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# ISRAELI DAIRY: FARMING UNDER PRESSURE



**Helge Eikemann, Managing Director of the German-Israeli Business Association.**

Photo: German-Israeli Business Association

“Make more with less” – the slogan coined by Israel’s drip irrigation pioneers Netafim over the last decades is the quintessential message of what makes Israel a forebearer in combining food and water industry with cutting-edge technology.

For a small country lacking resources in an arid environment, food has always been at the top of the list for innovation drivers and tech entrepreneurs in Israel. The Kibbutz movement encouraged new ideas in improving yield and quality despite far from ideal conditions. It is no wonder that many startups in the growing food tech ecosystem come out of the Kibbutzim, where people shared everything and had to always be one step ahead to beat harsh temperatures and scarce resources. Today, over 200 startups in food tech alone push the envelope constantly to develop new ideas in digitalisation and automation, but also in biological and chemical research. Countless patents

and innovations are made in the field of alternative proteins, and young companies such as Aleph Farms and Remilk are at the forefront of it.

Dairy farmers have an important role in the Israeli food sector, dating back to the days of the Jewish communes even before the State of Israel had been established. To make it happen, they had to re-imagine most of the procedures from breeding to feeding to processing. Today, milking cows in Israel produce tremendous yields, exceeding 12.000 litres per cow annually. Farms now have a track record of improving quality and effectiveness over decades of experience. In the last 20 years, the tech wonder that is Israel’s startup ecosystem has added their special sauce to the industry, which is now highly automated and calculated, where algorithms optimise feed analysis and rations, lower production cost and improved infrastructure and logistics. If you like to see automated milking systems, nutrition monitoring tools and process refinement management all fitted into a working production site, Israeli farmers can make it happen.

But, we need to address the elephant in the room, obviously: October 7, 2023 and the events following the barbaric attack of Hamas on Kibbutzim in the South have led to devastating effects on farms and industry. Two and a half years of war left a mark on Israeli society, and the Kibbutz movement’s elemental way of solidarity has been put to the limits. Rocket attacks in the North by Hezbollah and in the South by Hamas and Houthis, in recent weeks on the whole country by Iran, not only scarred society, but the environment as well. Under such conditions, taking care of fields and animals is a Herculean task. Boycott movements and growing isolation internationally have added to the concerns. We need to bring cooperation back into focus with the Israeli food ecosystem. Dairy farming is a small sector in the country’s agricultural sector – but the experience of combining improvisation, creative thinking and openness towards digital innovation makes it a unique partner in dealing with a changing and challenging environment. Israel continues to make more with less – a venerable task worth pursuing together.

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The new enhanced Chinese import tariffs will be in force for the next five years.

Photo: eyewave/stock.adobe.com

# EDA QUESTIONS CHINESE IMPORT TARIFFS

ASSOCIATION CRITICISED CALCULATION-BASED ARGUMENTS AND TECHNICAL ASSESSMENT WERE NOT TAKEN INTO ACCOUNT BEFORE IMPLEMENTATION.

With the publication in February of MOFCOM Announcement No. 9/2026, the Chinese authorities have confirmed the maintenance of the additional import tariffs (“countervailing duties”) previously published at the end of January 2026.

Following constructive engagement with the Chinese Ministry of Commerce (MOFCOM), the initial tariff level of 42.7% was reduced to 11.7%. While this significant reduction reflects the strength and substance of the arguments presented by the competent EU Commission services, the three sampled companies and the European Dairy Association (EDA), regret that the further technical assessment and calculation-based arguments shared in recent weeks were not taken into account in the final determination.

The general additional tariff of 11.7%, as well as the individual company-specific tariffs ranging between 7.4% and 11.7%, remain unchanged. These measures have entered into force on

13 February 2026 and remain in place for a period of five years. The “countervailing duties” are applied on top of the existing “normal” import tariffs, which are about 8% on cream and 15% on cheese.

The European Union currently exports approximately 30,000 tonnes of cheese and 100,000 tonnes of cream annually to China. These exports already operate in a highly competitive market environment, particularly as other exporting countries benefit from Free Trade Agreements (FTAs) with China. The additional tariffs will therefore significantly curb European dairy exports to the Chinese market.

This development once again underlines the importance of the European Commission’s efforts to conclude comprehensive Free Trade Agreements that ensure stable and predictable trade relationships for European exporters.

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# EDA LAUDS FTA WITH AUSTRALIA

THE EU DAIRY SECTOR WELCOMES THE CONCLUSION OF THE EU-AUSTRALIA FREE TRADE AGREEMENT NEGOTIATIONS.

“Congratulations to EU Commissioner Maroš Šefčovič and his team for yet another breakthrough in both the European trade strategy and the global trade arena”, stated Alexander Anton, EDA secretary general.

Without having analysed the full text of the agreement, EDA acknowledges and welcomes the expanded two-way trade opportunities for the dairy sector in Australia and the EU, with a carefully managed market opening with specific TRQs for products such as butter (5.000 tonnes), SMP (8.000 tonnes) or whey protein concentrates (2.000 tonnes).

With these improved market access conditions, the EU dairy sector would gain greater predictability in a market with potential beyond the €380 million in EU exports in 2025.

“Another major step is, of course, the in-principle acceptance of the GI system and its value by our Australian partners —the details of the agreement remain to be seen —but this is certainly a very important step for us”, summarised Alexander Anton.

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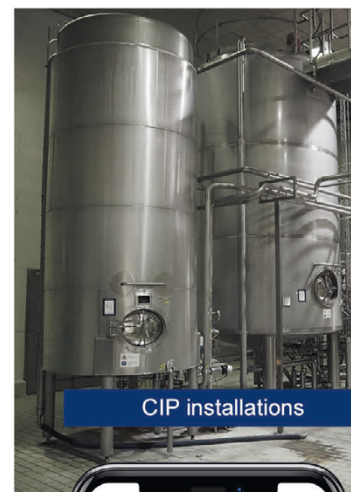
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Well-attended: the EDA Dairy Policy Conference gathered more than 200 dairy experts at Brussels

Photos: Ammann

## ON THE RIGHT PATH TO FUTURE

THE WAY TO A MORE RESILIENT AND SUSTAINABLE DAIRY INDUSTRY WAS THE THEME OF THIS YEAR'S EDA DAIRY POLICY CONFERENCE IN BRUSSELS.

The order is clear. The EU dairy sector must become even more competitive, sustainable and resilient. How this could be done was discussed at this year's EDA Dairy Policy Conference at Brussels at the end of March. More than 200 dairy experts assembled at the EDA headquarters to get first-hand information about the path in the future.

EDA President Alfred de Groot opened the conference with a view on the actual situation of the sector. And that is difficult as we are living in times of volatile prices and challenges like the climate change or animal diseases. Wars like the Ukrainian war complica-

te things. He stated in these circumstances not to underrate the aspects of food. "Food is not just a commodity. Food is stability and in today's world, food is a peace-making force", he emphasized.

### Dairy is a strategic sector

The dairy sector is a big asset of the EU as it for many countries around the globe is a reliable and predictable industry which creates stability in many parts of the world. "That's why our

sector is not just economic, it is strategic.”

Competitiveness is the foundation of the incomes of farmers and dairies. Therefore, it is necessary to maintain a market-oriented approach policy. Resilience also is needed. If we take the wrong decisions, it will weaken. As the EU has ambitious climate targets, sustainability is another pillar. The sector has heavily invested to strengthen sustainability in the supply chain and to reduce energy demand. But this has to go hand in hand with visibility, which is not always the case. The industry supports millions of jobs and fosters rural developments and needs a level playing field for doing so. How to preserve fairness y being competitive, sustainable and resilient is one of the issues to solve, if the industry wants to set a global standard.

“A competitive dairy sector feeds economies, a sustainable dairy sector protects our future and a resilient dairy sector secures stability in an uncertain world”, Alfred de Groot finished his opening speech.

## Paradigm shift for European Agriculture and Dairy?

He handed over to George Morrison, Director of Global Public Affairs of Arla Foods, who chaired the first session of the day. Under the theme “Paradigm shift for European Agriculture and Dairy?” it focused on the changing political landscape and its impact on the European agriculture and the factors competitiveness, sustainability and resilience.

Marion Picot, Secretary General of the CEJA/Young Farmers, started the key notes with a look on the situation of young farmers in Europe. They are willing to take care of the tradition and to run their farms. After a long time, they are also on the agenda of the



The speakers of the first session (from left to right) Pierre Bascou, Damien Flynn, Marion Picot with Chair George Morrison.



Catherine Combette gave an overview about the plans of the EU concerning free trade agreements with countries around the globe.

EU, which is a great thing, she stated. But there is still a lot to do. A solution how we take farms from one generation to the next is still to be found. For this, EU strategy wants to bring in additional instruments which are needed. But what is most needed according to Marion Picot is a strong and coordinated commitment from the EU, Member States, regions, and local governments. Especially, she called for a dedicated national-level budget within the CAP to better support young farmers and ensure generational renewal in the sector. “It is worrying that young farmers so far are not supported in the GAP.” Transition is important but, in the moment, it is first and foremost on the shoulders of the farmers and that has to change. “We need to find a way to do the transition better”, she concluded.

After her Pierre Bascou, Deputy Director-General DG Agri, explained how the European Commission wants to make the agricultural sector more attractive, particularly to younger generations. He agreed with Marion Picot at the point that encouraging young people to enter farming is essential for the future of industry.

## Dairy is important for European sovereignty

And the industry is very important for the sovereignty of Europe. Additionally, food security means security for the EU. The EU has to deal with challenges like animal disease, volatility, energy prices, to name a few. Also, logistics are becoming more complex. But food security is not in danger, he emphasized. Concerning the GAP negotiations, Bascou pointed to the need of a more targeted GAP in the future. “The key is a better income and to attract young farmers. Therefore, the money has to go where it is most

needed". Additionally, sustainability must be encouraged via the new GAP, too.

For a level playing field, the Unfair Trading Practice (UTP) directive is necessary, as it is a key to save farmers. "It is important to strengthen our relations to our trade partners by strengthen our trade policy via diversification of markets and sources for imports and maintain our standards as dairy stand on an important moment", Pierre Bascou finished.

## Irish presidency focuses on sustainability, progress and security

The first session was brought to an end by Damien Flynn. The member of the Special committee on Agriculture, incoming Irish EU presidency, explained the priorities of the incoming Irish EU Presidency. The Irish approach will progress, security, competitiveness and sustainability. The main target will be the negotiations of the GAP which shall enhance the competitiveness of the industry. One of the questions to be answered will be the challenge to bring innovations to the markets. Actually, it takes too much time and need to be accelerated. Also, a new strategy for livestock will be discussed to help to reach the main goals.

