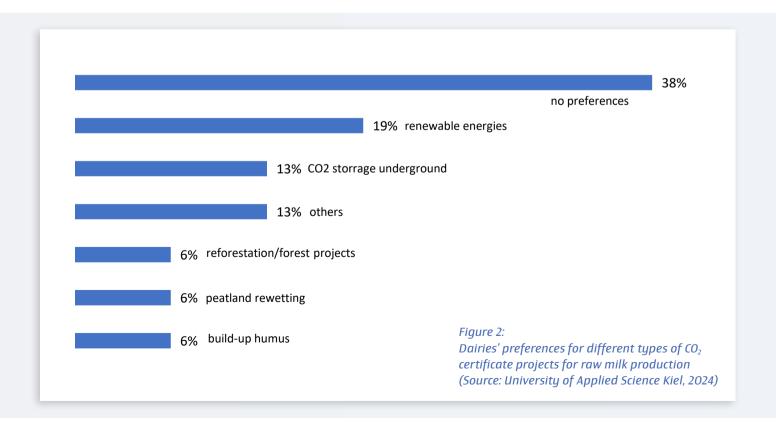
A reduction in the carbon footprint of milk can be achieved through financial incentives for farmers directly from the dairy or through the aforementioned certificates. The fundamental

introduction of financial incentives to reduce emissions is planned in the long term by 86% of the dairies surveyed, as shown in Figure 4. Only a few dairies are planning financial incentives in the short term.

The additional costs incurred by a dairy through the purchase of CO₂ certificates and through future planned financial incentives for farmers to reduce emissions must be paid for on the sales side through price premiums for lower CO2 values of the products. If this is not the case, then additional costs for CO2 emission reductions will lead to reductions in the basic price of raw milk. However, CO₂ emission target agreements and reductions can also increase market shares in individual sales channels. The resulting additional revenue can be used at least in part to reduce the additional costs. Against the background of these open questions, the stated willingness to pay for certificates by dairies is still low.

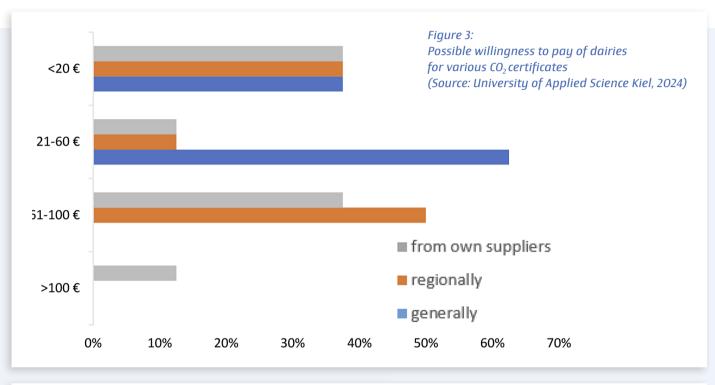
Conclusions

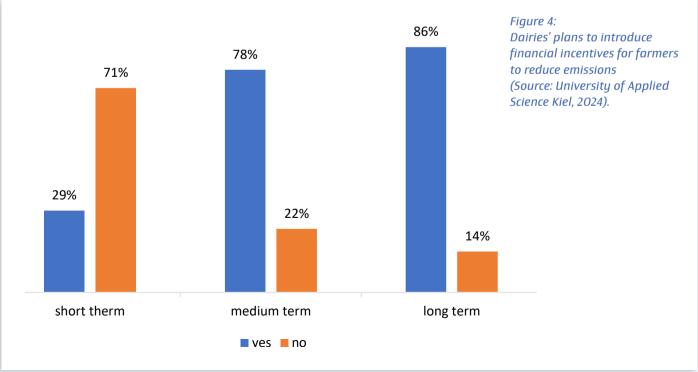
A clear majority of dairies favour CO₂ certificates to offset or reduce CO₂ emissions for the product carbon footprint (PCF) of their own dairy products if they come from their own raw milk suppliers. At the very least, the majority of CO2 certificates should come from projects in the company's own federal state. As this is a voluntary carbon market, dairies are required to incentivise their own raw milk suppliers to offset CO₂ emission reductions for their own dairy products. Adjustments to milk supply regulations and statutes may be necessary here.