## Trade – what can be expected in 2026?

The second session was chaired by Lise Andreasen Høyer, Chief Consultant at the Danish Dairy Board. It had a look on the global trade, especially expectations and opportunities in the ongoing 2026. The recent crisis in the Middle East has shown the instability of the global chains as they can be interrupted fast. If we can't produce food, we have to deal with a food crisis, but if we get it right food can support resilience and sustainability. To do so trade agreement offers some help, started Høyer the session.

Catherine Combette, Head of the Unit at DG AGRI, informed the attendees about the actual plans and negotiations of the EU

concerning such agreements including the EU – Australia free trade agreement. This one offers some new opportunities for European companies. Another one the EU-Mercosur agreement starts with provisional obligation on June 1.

Another agreement was recently reached with India. "This one is the largest both partners have ever concluded", emphasized Combette. Even with dairy not totally included, it is very important as some of the dairy products are included. Another great achievement according to Combette was the FTA with Indonesia. There will be no tariffs on all dairy products except liquid milk. As Indonesia is one of the biggest importers around the globe, this means a good opportunity for European companies to sell their products.

But China will be no aim for an FTA as the EU still believes the investigations of the dairy sector as unfair. The rise of import tariffs also is not acceptable, Combette explained. The EU Commission is working on a solution and reaction to this.

As there is now no FTA with China planned, other FTAs the EU is working on are with the Philippines, Malaysia, Mexico, and with Thailand. The last named is a long-term goal as the ninth round of negotiations was held in early March. An agreement would be interesting especially for whey and cheese exporters.

Nearer is a FTA with Mexico. The signing could take place in May, which would be a real positive for European Farmers. Not so easy will be the talks with Malaysia as they are now in the fourth round and ongoing. But it's not a forlorn hope.

Generally, FTAs are a good way for predictable trade, Catherine Combette ended.

And such a FTA with Thailand could soon be the case as Songkhla Chulakasian, Minister Counsellor of Agriculture at the Royal Thai Embassy, spoke not only about the interest of Thailand to reach an agreement. He also noted Thailand's interest in greater diversification of products entering the Thai market, signalling opportunities for the European dairy sector. So far, The Nether-



In the second session discussed (from left to right) Songkhla Chulakasian, Catherine Combette, chair Lise Andreasen Høyer, Maria Angela Esquivel and Winarti Halim challenges and chances of trade in Asia.



“To stay attractive, you have to be relevant”. EDA President Albert de Groot opened and finally summarized this year’s Policy conference

land, France and Germany are the main sources for imports. Dairy is very important for the Thai as the country not only is a major importer, but also exports 280.000 tonnes of dairy products, especially yogurts to customers in the Asian region. The land contains 15.000 dairy farmers responsible for 600.000 cows

### EU is welcome in Indonesia

Winarti Halim, Agricultural Attaché for the Embassy of the Republic of Indonesia, emphasized during the session that food securi-

ty remains a top priority for Indonesia. One of the next steps in this direction will be the implementation of food security in proteins. Additionally, the country runs an ambitious programme for school milk. Although the logistics and higher transport costs due to the island system are a challenge for European companies, Indonesia would welcome more activities of the EU as it don’t want to rely on only New Zealand as source for dairy imports. „The knowledge in the EU is so high“, emphasized Halim. It would bring major improvements to the smaller and bigger farms.

Maria Angela Esquivel, Asia, Corporate Affairs Director at Royal FrieslandCampina, first showcased a trade sample of Friesland-Campina in the southeast Asia-region. The group is trying to build long-term partnerships and therefore invests in the local production. Despite the challenges the region is one of the most promising areas for growth worldwide. Finally, Maria Angela Esquivel underlined that, while the opportunities are significant, it is ultimately up to the European Union to take the initiative and actively engage with the southeast Asian-region.

After the second session Albert de Groot summarized the event. “To stay attractive, you have to be relevant. So, if we want to make farming attractive, we as an industry have to be attractive for investing, operating and partnering with”, he drew a conclusion of the conference.

And for this the industry seems to be on the right path as not only the conference but the traditional Cheese buffet and the ongoing talks after the event showed.

### Next stop Bratislava

The next Dairy Policy Conference will be run in March 2027. The next meeting point of the European „Lactosphere“ will be the Annual Convention 2026 of EDA which will take place from October 14 to October 16 in Bratislava, the capital of Slovakia.

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# THE EUROPEAN DAIRY INDUSTRY HAS A LOT TO TAKE AWAY FROM UKRAINE.

ALEXANDER ANTON, EDA , AND ARSEN DIDUR, (SMPU) SPEAKS ON THE CURRENT SITUATION IN UKRAINE, FOOD SECURITY AND THE COUNTRY'S INTEGRATION INTO THE EU DAIRY MARKET

**Mr. Didur – since the beginning of the Russian invasion in 2022, Ukraine is probably experiencing its hardest winter of war. How are you and the people in your country doing?**

**Didur:** First of all, I would like to remind you that the Russian invasion took place back in 2014, when Crimea was annexed and military operations began in the two eastern regions of Luhansk and Donetsk. Since then, war has been raging in Ukraine. What happened on February 24, 2022, we call a „large-scale invasion.“ The struggle for the country's sovereignty and independence has been ongoing since 2014. But now to your question: this winter has become a real test for our people, the energy system and the Ukrainian armed forces. However, Russia did not only start attacking the energy supply this winter. In 2022, in the first week of the large-scale invasion, the Zaporizhzhia nuclear power plant was captured, and in 2023 the Kakhovka hydroelectric power plant was destroyed. Recently, the Russian military has even stopped hiding behind false reports about the alleged shelling of exclusively „military facilities“. An open struggle against the civilian population has begun. Energy facilities and infrastructure, including railways and passenger trains, are

massively paralyzed. The Western media is now paying much less attention to this war. People are tired of reading about the deaths, fires and devastation caused by the Russian aggressor. But it seems to me that it is important that Europeans do not forget that this war is ongoing and is gradually developing into their war. I also advise resisting Russian narratives about Ukraine's weakening economy. Objective information is best obtained from Ukrainian sources. For example, through the analysis company Infagro, which specializes in the dairy sector. We are in constant contact with our dairies, which continue to operate despite the difficulties caused by the war, and have an up-to-date picture of their situation.

**Mr. Anton, how do you assess the situation in Ukraine?**

**Anton:** I have nothing to add to Arsen's analysis, except perhaps to express my admiration for the resilience of the Ukrainian people, which I experienced myself in May 2024 during my last visit to Kyiv. I would just like to take a more differentiated look at media coverage in Europe. I agree that coverage of the Russian war in Ukraine has evolved, but the attention of the European media is still strongly focused on Ukraine. In Europe, too, beyond

the countries bordering Russia, Belarus and Ukraine, people have finally become aware that the war against Ukraine is a war against Europe.

**Mr. Didur: In previous interviews with us, you have often talked about the operation of your dairies under war conditions. Emergency power generators, for example, are part of the standard equipment. What is the current situation in view of the renewed massive Russian attacks on your energy infrastructure and production facilities?**

**Didur:** The situation is difficult. Under the current circumstances, it cannot be otherwise. Some of our dairies have to use backup generators for weeks to maintain operations and ensure regular processing. But the active destruction of our energy system by the aggressor is not the only factor hindering the work of our processing plants as well as other companies in the country. Nevertheless, the stocked shelves of our stores best reflect the current situation. All major dairy products are provided, which means we work. In addition, despite the difficult conditions, we are actively working to adapt our dairy industry regulations to EU requirements, as we are committed

to integrating our dairy sector into the European dairy industry. We are moving in this direction and following the roadmap for the integration of the Ukrainian dairy industry into the EU. Several multinational dairy companies are already successfully operating in the Ukrainian milk market. Lactalis Ukraine, for example, was the first company to enter our market 30 years ago and join Ukrainian milk processors. Since then, they have invested massively in their development and continue to do so – as do some other companies – under the difficult conditions of the war. Their commitment shows that investments are possible. It strengthens both companies and the dairy sector as a whole.

**Farmers, especially within the EU, are concerned about Ukrainian agricultural imports into the European Union. What is the situation with dairy products?**

**Didur:** During the particularly active protests of Polish farmers against agricultural imports, our Association of Dairy Enterprises of Ukraine made great efforts to convince the European Commission that imports of Ukrainian dairy products into EU countries would not affect the dairy industry of these countries due

to the very small volume. For example, Poland imports five times less Ukrainian dairy products than Ukraine exports. We met repeatedly with our Polish colleagues from Polska Izba Mleka and other local dairy organisations and jointly reported objective information to the Polish government about the real situation in the milk trade between our countries. The European Dairy Industry Confederation also provided us with continuous support in this matter. Our argument was convincing, and the issue was temporarily off the table. We and our Polish colleagues believe that Ukrainian milk imports do not pose a threat to the Polish or European dairy market. We were disappointed when the special regime for the export of Ukrainian dairy products to EU countries was lifted. In view of the difficult situation in the dairy industry, export transactions are of great importance to us. At the same time, we believe that the integration of Ukrainian dairy products into the European dairy market will be an advantage for the EU, not a threat to EU farmers.

**Anton:** The European Milk Association supports the integration of the Ukrainian dairy sector into the EU internal market and is a member of the EU Integration Committee of the Ukrainian dairy sector. Together with Arsen and the SMPU, we have repeatedly advocated for a long-term integration perspective for the Ukrainian dairy industry. While we understand the concerns of other agri-food sectors, we have called on the EU Commission at all levels to define dairy as a pilot sector for EU integration. Today's figures speak for themselves: the Union has a milk export surplus. Together with Mr. Maks Fasteyev and his team from infagro, we conducted a study on the future development probability. With a population of around 40 million people today and a milk production of less than 7 million tons, the Ukrainian dairy sector is structurally integrated into our European milk sphere.

**At the Munich Security Conference, it was found, among other things, that**

**infrastructure is a far more critical factor for food security than production itself. Do you both agree with this assessment?**

**Anton:** EU Agriculture Commissioner Christophe Hansen emphasised the crucial importance of food production in the panel discussion „War on Food“ at this year's Munich Security Conference. And as Arsen rightly argues, agri-food production needs adequate – and in the dairy sector even highly developed – infrastructure.