At present, the dairy companies willingness to pay for CO₂ certificates is still at a lower level than the usual market prices for CO₂ certificates at an average of €33/t CO₂ for the dairies surveyed. As market prices for CO₂ certificates are expected to rise, the willingness to pay for CO₂ emission reductions in marketing must also be adjusted upwards in the future. If this is not or only insufficiently the case for milk as a raw material, the implementation of climate

targets in the milk value chain could lead to lower base prices and increased structural change among raw milk suppliers and dairies. Although this initial analysis of the new topic of CO₂ certificates was only based on a small number of dairies surveyed, it already showed that there are still many unresolved issues to be clarified for the milk value chain and that dairies should deal intensively with the challenges of reducing CO₂ emissions.





Spray drying of infant food components

Uelzena puts 'Tower 12' into operation

View of the centre section of the spray tower

elzena eG's newly built "Tower 12" spray drying plant has been in regular operation for several months now. The plant is primarily designed for the production of ingredients for infant food under high-care conditions. With the new plant, the contract dryer from northern Germany, which specialises in food and infant food, intends to further expand its leading position in this product segment. A total of four spray towers of different sizes and configurations are now available for drying infant food components at the central production site in Uelzen (Lower Saxony).

"The requirements for product safety of ingredients for infant food, such as minerals or vitamins on carrier materials, have risen continuously in recent years. With this in mind and with the intention of further expanding existing partnerships with baby food manufacturers, the construction of a new high-care spray drying plant was a logical and logical step for us. In this way, we are ideally positioned to continue supporting our customers in the food and infant food industry as a preferred and sought-after specialist in the future," Bern Gewecke, Managing Director of Ingredients and Contract Manufacturing, explains the decision to build a new spray drying plant.



View of the fluid bed of the spray tower



Stand-alone spray drying plant for high-care productions

Alongside the main spray tower, the plant also includes other central areas such as a high-performance wet mixing area with various technologies for preparing different recipes, fully automated packaging lines and various technical and social rooms. Everything is embedded in a completely self-contained spray-drying plant that is state-of-the-art in terms of hygiene, technology and efficiency. The construction time, including the technical installations, was just over two years.

The centrepiece of the new plant is the 15 m high spray tower with a flexible nozzle spraying system and a capacity of 650 – 750 kg of powder per hour. From the concentrate production up to the ready-packed powder in aluminium bags, the entire manufacturing process is recipe-controlled.

With the new spray drying plant, we can offer our customers state-of-the-art services in terms of technology, sustainable production and environmental protection. We are particularly proud of the very high hygiene level of the new plant," explains Simone Oeder, Sales Manager for Contract Drying. "Latest technology, a high degree of automation and a sophisticated hygiene concept ensure particularly safe production conditions for spray drying these sensitive product groups," continues Oeder.

Optimised hygiene concept

A strict hygiene concept has been implemented throughout the entire plant. This includes four different hygiene zones with product and staff airlocks to separate the different production areas, containment systems on the active ingredient dosing and filling systems, elaborated cleaning concepts with separate washing and drying rooms for the cleaning of plant components as well as efficient ventilation and filter systems for fresh and exhaust air. Parts of the plant are certified in accordance with the strict EHEDG standard for hygienic plant design.

Sustainable and resource-saving production

In addition to the functional aspects, the plant is also at the cutting edge in terms of a sustainable and resource-saving production thanks to its energy-efficient concept. For example, the spray tower is encased and insulated to reduce heat loss and save energy. Heat exchangers in the ventilation systems ensure effective supply air preheating for the spray tower by recovering heat from the exhaust air. Wherever it is possible, the process heat is recovered and losses are minimised. All cleaning processes are optimised to save resources and are also reduced to a minimum thanks to various measures.

> View into the wet mixing area of the new plant (photos: Uelzena/Photographer: Thies Rätzke)



From cheese to butter supplier

Partnership between Brue Valley Farm and Machinery World Group

ROKK butter homogeniser (photo: Machinery World Group)

s Leicestershire-based food and dairy machinery suppliers Machinery World Group celebrate 25 years of trading, one of their first customers, Simon Clapp of Brue Valley Farm, explains their own transition from cheese to butter suppliers, and how Machinery World have been with them every step of the journey.

Nestled in the Somerset levels is Brue Valley Farm, where the Clapp family have farmed the land for almost 500 years, raising herds of cows to produce quality milk.

Traditionally cheese-makers, they started to experiment with producing high quality bespoke butter options in 2005 - and within eight years their business had switched completely to focus solely upon small batch butter and their award-winning fior di latte mozzarella.

"We started supplying M&S over 38 years ago, producing many of their own brand cheeses," explains Simon, who has grown up making cheese and butter on the farm. "When they asked us to take on a butter project for them, we grasped it with both hands - and haven't looked back."