**Didur:** To be honest, it is difficult to separate production and infrastructure in the dairy industry. Production is part of the infrastructure. It is difficult for me to say what is more important for food security: the availability of raw materials and intact, operational processing plants, or the uninterrupted supply of milk to dairies, the availability of electricity and gas, and the delivery of products to points of sale. In 2022, in the first days and weeks of a full-scale war, logistics problems arose. Farmers distributed their milk to the population as humanitarian aid. They could not deliver them to the dairies. For the dairies, the rapid restructuring of supply chains was a difficult task, but they succeeded. When the bombing of the energy plants began, logistics had already been restored, but problems arose in production: an alternative energy supply was needed, which also proved to be problematic. For food security, however, it is the result that counts: dairy products on the shelf. And for these to be available, the coordinated work of the entire production chain is crucial.

**The Secretary General of the NATO Parliamentary Assembly, Benedetta Berti, described Ukraine as a „role model“ in securing food supplies on the same panel of the Munich Security Conference. She explained that the country had shown how agriculture could be carried out successfully even under war conditions. Mr Anton, what can the European Union learn from Ukraine?**

**Anton:** The experience of the Ukrainian agri-food sector and the dairy sector



Arsen Didur, Director General of the Association of Dairy Enterprises of Ukraine (SMPU).

Photo: AgE

during the war has been analysed by the services of the European Commission in the framework of the European Crisis Preparedness and Response Mechanism for Food Security (EFSCM) in order to draw lessons for the Union on how to ensure food security in Europe in times of severe crises. As part of this EFSCM, military personnel also presented their view on food security in Europe, which of course focuses on the supply of the armed forces in Europe. The main challenge is to ensure the food supply of the 75 army brigades – around 240,000 soldiers – who – if necessary – are to be transferred to the eastern border according to the latest operational plan. For the time being, food stockpiling is considered a central issue of food security in Europe.

**Mr. Didur, after the large-scale invasion on February 24, 2022, your country had to adapt quickly to the new circumstances. What can Europeans learn from you in the face of Russia's increasing hybrid attacks on EU member states?**

**Didur:** I think our biggest advantage in extreme war situations is our flexibility and quick decision-making. European dairies are on average more automated; they have backup power systems, operate in a more stable financial system, and are backed by insurance and government support. Our dairies have never worked in a stable environment; they have always had to adapt to constant changes in legislation and tax regulations, work with short-term supplier contracts, manage price fluctuations and resist the arbitrariness of retail chains. Therefore, the companies met the new challenge – the war – in a certain way more resiliently. They didn't expect anyone to solve their problems. In the spring of 2022, Ukrainian dairies quickly changed their logistics, installed generators, changed the collection routes for milk, switched to the production of non-perishable products such as UHT milk and milk powder, relocated parts of their production, provided accommodation for their employees, and asked the government to classify dairies as

critical infrastructures in order to receive preferential power in the event of power outages. I know that Polish processors have already approached their government with the same request. Despite the loss of some suppliers in the occupied territories, most of our large processors were able to continue production. In my opinion, European dairies are technically better prepared than most Ukrainian ones before 2022. However, our experience shows that flexibility and fast decision-making are crucial. I do not know whether our European colleagues can learn this quickly, but they can already develop a simple decision-making scheme for when needed.

**Mr. Anton, what influence does the European dairy industry have in supporting Ukraine?**

**Anton:** Three European dairy companies are active in Ukraine and have continued their investments in the Ukrainian dairy industry over the past four years – new production facilities have even been built. This commitment is a strong sign of confidence in Ukraine and the Ukrainian dairy industry. Supporting the full integration of the Ukrainian dairy industry into the European single market is another sign of our confidence – we are a member of the EU Integration Committee of the Ukrainian Dairy Sector and we are impressed by the progress made over the past two years. We need to step up the pace: Ukraine's accession to the EU in 2027 – in whatever form – mentioned in the December 2025 „peace proposal“ continues to be seen as a possible option in Brussels, despite opposition from the EU's largest member state.

**What does your country need most urgently at the moment, Mr. Didur?**

**Didur:** In my opinion, it is important for us that the world does not forget that Russia unleashed the biggest war in Europe since World War II by disregarding all international rules and treaties and despising the values of the democratic world. It is important for us that the world stops engaging in dubious diplomacy,



Alexander Anton, Secretary General, European Dairy Association (EDA) Photo: EDA

remembers universal human values and clearly condemns Russia's criminal actions.

**When do you hope for Ukraine's accession to the EU, and when do you expect it, Mr. Anton?**

**Anton:** Since Ukraine's rapid accession to the EU would be the result of successful peace negotiations, the sooner the better! For the dairy sector, there is basically no need to wait for accession – with the autonomous trade measures, we had already achieved a partial integration of Ukrainian dairy products into the EU internal market. The revised EU-Ukraine Deep and Comprehensive Free Trade Agreement (DCFTA) in force today is more restrictive – we really see no reason why the integration path should not be continued through long-term dairy trade agreements.

**Where do you place your hopes?**

**Didur:** I hope for the restoration of justice and lasting peace throughout the continent.

**Anton:** May the war end soon and peace reward the courage and resilience of the Ukrainian people.

Thank you very much and all the best!

AgE



Emily McIsaac

Photos: Daisy Lab

## A DIFFERENT PATH TO DAIRY PROTEINS

START-UP DAISY LAB USES PRECISION FERMENTATION TO PRODUCE DAIRY PROTEINS WITHOUT COWS. WE SPOKE WITH MS. EMILY MCISAAC, ONE OF THE FOUNDERS.

**Ms. McIsaac, you are a co-founder of Daisy Lab, together with Irina Miller and Nikki Freed. Tell us a little bit about yourself and your colleagues.**

**Emily McIsaac:** Daisy Lab is a fully female-founded biotech start-up based in New Zealand. I have a background in genetics and molecular biology, and my master's thesis formed the foundational science behind Daisy Lab. Irina Miller, our CEO, holds a master's in bioinfor-

matics and has a strong background in business strategy, while Dr. Nikki Freed, our CSO, is a molecular biologist with years of experience in genetic engineering and microbiology.

**How did the idea to found Daisy Lab come about?**

**McIsaac:** Daisy Lab is Irina's brainchild. She had heard about precision fermentation being used to make functional

proteins and thought the technology would be perfectly suited to dairy protein production. Initially, she assumed someone in New Zealand would take it forward, given the country's deep connection to dairy innovation. As years passed with no movement, she decided to explore the opportunity herself and partnered with Nikki. Then I was brought into the fold, and Daisy Lab's first research began as part of my master's project.

**Why did you choose New Zealand as your base, and how did you arrive at the name Daisy Lab?**

**Mclsaac:** New Zealand is our home. It's also the largest dairy exporter in the world. As a global dairy hub, this is the ideal place to reimagine dairy with new technology. Being here keeps us close to both the opportunities and the challenges in the sector.

As for the name: "Daisy" reflects our connection to dairy, while "Lab" signals the scientific innovation at the heart of what we do.

**How did Tatua's involvement in the project come about?**

**Mclsaac:** Tatua Dairy Cooperative, a leading New Zealand-based dairy company, is our industry partner. With a vested interest in exploring the future of dairy, Tatua engaged with us based on a shared recognition that the industry needs to embrace new technologies. The cooperative has been instrumental in supporting us as we develop our technology, particularly in the downstream processing of our proteins.



Inside Daisy Lab's operations in Auckland.

**What does Daisy Lab aim to achieve??**

**Mclsaac:** Our main goal is to accelerate the transition to sustainable dairy by producing key proteins without cows. We want to create high-quality, animal-free ingredients that can be used in foods people already love.

**How many people do you currently employ?**

**Mclsaac:** We are a small but growing team, with six employees.

**Could you outline the products you currently produce?**

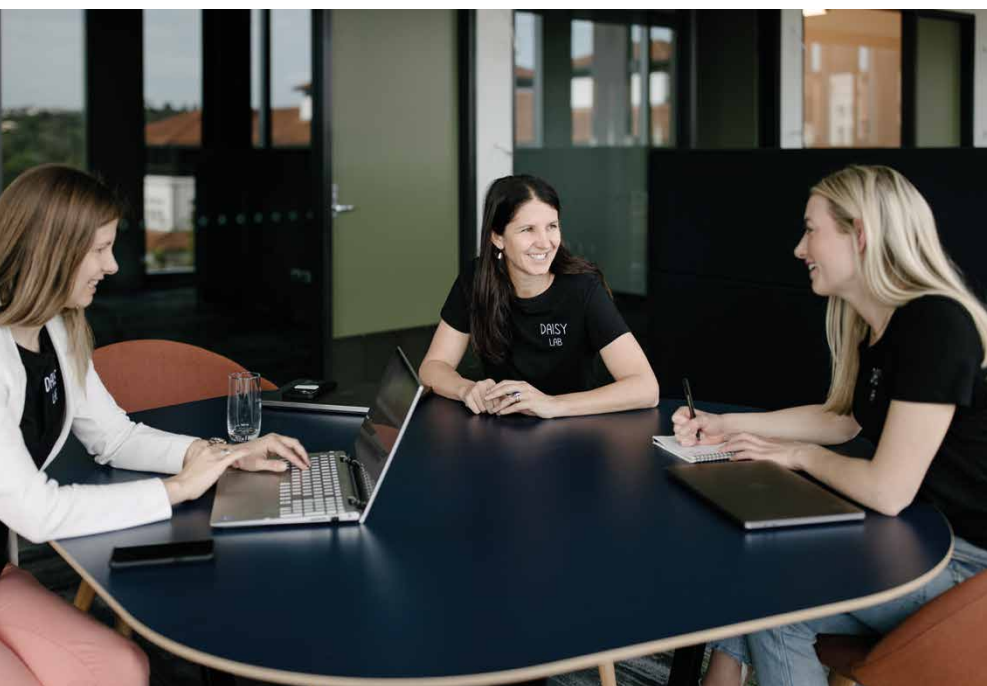
**Mclsaac:** Our current focus is on producing recombinant lactoferrin, a high-value dairy protein known for its nutritional and functional benefits. We are also working on beta-lactoglobulin, the main ingredient in whey protein isolate. In time, we plan to expand into other milk proteins that are critical for taste, nutrition, and functionality in dairy products.

**Where do you source the raw materials?**

**Mclsaac:** Our microbes are fed on simple, plant-based sugars and nutrients, and we are actively exploring ways to incorporate more renewable and circular feedstocks as we scale.

**There are various promising technologies in the field of cell-based milk alternatives. Why did you choose precision fermentation?**

**Mclsaac:** Precision fermentation is a proven technology with decades of safe use in the production of proteins for food and



Women in power: (from left) Irina Miller, Nikki Freed, and Emily Mclsaac, co-founders of Daisy Lab.

pharmaceuticals. It enables us to produce proteins identical to those found in cow's milk, resulting in the same functionality, taste, and nutrition, which is something plant-based alternatives can't always fully replicate.