Initially produced in a small space at the back of the dairy, the butter business grew quickly, spreading across the former cheese factory to enable the family to make more and more butter.

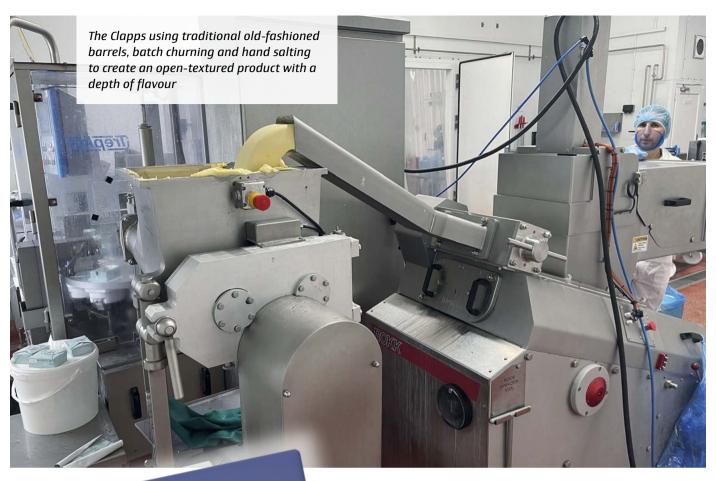
It was during these early growth years that Simon turned once again to Paul Crowter who, in 2007 had expanded the Machinery World Group to include the ROKK Processing arm of the business, supplying their own brand machinery for the dairy industry.

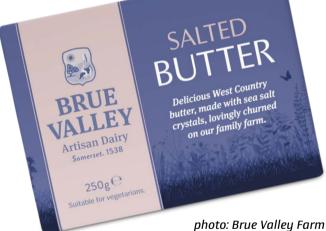
"I knew Paul from his inaugural days of starting Machinery World," says Simon, "and he always had something interesting to sell. I liked his straight dealing approach and family values which resonated with our own, so when he showed me the ROKK butter homogeniser, a partnership was formed."

Simon and Paul worked closely together on this early model homogeniser, making small changes to enhance the performance of the machine and developing additional features and options to increase flexibility.

It is this versatile and explorative approach that has made many big name retail and wholesalers long term partners of Brue Valley Farm, as Simon explains: "Both we - and our customers recognised that we could do what the big players can't do, which is to make high quality small and bespoke batches, experimenting with different flavours, shapes and portions."

Unlike many other butter manufacturers, who have turned to more modern methods, the Clapps continue to follow procedures





passed down through generations of the family, using traditional old-fashioned barrels, batch churning and hand salting to create an open-textured product with a depth of flavour.

"We are always happy to try something new," says Simon. "In fact, I would say it's a core driver of ours to continue to challenge the norm, trialling new tastes and styles, but always backed up by the finest of ingredients, traditions and machinery."

Over the past 3 months a further six new retailer products have hit the shelves bursting with the unique tastes and textures of Brue Valley Farm.



Separators, Bactofuges

Brands: Tetra Pak, Alfa Laval, GEA Westfalia

Homogenizers

Brands: Tetra Alex, SPX APV, GEA Niro Soavi

UHT & Sterile / Aseptic units

Brands: Alfa Laval, Tetra Therm, Tetra TBA, GEA

Also complete dairy factories

Advertising ____

New streamlined rPET bottle base

Sidel has expanded its StarLITE-R range

Sidel has expanded its StarLITE-R range to include a new premium bottle base (photo: Sidel)

idel has expanded its StarLITE-R range to include a new premium bottle base suitable for liquid dairy products, flavoured water as well as juices, nectars, soft drinks, isotonics and teas

Commented Pierrick Protais, Packaging Innovator Leader, Sidel: "This bottle is specifically crafted for the premium market, where consumers expect exceptional performance and striking shelf appeal when purchasing a high-end product. Our new bottle is designed to endure every stage of its journey – from production through the supply chain, to the supermarket shelf, and ultimately into the consumer's hands. The bottle quality and performance has also been rigorously tested in Sidel's laboratories under industrial conditions. Consumers also look for a sophisticated, streamlined appearance, and our new bottle design meets these expectations by offering a base that is distinctive and high performing with a low environmental impact."

Premium bottles are typically heavier than standard designs to ensure a great consumer experience through bottle rigidity and preserved beverage quality. When bottles have increased PET thickness, their bases are prone to deformation especially if manufactured at high speeds.