**What advantages does precision fermentation offer compared to traditional dairy production?**

**Mclsaac:** There are many advantages, including lower greenhouse gas emissions, no reliance on animals, reduced land and water use, and greater scalability in the long term. Precision fermentation enables us to meet growing global demand for dairy proteins without expanding the environmental footprint of traditional farming.

**Scaling from laboratory to industrial production is a key challenge. How are you addressing this?**

**Mclsaac:** Scaling is always a challenge

for all new technologies, but it's one of our key focus areas. We work closely with experienced partners, invest in process optimization, and follow well-established pathways that other fermentation-based industries have already proven at industrial scale.

**Where do you see Daisy Lab in five years?**

**Mclsaac:** In five years, we see Daisy Lab as a leading producer of precision fermentation dairy proteins, licensing our technology to dairy companies around the world. We believe these companies can leverage their existing infrastructure to process precision fermentation proteins, accelerating the shift toward sustainable dairy.

**Thanks a lot and all the best.**

The interview was conducted by Ralph Ammann.



Ice cream made from proteins of Daisy Lab

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Small, but selected: Israel's Dairy sector is one of the most advanced globally.

Photo: koltukovs/stock.adobe.com

## HIGH-TECH – NOT GREEN PASTURES

ISRAEL'S DAIRY INDUSTRY IS CONSIDERED ONE OF THE MOST ADVANCED IN THE WORLD. IT SERVES AS A MODEL FOR DAIRY FARMERS WORLDWIDE.

Despite unfavourable conditions such as heat, humidity, and limited resources, the average milk production per cow in the Israeli dairy industry has increased dramatically since the 1950s, from 4,000 kg annually to over 12,000 kg in 2023. On some farms, cows are milked three times a day to maximize milk production. „Grazing“ is a foreign concept in Israel. Water scarcity is a major issue. The nutrition of the herd (the dairy breed is the Israeli Holstein) is based on scientific online feed analyses and calculated feed rations designed to maximize nutritional value, production rates,

and profitability. Advanced technologies, including computerized milking and feeding systems, cow cooling systems, and milk processing equipment, combined with unique agricultural management techniques, have made Israel's dairy industry a world leader in efficiency, production, and sustainability. Advanced, domestically developed technologies are used in all areas of Israel's dairy industry, resulting in a fully automated calculated system that guarantees strict quality control. Each cow wears a transponder on its leg – this means that data can be permanently collected

in real time on milk yield and indicators of animal health, such as mastitis, fertility, etc. A laboratory evaluates the data, which flows into intelligent control systems that enable an optimal adjustment of feeding. These technological advances contribute to higher milk production and better herd management. Overall, Israel's commitment sets the standard for innovation in the global dairy industry.

## Israel Dairy Board

All milk production is regulated and monitored by the Israel Dairy Board (I.D.B.; quota production restriction), which is under the authority of the Israeli government, the large processing companies, and the dairy farmers. Under the I.D.B., dairy farmers are subject to monthly quotas to share the annual milk production. Today, quotas are calculated on a semiannual basis in order to compensate for certain natural fluctuations in the production on individual farms. The basic price for the milk is agreed between the government, the farmers, and the dairy industry. The Israeli Dairy School's training center offers seminars on dairy farming in Israel and many other topics – including herd management, courses, and dairy education – for both local and international visitor groups.

## Two agricultural systems

There are currently two agricultural systems: the kibbutz, a large collective agricultural unit, and the moshav, which is a family herd organized as a cooperative. All milk production is monitored by the Israeli Milk Authority. This is the property of the Israeli government, the large processing companies, and the dairy farmers. Average milk production per cow: 12,025 kg/year. Average fat content: 3.59%, 435 kg/cow/year. Average protein content: 3.17%, 384 kg/cow/year.

The highest average annual milk yield per cow in an Israeli cooperative milk farm (Ein HaShlosha) is 14,463 kg. There are a total of 164 kibbutz dairy farms. Source: Data from the Israel Dairy Association.

Milk production figures of the Moshav: Average milk production per cow: 12,025 kg. Average fat content: 3.86%, 458 kg/cow/year. Average protein content: 3.42%, 402 kg/cow/year. The highest average annual milk yield per cow on an Israeli Moshav dairy farm: 13,564 kg (29,904 pounds). Total number of dairy farms in Moshav: 420 farms.

Also worth mentioning is the Israel Sheep and Goat Breeders Association – Pastures of Eden, based in Tel Aviv. Together, 200 sheep and goat farms produce 10.5 million liters of sheep's milk and 4.5 million liters of goat's milk annually. In 1998, the association broadened its horizons with the export of its unique „Pastures of Eden“ range of cheeses to the USA. It is a Balkan-style feta cheese made from 100% sheep's milk. According to the Israel Dairy Board, it was awarded the „Best Taste Award“ by the

Quality Institute International in 2004 (American Tasting Institute, American Culinary Institute). „Pastures of Eden“ is considered better than French or Greek feta in taste and consistency.

## Export dairy producers

Tnuva-Food Industries Agricultural Co-Op in Israel Ltd. – Israel's largest food manufacturer, especially in the dairy sector.

Founded: 1926 under the leadership of the Histadrut sub-organization Chevrat Ovdim of around 620 kibbutzim and moshavim. It was conceived as a central cooperative for the marketing of their agricultural products. Headquarters: Gilot near Tel Aviv. Number of employees: 6,630. Turnover 1.87 billion € / 7.17 billion shekels. Market share: More than 70% in the dairy sector.

The planned expansion into Romania in 2005, supported by the European Bank for Reconstruction and Development and involving the construction of a new dairy factory, ultimately proved unsuccessful. The decommissioned factory was bought by Turkish dairy group Süt Ürünleri A.S. in 2013. In 2006, Californian investment company Markstone Capital sought to acquire Tnuva, but no majority was achieved for the conversion into a corporation.

At the end of 2006, British investment firm Apax Partners, together with an Israeli investor – Mivtach Shamir Holdings – succeeded in winning a tender for the takeover. Since then, Apax has held 56.05% of the shares in Tnuva, with Granot (the remaining kibbutz and moshav cooperatives) retaining a 23.3 % stake and Mivtach Shamir Holdings the remaining 20.67 %. In 2012, the Israeli Ministry of Environment fined the company 15 million shekels, or 3.96 million US-\$, for deficiencies in the pre-treatment and discharge of wastewater into the sea. On May 22, 2014, Apax and Chinese state-owned food manufacturer Bright Food (the second-largest Chinese food company) signed a preliminary agreement for the latter to acquire a 56 % stake in Tnuva. After delays caused by the Gaza conflict, the takeover was not completed until March 30, 2015. At the end of 2016, the Central Disciplinary Commission of the Communist Party of China began investigating Chinese managers of Bright Food over allegations of corruption. Tnuva's then-Chinese CEO Guo Benheng was sentenced to six years in prison for corruption. Source: Wikipedia.

In 2025, Tnuva remained Chinese-owned, but there are discussions about possible changes or further investment in its structure and operations. In addition to the production and marketing of milk and dairy products, meat, fish, eggs, baked goods, and frozen food are also on offer. Tnuva's cottage cheese, which was launched on the market in 1962, is the company's most popular dairy product – so much so that in 2011, price increases led to protests and calls for boycotts in Israel.

## Strauss Dairy

Strauss Dairy is one of Israel's largest dairy companies. Its roots go back to 1933, when Richard and Hilda Strauss fled persecution in Nazi Germany. They soon founded a small family business in

the northern Israeli city of Nahariya, learning their trade through experience. The company was also known for its ice cream. By the 1960s, Strauss Dairy had grown into Israel's largest privately owned dairy enterprise. In the decades that followed, it partnered with major European dairy companies, including Unilever and Danone, to strengthen its expertise in R&D, production, and quality control. In 1997, the company became the majority shareholder of coffee and confectionery manufacturer Elite. The Strauss-Elite-Group has recorded outstanding growth rates, with Strauss dairies alone employing over 400 employees at branches throughout Israel. The group, led by Ofra Strauss, reported 2024 revenue at 1.95 billion US-\$. Ownership is divided between Unilever (51 %) and the Strauss family (49 %).

Products include food, beverages (Strauss Coffee B.V.), and water. The company operates in over 20 countries worldwide, with 27 production sites and 12,600 employees, and has strategic partnerships with global companies, including PepsiCo and Danone.

### Gad Dairies

„Cheese with character“ – the best way to describe Gad Dairies products, according to the Israel Dairy Board. Founded in 1980 as a family-run dairy, Gad has since grown into one of Israel's largest dairy producers. Its state-of-the-art production facility is located in the Central District of Israel, covering an area of around 7,000 square meters. Gad's product range reflects strong Mediterranean influences, shaped in part by the founders' Turkish roots. Ezra Cohen, founder and chairman of the board, also spent a lot of time in Italy studying the secrets of local cheesemaking. Gad offers more than 200 products, including more than 17 different types of mozzarellas, ricotta, mascarpone, pecorino romano, white cheese, cream cheese, and salted cheese made from sheep's milk and goat's milk – Bulgarian cheese.

### Tara Dairy

An extraordinary story: With its renovated headquarters in the Tel Aviv district and branches throughout Israel, Tara Dairy today is Israel's leading privately held dairy producer, ranking second in milk processing nationwide. Its roots go back to 1942, when seven dairy farmers from the Tel Aviv district of Nachalat Yitzhak met and were looking for a solution to their milk surplus. From then on, they produced cheese and cream, selling their products throughout the district. 63 other farmers ultimately joined the enterprise. Together, they bought a piece of land in Nachalat Yitzhak and founded the Tara Dairy.