The flat-looking bottle bottom creates a high impact bottle display on supermarket shelves, and is compatible with round and square-round shaped bottles; single and multi-serve sizes; and can be used with opaque and transparent PET.

The technical features allow a 100 percent rPET bottle to be blown at high speed while securing maximum base performance for a top bottle quality with a visually appealing look.

The design uses a Sidel patented vault technology to avoid any visible ribs on the bottle base and to optimise its geometry. Made of a tall central dome, surrounded by lower radiating ridges with alternating widths and lengths, the bottle base is easy to blow, and perfect material distribution and a high base clearance are ensured. The base offers guaranteed bottle stability thanks to its wide-standing surface. Additionally, the mould base includes an enhanced cooling circuit for efficient bottle base chilling, especially with rPET, which is processed at higher temperatures when compared with virgin sources.

These technical features allow the bottle base to be highly performant when manufactured at a high speed of up to 2,500 bottles per hour, per mould thanks to the optimised geometry of the bottle design.

StarLITE-R Premium can be manufactured using 100 percent rPET and Sidel has adapted its mould base technology to accommodate the material, to ensure a top-quality bottle. Similarly, this easy to shape base requires a lower blowing pressure. With the switch from virgin to 100 percent rPET, manufacturers can save up to 3,100 tonnes of carbon dioxide equivalent per year, and by reducing the blowing pressure of up to 25 percent when compared to a market average premium bottle, up to 61 tonnes of carbon equivalent savings per year can be achieved

Global Dairy Top 20, 2024

Modest revenue growth and strategic divestments for dairy giants, Lactalis in No. 1 spot with record revenue



RaboResearch's annual Global Dairy Top 20 report reveals a year of modest gains and strategic shifts within the dairy sector. The report, which analyzes the financial performance of the world's leading dairy companies, indicates a slight 0.3% increase in combined turnover in US dollar terms, a stark contrast to the previous year's 8.1% growth. Lactalis remains No. 1, followed by Nestlé and Dairy Farmers of America. Fewer than half the companies listed maintained the same position as last year. FX developments continue to impact the overall rankings, and limited M&A activity was again a key theme this year.

2024	2023		Company	Country of	Dairy turnover, 2023*	
		2023	Company	headquarters	USD billion	EUR billion
1		1	Lactalis	France	30.2+	27.9+
2	↑	3	Nestlé	Switzerland	24.1 ⁺	22.3+
3	4	2	Dairy Farmers of America	US	21.7	20.1
4		4	Danone	France	19.7*	18.2*
5		5	Yili	China	17.5+	16.2+
6	↑	9	Fonterra	New Zealand	15.1	14.0
7		6	Arla Foods	Denmark/Sweden	14.8	13.7
8	4	7	FrieslandCampina	Netherlands	14.1+	13.0+
9	4	8	Mengniu	China	13.9	12.9
10		10	Saputo	Canada	12.8	11.9
11		11	Unilever	Netherlands/UK	8.7+	8.1+
12	↑	16	Schreiber Foods	US	7.4+	6.8+
13		13	Savencia	France	7.4+	6.9+
14	4	12	Gujarat Cooperative Milk Marketing Federation Ltd	India	7.2+	6.6+
15	1	14	Müller	Germany	6.7+	6.2+
16	↑	17	Sodiaal	France	6.3	5.8
17	1	15	Agropur	Canada	6.1	5.6
18		18	DMK	Germany	5.9	5.5
19		19	Froneri	UK	5.7	5.3
20	↑	#	Grupo Lala	Mexico	5.6	5.2

Turnover data is predominately dairy sales (actual or estimated), based on 2023 financials (actuel), coupled with some adjustments based on certain M&A activity.

Source: RaboResearch 2024

estimate.

Belarussian dairy industry navigates choppy waters

A big challenge on the horizon

elarus, the world's largest dairy exporter per capita, gears up its development plans, launching new farms and processing capacities, hoping to expand sales to foreign customers even further. Officials claim the industry is having its finest hour. However, net profit dynamics tell a slightly different story.

Belarus manufactures around 850 kg of dairy products per capita, of which only around 240 kg is consumed on the domestic market. Belarussian self-sufficiency in dairy products is estimated to be close to 270%, the highest figure in the world.

The dairy industry is a point of pride for Belarussian President Alexander Lukashenko, who emphasized the importance of agricultural industry development during his two decades of rule. During a recent government meeting, he claimed that other agricultural sectors, such as pig farming, should take the example from practices successfully used by dairy manufacturers.