Today, it controls about 12-14 % of the Israeli dairy market and its products are sold in all supermarket chains and most private grocery stores in the country. Tara also supplies hospitals, hotels, and restaurants, as well as exporting its products. It is the only dairy in Israel that strictly observes the Shabbat, which makes it extremely attractive to the strictly Orthodox market. The products are certified kosher. Tara was acquired in October 2004 by CBC CocaCola Israel, a licensee of Central Bottling Company Ltd. As German software company ProLeiT GmbH, based in Herzogen-

aurach, explains in a Success Story article, there is a cooperation with Tara Dairy in the field of process control systems. „A pivotal driver of success is the carefully selected partnerships that Tara has entered into throughout its history, exemplified by its collaboration in the field of process control systems. In this sector, the dairy has been cooperating with ProLeiT since 2011: The German company played a central role in the new construction project of the dairy, formerly located in Tel Aviv, which involved fully automating the entire plant with Plant iT. The main challenge of the greenfield project in the south of Israel was the size and complexity of the cutting-edge dairy, boasting over 40 filling lines and a individually tailored control system that required more than 700 step sequences.“

Tara combines unique technologies with strict quality assurance procedures to produce a wide range of dairy products – hard and soft cheese, yoghurt, yoghurt drinks, mixed milk drinks, desserts, and butter, which it sells in all supermarket chains in the country and beyond. Its cottage cheese with 3 % fat content tastes like it has a higher fat content. Tara was also Israel's exclusive entry for the Milk and Ice Cream category of the Golden Seal Award, one of the most prestigious food awards in the world. Hard cheese: Tara produces hard Emmental cheese, 28 % fat, Keter hard cheese, 28 % fat, Keter light hard cheese, 9 % fat. Soft cheese: Spreadable soft cheese, 3 % fat, 250 g, spreadable white cheese, 9 % fat, 250 g, cottage cheese, 3 % fat, 250 g. Yoghurt: Natural flavouring, 1.5 % fat, various fruit flavoring, 0 %, 3 % fat. Yoghurt drinks: Various fruit flavours, 0 %, 1.5 % fat. Milk drinks: Tara Kid: chocolate banana milk drinks in mini bags, Janana: chocolate and banana milk drinks in small cartons, ice coffee in pint packs. Desserts: Janana puddings: side-by-side vanilla & chocolate nut, side-by-side punch banana, Janana Trio chocolate banana, mini chocolate. Butter: Normal, 100 g, Light butter, 200 g. Hedwig Spies



Cheeses - sold at local cheese markets - are one of the main dairy products of Israel. Photo: Curioso.Photography/stock.adobe.com

# DAIRY MARKETS IN ISRAEL

ISRAEL'S DAIRY INDUSTRY STANDS OUT AS ONE OF THE MOST ADVANCED AND EFFICIENT IN THE WORLD.



The Israeli dairy sector is one of the most productive in the world.

Photo: Polack/stock.adobe.com

Israel's dairy sector is among the most productive in the world. It combines cutting-edge technology, genetics and policy to achieve exceptional productivity under challenging climatic conditions. In the following we examine the structure, production dynamics, market trends and trade patterns of Israel's dairy industry.

In 2024, the average milk yield per cow reached approximately 12,125 kg per year. Total annual milk production is estimated at 1.6 billion liters, produced by about 120,000 dairy cows. Israel's exceptionally high milk yield per cow (around 12,000 kg per cow per year) is the result of a long-term, systematic national effort combining science, technology, genetics, and policy. Israel's dairies are integrating AI-based herd analytics, cooling systems (misting, fans, shading), and genetic selection for heat tolerance.

**Table 1. Key Indicators of Israel's Dairy Production**

Indicator	Value	Source
Average milk yield per cow	≈ 12,125 kg/year (2024)	israel.com
Total milk production	≈ 1.6 billion liters/year	dairyschool.co.il
Number of dairy cows	≈ 120,000	hadassahmagazine.org
Market share of top 3 processors	≈ 92 %	dairyschool.co.il

Source: <https://israel.com/>

ance. Breed: Almost 100% Israeli Holstein — a locally adapted variant of the Holstein-Friesian breed, bred for heat tolerance, fertility, and longevity. The EU average yield for dairy cows in 2023 was about 7,791 kg per head. Among European countries for which recent figures are available, Finland has ~10,867 kg (2023 reported). Some companies/farms in other countries (e.g., mega-dairies in the Gulf or high-performing U.S. states) can exceed 12,000 kg on individual-farm averages, but no country-level average is reliably documented above Israel's. Israel's dairy board and multiple profiles also note Israel as the world leader by average cow yield.

The Israeli dairy processing market is highly concentrated: the three largest dairies control around 92 % of total processing volume. This reflects an oligopolistic structure dominated by a few major players with integrated supply chains and strong brand presence.

Over 90 % of milk produced in Israel is processed by dairies. Approximately 40 % of the processed milk is used for drinking milk and beverages, 30 % for soft cheese, 25 % for hard cheese, and about 1 % for butter.

Israel's dairy production is dominated by kibbutz farms, which account for about 60 % of national output and operate large, highly automated herds. Moshav farms contribute roughly 40%, while only a small fraction (<2%) comes from private farms, reflecting the cooperative nature of Israel's dairy sector.

Table 3 shows that Israel's milk production increased steadily from 1,580 thousand tonnes in 2023 to a projected 1,620 thousand tonnes in 2025, reflecting moderate but consistent growth. The production growth rates of +1.3 % (2023–2024) and +1.2 % (2024–2025) indicate a stable expansion driven by improved herd

efficiency and technological innovation.

In contrast, the European Union's milk production is forecast to decline sharply by -6.99 % in 2025, highlighting challenges related to environmental regulations and herd reduction. Globally, milk production is expected to rise modestly by 0.72 % between 2024 and 2025, showing slower growth compared to previous years. These figures suggest that Israel's dairy industry continues to outperform the global average in terms of production stability and yield growth.

## Market trends and development

Analysts forecast moderate growth in the Israeli dairy products market. The market is expected to expand by approximately 11.2 % in 2025, slowing slightly to around 10.3% by 2029. In 2023, the milk products segment was valued at about ILS 2.05 billion, marking a 4.98 % increase from 2022 (Israeli shekels — the official currency of Israel).

In August 2025, the Israeli government temporarily suspended the 40 % import tariff on milk until February 2026 to prevent domestic shortages and stabilize consumer prices. At the same time, major dairies such as Strauss and Tara announced price increases of up to 3.5 % in mid-2025.

Table 4 provides an overview of milk trade flows from 2023 to 2025, illustrating Israel's position as a net importer of milk products. Israel's milk imports are projected to decline from 118 thousand tonnes in 2024 to 115 thousand tonnes in 2025, a 2.5% decrease, due to rising domestic production. Conversely, exports

**Table 2. Structure of Dairy Farms in Israel**

Farm Type	Share of National Milk Production	Description
Kibbutz farms	~58–60 %	Large, communal farms operated collectively. Usually 400–1,000 cows per farm, very high-tech and efficient.
Moshav farms	~40–42 %	Family-owned cooperative farms. Smaller scale (typically 40–120 cows), often part of village cooperatives that share equipment and cooling facilities.
Private or independent farms	<2 %	A small minority of individual farms outside cooperative systems.

Source: <https://hoards.com/>

are expected to rise from 52 thousand tonnes to 55 thousand tonnes, representing a 5.8 % increase, indicating growing competitiveness in niche export markets. Compared with the European Union and the world averages, Israel's trade balance remains relatively small but dynamic, reflecting a well-regulated and efficient dairy system. Overall, the data from both tables illustrate a healthy and steadily expanding Israeli dairy sector, with increasing production, improved export performance, and reduced dependence on imports.

## Top import partners (2023 – estimated)

The Netherlands is the No 1 import partner — driven mainly by cheese volumes: ≈ 3,133 t cheese → ~13,788 t milk-equiv. (3,133,730 kg × 4.4). Poland follows with cheese volumes ≈ 2,859 t → ~12,578 t milk-equiv.; The Eastern European country also dominates Israel's liquid-milk imports. Finally, Italy is one of the most important cheese importers with ≈ 1,286 t → ~5,660 t milk-equiv.

## Top export partners (milk-equivalent, 2023 – estimated)

United States is Israel's largest cheese export market by value (overall cheese). In 2023 Israel exported ≈ 869,410 kilograms of cheese to the U.S. The reported value of this export was USD 6.70 million in 2023. Occupied Palestinian Territory — significant butter import from Israel (≈ 1,357 t in 2023). Canada — second for Israel's cheese exports by value.



Israel's dairy production is dominated by kibbutz farms.

Photo: Sarit Richerson/stock.adobe.com

**Table 3. Milk production in 2023-2025, (in thousand tonnes – milk equivalent)**

	2023	2024 (estimated)	2025 (forecast)	Change (2023-2024), %	Change (2024-2025), %
Israel	1 580	1 600	1 620	+1.3 %	+1.2 %
European Union	159 821	160 621	149 400	+0,50 %	-6,99 %
World	966 593	981 051	988 100	+1,50 %	+0,72 %

Source: Food and Agriculture Organization of the United Nations; U.S. Department of Agriculture's Global Agricultural Information Network (GAIN); USDA Foreign Agricultural Service (FAS); Rabobank

The current Israel–Palestine (Israel–Hamas) conflict began with a major escalation on October 7, 2023. The ongoing conflict between Israel and Palestinian Territories (in particular the Gaza Strip) is significantly impacting the dairy market in several ways. Israeli dairy producers report threats through to farms and supply lines.

Because of the conflict, there is rising production cost pressure for Israeli dairies, which has resulted in price hikes. The war has exposed the fragility of regional supply chains for dairy and other perishables. For Israeli dairy importers/exporters, the instability means elevated risk of border closures, screening delays, heightened transport cost, all of which may reduce volumes or raise prices of dairy trade. In Israel, the industry is under strain but remains functioning, and may be adapting through price adjustments and tariff changes.

### Challenges and innovation

Israel's dairy farms face unique environmental challenges such as extreme heat and water scarcity. Studies show that high temperatures can reduce milk yields by up to 10%. Nevertheless, Israel's industry maintains global leadership through innovation: automated milking systems, data-driven herd management,

and advanced breeding programs enhance both efficiency and sustainability.

### Outlook

Israel's dairy sector is expected to maintain its position as a global leader in milk productivity, driven by continued investment in precision agriculture, genetic research, and climate-adapted farm management. While production growth is forecast to remain moderate, efficiency and milk quality will continue to improve through automation, digital herd analytics, and feed optimization. Producers are encouraged to invest in innovation, diversify product lines, and integrate sustainable production methods to maintain competitiveness in both local and export markets.

Looking forward, the industry's resilience will depend on its ability to balance technological advancement with economic and environmental sustainability. If these efforts continue, Israel is likely to remain not only self-sufficient in milk production but also a model for high-tech dairy farming in arid regions worldwide.

Dr Vera Schenkenberger

**Table 4. Milk trade in 2023-2025 (in thousand tonnes – milk equivalent)**

	2023		2024 (estimated)		2025 (forecast)		Change (2024-2025), %	
	Import	Export	Import	Export	Import	Export	Import	Export
Israel	120	50	118	52	115	55	-2.5 %	+5.8 %
European Union	3 063	24 458	3 059	23 811	3 050	23 600	-0,3 %	-0,9 %
World	84 622	84 619	84 706	84 934	85 000	85 300	+0,3 %	+0,4 %

Source: Food and Agriculture Organization of the United Nations; U.S. Department of Agriculture's Global Agricultural Information Network (GAIN); USDA Foreign Agricultural Service (FAS); Rabobank

# SORGHUM – THE UNDER-RATED SOURCE FOR MILK ALTERNATIVES

NATE BLUM, CEO OF THE SORGHUM UNITED FOUNDATION, SPEAKS ABOUT THE OPPORTUNITIES AND CHALLENGES OF SORGHUM AS A NEW AND UPCOMING SOURCE FOR PLANT-BASED MILK ALTERNATIVES.



Nate Blum, CEO of the Sorghum United Foundation Photo: Sorghum United Foundation

**Mr. Blum, you are the CEO of the Sorghum United Foundation. Tell us a little bit about the company.**

**Blum:** At Sorghum United Foundation, we have made it our mission to advance the production, utilization, and public understanding of sorghum and other climate-resilient grains around the world. We are a nonprofit organization working across borders to educate, connect, and empower stakeholders — from smallholder farmers and researchers to food scientists, entrepreneurs, and policymakers. Our work stems from the fact that indige-

nous and underutilized crops such as sorghum can provide sustainable solutions to some of the biggest global challenges we face today, especially in terms of food security, climate adaptation, and agricultural biodiversity. Sorghum is more than just a grain, it is the way to build resilient food systems, protect rural livelihoods, and offer nutritious, eco-friendly alternatives to conventional grains.

**One of your goals is to transform food systems. Why do you focus specifically on the production and distribution of sorghum?**

**Blum:** Sorghum is one of the oldest cultivated grains on earth, yet it remains vastly underutilized in many parts of the world. It's incredibly versatile, and can be used for food, feed, fuel, and fiber. Over and above this, it can be grown in challenging climates where other crops often fail. Our focus on sorghum is both strategic and urgent. With the pressures of population growth, water scarcity, and shifting weather patterns, we need crops that need fewer inputs, are able to regenerate soil health, and can thrive with minimal irrigation. Sorghum checks all these boxes. It's gluten-free, highly nutritious, and adaptable to both traditional and modern food systems.

By investing in sorghum production and distribution, we're supporting local economies, reducing dependence on imported staples, and helping countries build more climate-resilient agricultural systems.

**We are dealing with climatic changes worldwide. Is sorghum suitable for these changed conditions?**

**Blum:** Absolutely. Sorghum is a winner when it comes to climate resilience. It's naturally drought-tolerant and can grow in high temperatures with limited water resources. Many varieties also show resistance to pests and diseases that are becoming more prevalent with changing weather patterns.

Because sorghum has a deep root system, it makes good use of soil moisture and nutrients. This not only makes it ideal for dryland farming but also helps rehabilitate degraded lands and support biodiversity. As climate change continues to stress global food production, crops like sorghum will play an increasingly vital role in stabilizing yields and ensuring food security.

**In Western Europe, soy and oats dominate as bases for milk alternatives. Sorghum is still a marginal phenome-**

### non. Why is that?

**Blum:** That's a great question. The dominance of soy and oats in the plant-based beverage market is largely due to familiarity, supply chains that are already established, and marketing momentum. These crops have had a head start. Sorghum, on the other hand, is still unfamiliar to many consumers and manufacturers in Western Europe. There's also a lack of awareness about its nutritional benefits and processing potential. Additionally, regulatory frameworks and trade preferences have historically favored soy, oats, and almonds.

But that's changing, and as people seek more sustainable and allergen-friendly options, sorghum is beginning to gain traction. This is especially true among innovators in the food-tech space who are looking for the next generation of climate-smart ingredients.

### For which applications is sorghum particularly suitable as a milk alternative?

**Blum:** Sorghum is an excellent base for plant-based milk alternatives due to its neutral flavour profile, high digestibility, and naturally occurring nutrients. When properly processed, it creates a smooth and creamy beverage that works well in coffee, cereals, cooking, or enjoyed on its own.



Sorghum is an up and coming source for plant-based milk alternatives.

Photo: Angel1011/stock.adobe.com

Beyond basic drinking milk, sorghum can also be used in yogurt-style products, frozen desserts, and barista-style beverages. Its carbohydrate profile allows for a natural sweetness without excessive sugar, and its fiber and protein content adds nutritional depth. For people with gluten intolerance or nut allergies, it's also a safe and inclusive option.

### What are the advantages of sorghum over other bases for plant-based milk alternatives?

**Blum:** There are several compelling advantages. First, sorghum is non-GMO and naturally gluten-free, making it suitable for a wide range of dietary needs. It's also rich in antioxidants, fiber, B vitamins, and essential minerals like iron and magnesium.

From an environmental perspective, sorghum has a significantly lower water footprint compared to almonds or soy. It grows well in semi-arid environments and doesn't require the intensive irrigation or pesticide use that some other crops demand.

Economically, sorghum can be sourced from smallholder farmers in regions where other crops struggle. This promotes rural development and supports sustainable agriculture. It also a great addition to crop rotation and soil health, which are important when it comes to regenerative farming systems.

### Availability is for some bases a real problem. Is this also the case for sorghum?

**Blum:** Not necessarily. Sorghum is grown widely in regions like Sub-Saharan Africa, India, the United States, and parts of South America. The challenge is less about global availability and more about developing efficient supply chains and processing infrastructure to bring it into the mainstream food market—especially in regions like Western Europe. That said, sorghum has tremendous scalability potential. With the right investments in processing, logistics, and marketing, we can ensure a steady, affordable, and sustainable supply for

food manufacturers, particularly for the booming plant-based sector.

### Are there already applications for milk alternatives?

**Blum:** We're seeing sorghum-based milk prototypes and products coming out of innovation hubs in the U.S., India, and even parts of Europe. Startups are experimenting with fermentation, enzymatic processing, and fortification to enhance texture and nutrition.

Several universities and food-tech labs are also conducting research on how to optimize sorghum's functionality in dairy alternatives. There are already small-batch sorghum milk brands on the market—some targeting allergy-conscious consumers, others emphasizing sustainability. It's still early, but the groundwork is being laid.

### What has to happen for sorghum to play a greater role in this country as well?

**Blum:** Education is the first step at both at the consumer and policymaker levels. People need to know that sorghum exists, that it's good for them, and that it's good for the planet. That's where organizations like Sorghum United Foundation come in. We want to help bridge knowledge gaps and build global awareness.

Second, we need collaboration with the food industry to explore and scale sorghum-based products. Investment in R&D, marketing, and processing technology will be crucial, and public-private partnerships can also help develop sorghum value chains in new markets.

Finally, we need policy support — things like crop insurance for sorghum farmers, subsidies for sustainable agriculture, and funding for alternative protein development.

If we can align those elements—awareness, investment, innovation, and policy we will see sorghum flourish not just in niche health stores but in mainstream grocery aisles across the world.

The interview was conducted by Ralph Ammann.

# It won't get more hygienic than this



Temperature Sensors  
TSBF / TSMF



Installation System ESP / Sleeves ESH  
with integrated thermowell



The perfect process connection  
without media contact

Contactless or flush temperature measurement  
in pipes or tanks with installation system

Photos: Anderson-Negele

## IT WON'T GET MORE HYGIENIC THAN THIS: CONTACTLESS TEMPERATURE CONTROL

HYGIENE REQUIREMENTS ARE BECOMING INCREASINGLY STRINGENT IN DAIRIES. MORE AND MORE COMPANIES ARE LOOKING TO THE PHARMA INDUSTRY FOR GUIDANCE ON MAXIMISING THEIR OWN PROCESS AND PRODUCT SAFETY.

Anderson-Negele offers a particularly helpful solution: thanks to special installation systems with built-in thermowell, there is no contact between the sensor and the medium. Hygienic temperature sensors are among the most fundamental measuring instruments for monitoring and controlling production processes or CIP/SIP processes in food and beverage manufacturing. Anderson-Negele TS series temperature sensors ensure efficient processes and sustainable quality in many dairy applications with maximum precision, durability and short response times.

In standard applications, temperature sensors are installed in a pipe or tank using open process adaptation so that the sensor tip comes into direct contact with the product – from a hygiene perspective, this is not a problem if the sensor is installed correctly, the process runs correctly and CIP/SIP cleaning is carried out correctly.

But what happens when a sensor needs to be removed for testing or recalibration? First, the process must be stopped and the tank emptied to prevent any medium from escaping – which inevita-

bly results in a loss of production.

In addition, when reinstalling the sensor, care must be taken to ensure correct installation, e.g. the correct torque for screw connections, or replacement and correct seating of the seals for clamp connections, so that all hygiene requirements can be reliably met.

## It won't get more hygienic: built-in systems with thermowell

In a dairy practice, temperature sensors are regularly removed and reinstalled. To ensure maximum safety, Anderson-Negele offers an installation system with a thermowell, which simply and completely eliminates the limitations described above. The thermowell is an integral part of a pipe section or a permanently welded or screwed-in element of the process or tank. Even when the sensor is removed, the tank or pipe remains closed and aseptic.

## Temperature measurement with maximum performance

When combining a TS series temperature sensor with an ESP / ESH thermowell installation system, the sensor tip of the temperature sensor is never in contact with the medium. Nevertheless, the sensors achieve technical performance that meets all food and beverage process requirements: response times of  $t_{90} \leq 2.2$  s and  $t_{50} \leq 0.8$  s mean fast detection even of rapidly changing temperatures. The choice between Pt100 and Pt1000 sensors offers an accuracy class of up to  $\pm 0.08$  K /  $\pm 0.3$   $\Omega$  at 100 °C. The process temperature range extends from -200 to 400 °C. Thanks to the five-stage configuration, each sensor can be individually adapted to any conceivable process requirement.

## The 3-A and EHEDG-compliant PEEK solution as an alternative

If you do not want to or cannot implement this thermowell solution, Anderson-Negele offers another alternative with hygiene certification. With a process connection made of PEEK, the CLEANadapt threaded adapter system can also be used as a



The TS temperature sensors are available with standard or mini heads, have a 3 mm sensor tip for fast response times and are screwed onto the thermowell with a cap nut.

The result is maximum hygiene in almost any dairy process environment



The thermowell is permanently integrated into a pipe section or can be permanently installed in any tank or pipe as an integral part of the process system using a weld-in or screw-in sleeve.



hygienically safe installation method. In this case, in addition to a sensor version with a measuring rod with a maximum length of 2,000 mm, a completely flush-mounted sensor is even possible, which allows installation in vessel with agitators or pipe systems with pig cleaning.