Indeed, some of the dairy industry's key performance indicators look outstanding. In 2023, Belarus exported its products to 59 countries, Vadim Pobedinskiy, head of the processing department of the Belarussian Agricultural Ministry, recently revealed during a press conference in Minsk.

"If we look at cheese segmen], it would take our industry 1.5 to 2 months to fully meet the domestic demand. For the rest of the time, we work for export. If we look at butter, the share of exports reaches 75%." Pobedinskiy said, indicating that the dairy industry is the most successful part of Belarussian agriculture, securing roughly 40% of its revenue.

Belarus has been struggling to diversify dairy exports during the last few years, as reported by Ksenia Meleshko, head of the foreign affairs department of the Agricultural Ministry.

In 2023, Belarus saw a tangible rise in exports to Indonesia, Bangladesh, Syria, Israel, Turkey, Yemen, Pakistan, UAE, Oman, and Iraq, she said. Besides, the country registered a substantial rise in deliveries to African countries, driven by growing sales to Egypt and Senegal.

In addition, Belarussian dairy companies are working on gaining a stronger foothold in the already-explored markets.

"For example, we used to ship skim milk powder to the UAE, and now we have also started shipping ice cream. This shows that we continue developing already known markets through new product items," Meleshko said.

Belarus has ambitious plans for dairy export expansion. Sales to foreign customers are due to grow from US\$2.4 billion in 2020 to US\$3.1 billion in 2025 and US\$4 billion in 2030. To facilitate this growth, Belarussian authorities plan to launch 80 new milk farms in 2024 and continue expanding the industry in the coming years.

Although a slight increase in domestic consumption is expected by the end of the decade, almost the entire additional volume is destined to land on foreign markers.

Plummeting profit

However, the statements made by Belarussian officials should be taken with a grain of salt. Financial performance dynamics show that something is clearly going wrong in the dairy industry.

In 2023, the Belarussian dairy industry experienced an 85% drop in net profit to BRR 144 million (US\$27.2 million), official data showed. Moreover, nine dairy manufacturers, comprising nearly half of the industry, were loss-making.

The negative dynamics are attributed to a mix of different factors. For example, Felix Mirsky, a local analyst, partly blamed the Belarussian authorities, which still largely rely on Soviet-style industry regulation practices.



Belarus expands efforts to deversify dairy exports (photo: Minsk Agricultural Institute)

Over the last few years, the Belarussian government has broadly utilized price caps, imposing the maximum selling prices for dairy products on foreign markets and a minimum selling price for those destined for exports.

"The state price regulation is the key problem. Under normal circumstances, producers could compensate for their costs by raising prices. But government regulation prohibits them from doing that [on the domestic market]," Minsky said.

Facing financial turbulence due to sweeping Western sanctions, the Belarussian government has tightened its grip on the food market in a bid to tame food inflation and prevent the suffering of living standards.

"Over the past year, price regulation has killed the profitability of retail trade. Judging by the financial results of the dairy industry, dairy producers are next in line," Mirsky said.

However, when it comes to ongoing financial turmoil, there is more than that.

Among other factors dragging the net profit for Belarussian dairy companies down, Mirsky named the persisting labour shortage, which forces Belarussian dairy companies to boost wages to keep their staff intact.

Occasional reports indicate that Belarus suffers from a workforce deficit stemming from weak demographics and substantial emigration following the political crisis in 2020. The picture is similar to what is seen in neighbouring Russia, where the economy lacks 5 million workers. As estimated by the Central Bank, the current labour force crisis is the worst ever.

However, problems in the domestic market are only one piece of the puzzle. Exports are also under a certain pressure.

Despite the proud claims of diversification of Belarussian dairy exports, 85% of sales to foreign customers still land on the Russian market, and this figure has not changed much in the previous years.



Belarussian officials rarely publicly admit economic difficulties, but in the middle of 2023, Belarussian Prime Minister Roman Golovchenko revealed that the export flow was temporarily disrupted, resulting in warehouse stocks worth \$400 million accumulating in the country.

Oversupply on the Russian market might be a huge factor depriving the Belarussian dairy sector of profit last year, a source in the Russian dairy industry who wished not to be named commented.

In general, the source said that the Belarussian dairy industry's dependence on Russia is "near absolute," and there is no viable alternative on the horizon. During the last decade, Russian dairy manufacturers consistently demanded that imports from Belarus be restricted, which led to several trade conflicts known as "dairy wars" between the two countries.