Discover all the details about hygienic thermowells online. You can now explore in detail online how easy it is to optimise your processes. Anderson-Negele is also happy to offer video presentations for its various installation solutions. You can find contact forms and further information on the website [www.anderson-negele.com](http://www.anderson-negele.com).

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8-lane high-performance cup filling machine GRUNWALD-FOODLINER 20.000UC with ultraclean hygiene concept to achieve maximum product shelf life; production output up to 20,000 cups/h. Photos: GRUNWALD

## GRUNWALD SHOWS „MUST-HAVE“ TECHNOLOGY FOR LEADING DAIRIES

AT INTERPACK IN DÜSSELDORF, GRUNWALD SHOWS ULTRACLEAN CUP FILLING MACHINES FOR LEADING DAIRIES. VISIT STAND B01 IN HALL 6 FOR HIGH-SPEED, HYGIENIC, FLEXIBLE FILLING SOLUTIONS.

The highlight of the exhibition will be the 8-lane high-performance cup filling machine GRUNWALD-FOODLINER 20.000UC with a length of 10 metres dominating the 180 square metre stand area. This linear machine achieves production outputs of 20,000 cups/h with a dosing accuracy of  $\leq 0.3\%$ . This machine handles all round standard cups of the dairy industry with a diameter of 95 mm and filling volumes of up to 500 ml. These cups are either closed with aluminium or PP seal lids. This machine is designed for the efficient filling of all kinds of standard dairy products (e. g. yoghurt, mixed dairy products or desserts). The technical equipment with double advance feed allows for

the future handling of two cup formats. The format changeover is user-friendly and is activated at the push of a button. With this forward-looking technology GRUNWALD supports its customers to react to changes in the market.

### Ultraclean hygiene concept to achieve maximum shelf life and product safety

For dairies with high requirements to hygiene and product safety, GRUNWALD has been relying on their ultraclean hygiene concept that has been tried and tested for many years and

used worldwide. The packaging materials are sterilised with 2-phase pulsed high-energy UV(C) radiators that is the standard for all ultraclean cup filling machines. The GRUNWALD ultra-clean hygiene concept achieves a reliable and guaranteed sterilisation rate of at least LOG4. The products filled in all standard cup sizes of the dairy industry are produced without the use of chemicals and with extended shelf life. The aseptic main filling station type EASYCLEAN is designed in accordance with EHEDG guidelines and meets all relevant standards of the food industry. This hygiene concept is complemented by a laminar cabin designed as a hygiene tunnel of cleanroom class 5 (EN ISO 14644). Therefore, this hygiene concept is also specifically aimed at dairies that demand maximum hygiene standards combined with a sustainable operation of the machines and maximum production output.

## Compact rotary machine suitable for limited production areas

GRUNWALD shows the compact cup filling machine type GRUNWALD-HITTPAC AKH-029S as a flexible counterpart to the large linear machine. On a footprint of less than 2.5 square metres it shows its strengths in filling and mixing. The rotary machine handles all standard cups, larger DUO cups and small buckets with filling volumes of up to 1,000 ml. They are lidded with pre-cut aluminium seal lids or plastic snap-on lids with tamper evident closure. This machine is completely in CIP design, making it particularly suitable for companies that need frequent product changes and short cleaning intervals. The production output is up to 5,000 cups/h.

## Inline fruit mixer for a maximum variety of products and small batches

One central feature of the rotary machine concept is the integrated fruit mixer that “allows for almost unlimited mixing and filling”, explains Managing Director Ralf Müller. With this technology, GRUNWALD, the mechanical engineering company, appeals to dairies that produce a large variety of products and frequently changing types of fruit.

Liquid, set and stirred yoghurt can be easily filled with fruit layers or added fruit in a flexible way thanks to a quick change of the product types. Product loss and changeover times are reduced to a minimum, which particularly supports the efficient production of small batches.

Rotary and linear machines are the ideal application for the integrated fruit mixer technology for filling up to six types of fruit. Depending on the design, the changeover on the cup filling machines is carried out within a few minutes either at the push of a button or by hand. The customer can choose between a very simple low-cost version – or the fully-automatic CIP/SIP version. Compared to mixing units that are connected outside the



2-lane rotary machine GRUNWALD-HITTPAC AKH-029S with a footprint of < 2.5 square metres; with integrated fruit mixer for a maximum variety of products and small batches

machine, users of the integrated fruit mixer benefit from lower investment costs, reduced production costs and considerably increased process flexibility.

## Advanced product feeding to achieve maximum flexibility

The machine concept of the compact rotary cup filling machine GRUNWALD-HITTPAC AKH-029S allows for the flexible product feeding for handling both small and large fruit batches. The product can either be fed to the hopper from buckets or bags by hand or in fully automatic operation via containers. The technical solution for manual product feeding is aimed at dairies that frequently have to test new recipes or respond quickly to market trends. The advantages are minimum product residuals in the machine and high flexibility with reduced loss of raw materials. Thus, GRUNWALD supports sustainable, cost-conscious production, especially when production requirements vary considerably.

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# Monomaterial in Flow pack

Reliable sealing. Stable processes.  
for high-speed production.



**EK-PACKFOLIEN**  
A Subsidiary of **Oliver**

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Photos: EK-Pack

## MONOMATERIAL IN FLOWPACK: WHAT REALLY MATTERS IN PRACTICE

RECYCLABLE PACKAGING IS GAINING IMPORTANCE IN CHEESE FLOWPACK APPLICATIONS AS REGULATIONS LIKE PPWR INCREASE PRESSURE. AT THE SAME TIME, PRODUCT PROTECTION AND RELIABLE PROCESSING REMAIN ESSENTIAL FOR DAIRY PRODUCERS.

Flowpack packaging is one of the key packaging formats in the cheese industry - for applications such as grated cheese, sliced products or portioned items. At the same time, requirements for recyclability and material efficiency are increasing. For dairy producers, this means that existing packaging solutions must be further developed and assessed at an early stage in terms of their long-term viability under future regulatory conditions. In practice, it quickly becomes clear that switching to new materials is not purely a material-driven issue. The main challenge is to maintain stable production processes and keep risks under control. Packaging solutions must integrate into existing lines

and perform reliably under real production conditions, without introducing additional instability into the process. Not every solution that is theoretically recyclable can be implemented reliably in production.

### Between requirements and production reality

Flowpack processes are designed for high efficiency. Lines operate at high speeds and within narrow process windows, making them highly sensitive to changes in material behaviour. Even

minor deviations can have noticeable effects - for example on seal quality or material handling. Variations in temperature or product characteristics can further affect process stability and increase the demands placed on packaging materials.

Nicole Schehle, Head of R&D at EK-Pack, emphasises: "Oxygen ingress, microleakages or unstable sealing immediately lead to quality and shelf life issues."

In practice, this means that packaging solutions must not only perform under laboratory conditions, but also under real production environments—at speed, under fluctuating influences and in continuous operation. What matters is that this stability can be ensured consistently over time.

## Monomaterial as a solution approach

Monomaterial solutions are considered a key approach to enabling recyclability and simplifying material structures. In particular, PE- and PP-based films are at the centre of current developments.

However, in real applications, replacing existing multi-material structures requires targeted adjustments. Requirements for barrier performance, sealing behaviour and mechanical properties remain unchanged and must continue to be met to ensure product protection and shelf life.

At the same time, existing PE- and PP-based structures are continuously being refined to meet these requirements reliably while addressing increasing recyclability requirements.

"Monomaterial solutions will only succeed if they are functionally equivalent," says Nicole Schehle. "Simply changing the material is not enough", she adds.

For dairy producers, this means monomaterial is a key approach—but only if the solution fits the specific application, product and existing processing conditions and proves itself in practice.

## Introducing new materials: controlled rather than risky

Introducing new packaging materials always involves a careful trade-off. Production managers must ensure that existing lines continue to run stably and that planned performance levels are maintained.

New materials are therefore primarily evaluated based on whether they can be integrated without major adjustments and enable stable processes. In many cases, implementation takes place step by step—first tested under real production conditions before being rolled out more broadly into regular operation.

Nicole Schehle makes this clear: "Sustainability must not lead to longer cycle times or waste. New materials must prove themselves within existing processes."

This leads to a clear requirement: packaging solutions must be designed to run reliably under real conditions while also meeting recyclability requirements. What matters is not theoretical suitability, but actual process performance.

## Interaction between material and application

The development of recyclable packaging solutions is increasingly driven by specific applications. Material properties, machine technology and process parameters must be considered together.

In practice, there is no universal solution. The suitability of materials depends strongly on the specific product, application and process conditions. These differences require a differentiated evaluation and close alignment between development and production.

Success is determined in practice.

Discussions about packaging are often strongly focused on materials. In practice, however, what matters is whether a solution works reliably in day-to-day operation and can be used consistently over time.

For dairy producers, this leads to a clear priority: packaging solutions must not only be recyclable, but must also perform reliably under real operating conditions.

Product protection, process stability and recyclability must be achieved together.

Ultimately, the suitability of a solution can only be assessed through the interaction of material, process and application.

What matters is not theoretical performance, but proven reliability under real conditions.

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# SMART, COMPACT, POWERFUL

NIR MEASUREMENT TECHNOLOGY AT THE PRODUCTION LINE DELIVERS A DECISIVE ADVANTAGE.  
INLINE QUALITY CONTROL FROM MILK TO CHEESE.



Distance sensor in dairy industry.

Photo: Polytec

In the dairy industry, demands for product quality, efficiency, and sustainability are rising. At the same time, laboratory analyses are increasingly reaching their limits: they are time-consuming, labour-intensive, and often deliver results only when direct process correction is no longer possible.

Inline near-infrared (NIR) spectroscopy offers a modern solution by measuring quality parameters directly in real time during the production process.

With Polytec's PAS and PCS NIR process spectrometers, key components such as fat, protein, lactose, and dry matter can be measured continuously without the need for sampling. The systems are integrated in a hygienic manner and enable real-time monitoring along the entire production line—from raw material intake to the final product.

The technology follows the Process Analytical Technology (PAT) approach, in which critical process parameters are continuously monitored to enable immediate feedback and control. This offers significant advantages, particularly in milk processing, as natural variations in raw milk — such as those caused by season, origin, or feed — make precise and continuous monitoring essential.

In addition to liquid products, NIR analysis also plays an important role in solid or concentrated dairy products. The compact and powerful measurement units, based on NIR reflectance technology, are installed separately from the spectrometer unit at the appropriate point in the production process. A contact probe is available for connection to pipelines and collection tanks, which is reversibly integrated into the line using suitable hygienic adapters. Additionally, a non-contact probe is available that can be positioned over conveyor belts and hoppers.