A big challenge on the horizon

The source added that the Belarussian dairy industry is watching Russian attempts to boost self-sufficiency in dairy products with growing concerns. This factor has already started to play a role. For instance, Golovchenko named the growing dairy production in Russia among the reasons for last year's turbulence.

Belarussian dependence on Russia has grown even tighter in recent years and taken on a new dimension. As reported by local business news outlet IB Media, Belarussian exporters used to deliver their products to clients outside Europe through seaports in Ukraine and the Baltic countries.

However, as exports through Ukraine are no longer an option and deliveries through the European Union were banned in mid-2023, the dairy exports of landlocked Belarus were left with little choice. Almost all Belarussian dairy products are now exported through the ports of St. Petersburg.

Occasional reports indicate that some companies try to re-direct product flows to Crimean seaports, but this route is associated with even higher costs.

It is generally believed that the forced transition to Russian seaports has dealt a tough blow to Belarussian dairy products' competitiveness on the global market.

Citing local analysts, IB Media warned that the heavy reliance on Russian infrastructure carries numerous risks, including unfair competition with Russian exporters. This issue seems particularly troublesome for Belarussian dairy companies since Russia has already taken steps to ramp up dairy exports to Asia, the Middle East, and Africa. In this race, the Russian competitors have the upper hand not only thanks to the shorter transport shoulder but also due to a 100% logistics subsidy for dairy export imposed by the Russian government.

Besides, as long as the Belarussian companies have no viable alternative, IB Media claimed, Russian firms have a temptation to spur tariffs.

Given the export challenges, local analysts believe the prospects of the Belarussian dairy export development program being executed as planned look increasingly vague. There is a chance that the program will eventually be revised since it was hammered out in 2020 when Belarus's geopolitical reality was a far cry from what it faces now.

Native high-value proteins

Lyras pioneers a new method



ohoto: Lyras A/S

"It is well-known that heat treatment can reduce the functionality and quality of these high-value proteins, making them less effective for use in food products."

Ole Knudsen, Food Legislation Specialist, Lyras A/S

yras A/S has made a significant breakthrough in food technology by demonstrating that native high-value proteins can be preserved in skimmed milk using their innovative raslysation process. This development allows the preservation of these valuable proteins without significant changes to their nutritional composition, ensuring higher quality and yield without the damage typically caused by heat treatment.

"It is well-known that heat treatment can reduce the functionality and quality of these high-value proteins, making them less effective for use in food products. Even mild heat treatments can negatively impact the yield and quality of these proteins. With the confirmation of the "Not Novel" status for UV-treated skimmed milk and the EU Commission's support, Lyras can now offer a method that significantly increases the yield and maintains the quality of extracted proteins without the risk of heat-induced damage. These proteins are especially sought after because they retain their natural properties and high quality, making them ideal for use in a range of food products, including infant formula, and dietary supplements" says Ole Knudsen, Food Legislation Specialist, Lyras A/S.

Approved to replace traditional pasteurization

Following a thorough review, the Danish Food Authorities have confirmed that UV-treated skimmed milk, processed using raslysation, does not fall under the Novel Food category defined by EU Regulation 2015/2283. This "Not Novel" status allows unrestricted use of raslysed skimmed milk in food production without additional approvals.

In addition, the EU Commission, represented by Directorate-General for health and food safety (DG Sante), has confirmed that raslysation can replace traditional pasteurization for microbial control in processing proteins like Lactoferrin. This approval also extends to the production of other essential milk proteins, such as Whey Basic Proteins.

Raslysation can be applied at various stages of the production process, either before the extraction of proteins from the skimmed milk, during the extraction process, or after the extraction of proteins have been extracted. The process is versatile and is easily adaptable to meet the specific needs of different products, with settings such as flow rate and UV intensity adjusted accordingly.

Dairy Trends: Navigating Shifting Habits, Nutritional Labelling & Positive Nutrition



Author: Kate Kehoe. Marketing Manager at FMCG Gurus

This article is based on FMCG Gurus: Dairy Trends - Country Reports 2024



Consumer Experts, Insight Driven

ising prices are causing consumers to adjust their shopping behaviors in order to stretch their budgets. Despite this trend, consumers are more likely to report an increase rather than a decrease in their consumption of dairy products over the last year. For instance, FMCG Gurus' consumer insights reveal that 30% of global consumers say they have increased their consumption of dairy products in the last year. This suggests that, from a consumer standpoint, the dairy industry shows some resilience to price hikes, possibly due to consumers' belief that these products provide both great taste and nutrition.

The ongoing price increase is anticipated to persist for the coming years, necessitating dairy brands to enhance the perceived value of their products. One approach is to emphasize the quality of ingredients used in healthier categories, while also highlighting the idea of affordable treats and luxurious experiences in categories associated with enjoyment.

Nutritional labels:

Consumers tend to review nutritional labels, with a particular emphasis on products considered healthier

When buying dairy products, 48% of global consumers say they review nutritional labels most of the time. When examining labels, consumers are particularly likely to do so when purchasing milk, possibly due to its frequent use, perishable nature, and association with healthpromoting nutrients and high fat content. Regardless of the specific type of product,

the ingredients used in product formulation significantly influence the perceived value within the dairy industry, as consumers seek products that contain healthpromoting ingredients and are free-from unwanted elements such as fat, sugar, and additives, all while being sustainably sourced.

Positive nutrition:

Consumers find functional claims appealing when selecting products. although there has been a decrease in their significance compared to the peak of the pandemic

Consumers are increasingly prioritizing proactive health measures, focusing on prevention rather than cure, and striving to maintain fitness and activity levels for as long as possible. However, they are aware that their dietary habits may not be as healthy as desired, potentially increasing their long-term risk of illness. Simultaneously, consumers are leaning towards a return to back-to-basics nutrition, emphasizing cooking from scratch and reducing their consumption of processed foods. They seek out products they recognize, trust, consider natural and nutritious, and importantly, find tasty and affordable. Consequently, functional claims in the dairy market have continued to attract interest from consumers, with protein and vitamin claims being particularly appealing, despite a slight decrease from the peak of the pandemic as consumers shift towards a more balanced

and discerning approach to wellness and health claims. For example, FMCG Gurus' consumer insights indicate that 47% of global consumers deem protein claims on dairy products appealing, followed by 46% who find vitamins claims appealing.

Motivations:

Consumers choose dairy for both practical and emotional advantages, with dairy often linked to providing a natural energy lift

Consumers are driven by various reasons for choosing dairy, which may vary throughout the day, and the ability to fulfil multiple needs simultaneously significantly impacts how products are perceived in terms of value. FMCG Gurus' market research highlights that consumers perceive dairy as providing health benefits while also improving mood, especially during times of emotional strain when individuals seek products for escapism. Consumers are most inclined to turn to dairy products for an energy boost (42%), reflecting a common experience of fatigue and difficulty navigating the day, prompting the consideration of traditional energy-boosting options.

Consequently, products perceived to provide a clean and safe energy boost, reviving both physical and cognitive health, are likely to resonate with consumers and influence their perception of value.





EU Dairy trade: rain on the radar



Author: Alexander Anton, EDA secretary general

he global trade radar shows rain for the time to come, not least for our EU dairy exports.

After brandy in January 2024 and pork in June 2024, dairy is now on the menu of the Ministry of Commerce of the People's Republic of China.

As tensions escalate between China and the EU, the latest blow comes in the form of an anti-subsidy probe into EU dairy imports, adding to the growing list of agri-food products caught in global trade wars.

This is not the first time Europe's farmers have found themselves at the center of geopolitical disputes, and with an ever more unpredictable global landscape, the stakes for the EU's agri-food sector, and by extension, the farming community, have never been higher. This troubling trend not only puts additional pressure on agri-food businesses but also threatens their long-term stability.

A landmark event that highlights how agri-food products are being held hostage in global trade disputes even between allies and friends is the Boeing-Airbus dispute. In 2019, the World Trade Organization (WTO) authorized the United States to implement countermeasures on nearly €6.38 billion of imports from the EU. While the dispute initially revolved around aircraft, the U.S. applied 25% tariffs on over a hundred European goods, including dairy products. The tariffs only saw a temporary suspension when the U.S. and EU agreed in June 2021 to halt them for five years. However, the dark cloud of these tariffs looms large, with the possibility of their return in June 2026 if a long-term agreement isn't reached before. So far neither the U.S. administration nor the EU services have shown a lot of activities - but with a new EU Commission to come in office in a few weeks, we may get finally some momentum.

The most recent challenge arose on 21 of August 2024, when China opened

an anti-subsidy investigation into dairy imports from the EU. This move came some believe by coincidence - just a day after the EU published a revised tariff plan for China-made electric vehicles.

We as the European dairy sector found ourselves caught up in yet another geopolitical battle, highlighting the vulnerability of agri-food products to international conflicts.

In response to the Chinese investigation, the European Dairy Association (EDA) made it clear that they stood by their trade practices. As John A. Clarke, former Director for International Relations at the European Commission and senior EU trade negotiator, noted in his article on the Borderlex website, "The European Dairy Association issued a breezily confident statement declaring the WTO conformity of the CAP toolbox of support schemes from which they benefit. They are right." However, while we as EDA are very well justified in our stance, the fact remains





that the global trading environment is becoming more unpredictable and geopolitically unstable, putting the agri-food sector in a precarious position.

The global situation is also intensified by the EU's slow-moving free trade agenda. In a world that is increasingly protectionist, new market access for agri-food products seems like a distant prospect. Without swift action, Europe's farming community risks being left to shoulder the burden of these trade disputes for years to come.

As tariffs generally harm the countries that impose them, it is in everyone's interest to avoid such measures. The time has come for a more ambitious trade strategy - one that ensures agrifood products are no longer held hostage in global power struggles. Geopolitical tensions will likely continue to evolve, but protecting one of the world's most essential sectors should remain a priority.

In conclusion, the EU and its trading partners must act now to break this cycle of retaliation, uncertainty, and harm. The future of not only of the agri-food sector depends on it. The EU Council, the heads of states and governments of the 27 Member States of the EU, made it clear in their "Strategic Agenda 2024 - 2029": We will pursue an ambitious, robust, open and sustainable trade policy that allows fair trade agreements, opens third country markets to EU companies, defends EU interest, allows resilient and reliable supply chains to develop, guarantees a true level playing field and creates reciprocal market access opportunities". A bold statement of the masters of the EU of which we will remind the competent services if and when necessary.

FONTERRA TO EXPAND STUDHOLME SITE



Investment of around \$75 million

Fonterra is set to expand its Studholme site in the South Island to create a hub for high value proteins. Fonterra CEO Miles Hurrell says the investment of around \$75 million is part of the Coop's strategy to grow value through its world-leading Ingredients business by partnering with customers who value Fonterra's unique offering.

Fonterra President Global Markets Ingredients, Richard Allen, says the Coop's dairy ingredients are highly sought after by customers globally.

"We see significant opportunities in the global high protein dairy category, which is projected to grow by close to USD10 billion over the next four years, at an annualised growth rate of 7% per annum. Increasing our manufacturing capacity for functional proteins will enable us to continue to strengthen our offerings with existing customers as well as attract new business."

Site works at Studholme started in September with the first product due to come off the line in 2026. In addition to producing advanced proteins, the site will continue to support the South Island's milk processing as it has done since Fonterra acquired the site in 2012.

Fonterra expects six new roles at the site will be created as a result of this project and a large number of contractors involved in the build will come from the Canterbury region.

The project will also support the conversion of Studholme's existing coal boiler to a coal-free alternative in line with Fonterra's commitment to exit coal by 2037.

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KRONES receives EcoVadis gold medal

Krones can be doubly pleased with this year's EcoVadis rating: The supplier to the global food and beverage industry has once again earned the coveted gold medal - significantly improving its overall result for the fourth year running. With 78 out of a possible 100 points (previous year: 72), the group ranks among the top two per cent of companies in its industry.

"We are pursuing a rigorous strategy in all three dimensions of ESG, each with precisely formulated medium and long-term targets. In that respect, the EcoVadis rating objectively reflects our own understanding of our group's continuing evolution," says CEO Christoph Klenk

That is due in part to the fact that Krones has learned how to use the EcoVadis scorecard as an effective tool for development, as Peter Steger, Head of Corporate Sustainability, explains: "The annual scorecard gives us – and of course our stakeholders – a highly transparent view of which measures have yielded improvements in our ESG performance and where we still have work to do. We can then use this knowledge to initiate targeted optimisation measures and finetune our processes."

As an example, the company has since the 2023 rating adopted a group-wide climate and environmental policy and optimised its procurement processes. In addition, by appointing local sustainability coordinators in the various Krones regions, the company has lent additional support to the implementation of the group-wide ESG strategy. These actions are reflected in the current rating's higher score – and that despite the fact that EcoVadis once again tightened its assessment criteria considerably this year. Krones' biggest progress came in the "sustainable procurement" category. The company's "environment" score also improved further.

Krones CEO Christoph Klenk with Peter Steger, Head of Corporate Sustainability (from right) (photo: Krones)





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losef Kammerlehner

Cheese Technology



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