The multi-component analysis results from the respective measurement point are transmitted to the Manufacturing Execution System (MES) via Modbus or OPC interfaces. This helps reduce

process fluctuations, increase yield, and improve operational efficiency. At the same time, dairy processors gain the flexibility to respond more quickly to changing market demands.

Specific applications demonstrate the potential of this technology: In milk powder production, for example, the moisture content in spray towers can be continuously monitored to optimize product consistency and energy consumption in large-scale batches. In butter production, the analysis of fat and water content enables compliance with tight specifications, thereby supporting cost-efficient production.

Inline NIR is thus emerging as a key technology for modern dairy production. It lays the foundation for more efficient, sustainable, and quality-oriented manufacturing and helps companies prepare their processes for future requirements. With its process spectrometers, Polytec offers the accuracy and reliability manufacturers need to remain competitive.

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# BEL INVESTS \$ 200 MILLION IN US-PLANT

BEL ANNOUNCED IN MARCH A \$200 MILLION INVESTMENT TO EXPAND THE BROOKINGS, SOUTH DAKOTA, USA, PLANT.

Bel Group broke ground on a \$200 million expansion of its Babybel® production facility in Brookings, South Dakota, in March. The project will double the plant's annual production capacity from 10,000 to 20,000 tons, marking a major milestone in the company's 50-year presence in the U.S. market. According to the company the investment will create around 150 new jobs and double milk sourcing from American dairy farms – primarily in South Dakota and neighbouring states. It marks one of Bel's largest manufacturing investments in the United States, supporting the company's ability to meet sustained consumer demand for portion-sized dairy snacks.

## 50 years of presence in the U.S.

Bel has been manufacturing in the U.S. for over 50 years, and today it's the Group's largest market—driving 33 % of global sales with over \$1,2 billion in annual retail sales, with business doubling between 2018 and 2024. Now, Bel aims to double its U.S. business again in the years ahead, making the U.S. the driver of more than half of Bel Group's projected growth. "The United States is a strategic market and a key engine of growth for Bel," said Cécile Béliot, CEO of Bel Group. "Expanding our Brookings facility reflects our commitment to investing locally, strengthening domestic production, and supporting sustained demand for our brands. The decision to double capacity of this facility positions us for enhanced long-term growth in the U.S."

This expansion will boost production capabilities, drive product innovation, and support greater operational efficiency. With ca-



Bel expands its production capacities of Mini Babybel in the U.S.

Photo: Philip Kinsey/stock.adobe.com

capacity set to double, the plant's daily milk intake will significantly increase – further deepening partnerships with American dairy farmers and strengthening regional supply chains. This investment underscores the company's long-term commitment to making it easier for Americans to access dairy, fruit, and veggie snacks which can contribute towards a more balanced diet – a key need as 80 % of Americans fall short on these key food groups each day.

## Response to strong snack demand

It also directly responds to the strong and sustained demand for portion-sized, convenient and nourishing snacks in the U.S., driven by new dietary guidelines and the growing popularity of protein products and GLP-1 diets in the U.S. As an iconic global brand, Babybel® plays a central role in this transformation – a 100 % real cheese snack, made with four ingredients, and two billion portions enjoyed worldwide annually.

"Babybel® continues to see strong demand in the U.S., driven by consumers seeking convenient, portion-sized dairy snacks made with a few ingredients and delivering complete protein," said Peter McGuinness, CEO of Bel North America.

"Expanding our Brookings facility allows us to meet that continued demand while investing in American manufacturing, local jobs and the Brookings community."

The Brookings project follows the group's recent \$10 million expansion of another U.S. plant, in Little Chute, Wisconsin facility, which added 50 jobs and increased domestic production capacity.



On the move: the dairy sector is in transition.

Photo: Mike/stock.adobe.com

# DAIRY: FROM TRADITION TO TREND

## THE EUROPEAN DAIRY SECTOR IS IN TRANSITION, SHAPED BY CULTURAL SHIFTS AND EVOLVING CONSUMER VALUES

While traditional milk remains a staple in European households, it no longer stands alone. Plant-based drinks, high-protein products, organic variants, and lactose-free options have become relevant alternatives alongside traditional dairy – and consumers are weighing them carefully. The central question is no longer if alternatives will play a role, but how they interact with traditional dairy in everyday life. And what does this mean for product development, portfolio management, and marketing for manufacturers and retailers? According to YouGov's Brand Footprint

Europe 2025 report ("Less noise, more choice – what drove FMCG decisions in 2024"), growth in everyday categories like dairy was driven by brands that successfully combined health benefits, habitual relevance, and cultural fit—turning daily routines into consistent brand choices. One in four of the top-growing FMCG brands in Europe are dairy-based, underscoring the category's ability to evolve without losing its core. Dairy's strength lies in its ability to evolve while remaining embedded in everyday routines. Based on curated insights from YouGov's shopper panel and sur-

vey data, this article offers a multifaceted view of how European shoppers engage with the dairy category. By connecting behavioral trends with attitudinal shifts, it highlights emerging shopper needs and areas for strategic development.

Our findings show that generational differences are decisive: while older consumers remain loyal to traditional dairy, Millennials and Gen Z—whom we call iBrains—are increasingly driving demand for plant-based alternatives. For industry, this opens space for tailored strategies in product development, communication, and customer loyalty.

## Dairy as a constant – with regional nuances

Dairy remains a cornerstone of the European diet. According to YouGov's Behavior Change study (Spring '25 edition), 97 % of shoppers across 20 European markets state that they buy dairy products. Yet behavior differs. The majority (72 %) are minimalist shoppers, buying only what they need in the moment, while 28 % are variety-seekers - a pattern somewhat more common in Central and Eastern Europe, where consumers enjoy having a broader choice and like to try different items.

Poland illustrates how resilient demand can translate into growth – even in a period of inflationary pressure. Dairy's share of the grocery basket rose from 10.8 % in H1 2024 to 11.1 % in H1 2025. Value sales increased by +9.6 % year-on-year, outpacing overall FMCG growth (+7.3 %). While part of this uplift reflects rising average prices, the performance also signals dairy's continued relevance in Polish households. In H1 2025, Polish households spent over €3.5 billion on dairy products, compared to just over €70 million on plant-based alternatives.

Although the number of dairy buyers declined slightly (-0.04pp), all other key performance indicators for both dairy and plant-based segments showed positive development—pointing to a stable core and growing interest in alternatives.

## What drives choice: quality, price, and trust

Dairy purchase decisions across Europe are driven by a balance of quality and cost. According to YouGov's Behavior Change study, product quality is the most frequently cited factor, influencing 20% of purchase decisions. Price-related aspects follow closely, with both “budget-friendly choices” and “discounts and promotions” mentioned by 18 % of respondents.

Origin also plays a role: 12 % of shoppers say they prefer local or national dairy products. Health and wellness influence 9 % of decisions – particularly pronounced in markets like Croatia (15 %), Serbia (15 %), and the Netherlands (13 %). While premium positioning (5 %), ethical sourcing (2 %), and social influence (1 %) remain secondary considerations, health and locality continue to shape purchasing behavior.

Findings from the Behavior Change study also indicate that 6 in 10 European shoppers enjoy trying new products – with nearly

half (48 %) saying this depends on the category and dairy ranks among the top categories for product discovery (36 %). This places the category just behind personal care products (37 %) and confectionary (36 %).

## A category open to discovery

Dairy consistently appears in the top five across all markets surveyed. It ranks first in the Czech Republic, Hungary, and Slovakia, second in Poland, and leads in Western markets such as France and Sweden.

A look into the Italian consumer panel data reveals how innovation is emerging in different niches: the penetration of soy-based cheese increased by more than 20 % compared to the previous year (MAT May 2025), underlining that plant-based potential extends well beyond drinks.

## Plant-based alternatives: growing with younger generations

Shopper panel data from Central Europe show that the strongest impulse for change comes from households of the youngest generations – iBrains (Gen Z) and Millennials. In Slovakia, six out of ten households purchased plant-based alternatives in 2024; in the Czech Republic, just over four in ten did. However, spending in the Czech Republic is rising more quickly (+10 % annually, versus +6 % in Slovakia). More than half of spending in the category goes into milk alternatives, though they still account for only 1–2 % of the total milk market.

The generational shift is evident across markets: Also in Germany, panel data reveal a clear generational pattern. The youngest



Purchase decisions in dairy are driven by a balance of quality and cost.

Photo: [peopleimages.com/stock.adobe.com](https://peopleimages.com/stock.adobe.com)

households – iBrains and Millennials – show the highest buyer penetration for plant-based drinks, with 49 % of Gen Z and 47 % of Millennials purchasing these products. They are followed by Gen X (39 %), Baby Boomers (29 %), and the oldest cohort (20 %). Millennials and iBrains together account for 44 % of total category sales, compared with only 26 % among Baby Boomers and older consumers.

## Milk consumption in Germany is stable

A YouGov Shopper Intelligence survey conducted in Germany in March 2025 shows that despite the growing presence of plant-based alternatives, milk consumption in Germany remains stable. 82 % of German consumers continue to drink cow's milk, with 57 % doing so exclusively. An additional 25 % are "flexi-drinkers", combining dairy and plant-based options depending on the occasion. Over the past twelve months, most respondents did not change their consumption behavior; however, 19 % reduced their intake, while 11 % increased it.

The most frequently cited reason for reducing consumption was a shift in dietary habits, while taste was the leading driver for increased consumption.

In the plant-based milk segment in Germany, early signs of saturation are emerging. For the first time since the category's initial boom, penetration declined in 2024. Consumers cited taste

and texture, limited availability, and the higher price compared to dairy products as key barriers. Additionally, concerns about over-processing continue to negatively impact willingness to switch among some consumer groups.

## Outlook: segmenting for the future

The European dairy market is evolving not through substitution but through segmentation — shaped by age, lifestyle, and consumer values. Traditional dairy remains deeply rooted, particularly among older generations. However, plant-based options are growing in strategic relevance, driven by younger households of the iBrains and Millennial generations.

YouGov's Behavior Change study points to a distinct generational pattern in dairy purchase motivations across Europe. While product quality, discounts, budget-friendly choices, and local origin dominate overall importance, their relevance shifts notably by age group.

Boomers prioritize product quality, price, and regional authenticity, reflecting strong preferences for trust and familiarity.

They also place greater emphasis on health. Gen X shows similar patterns, with a strong connection to regional products and practical value-based decisions. They are more likely to consider waste reduction and time-saving aspects, while health plays a comparatively smaller role.

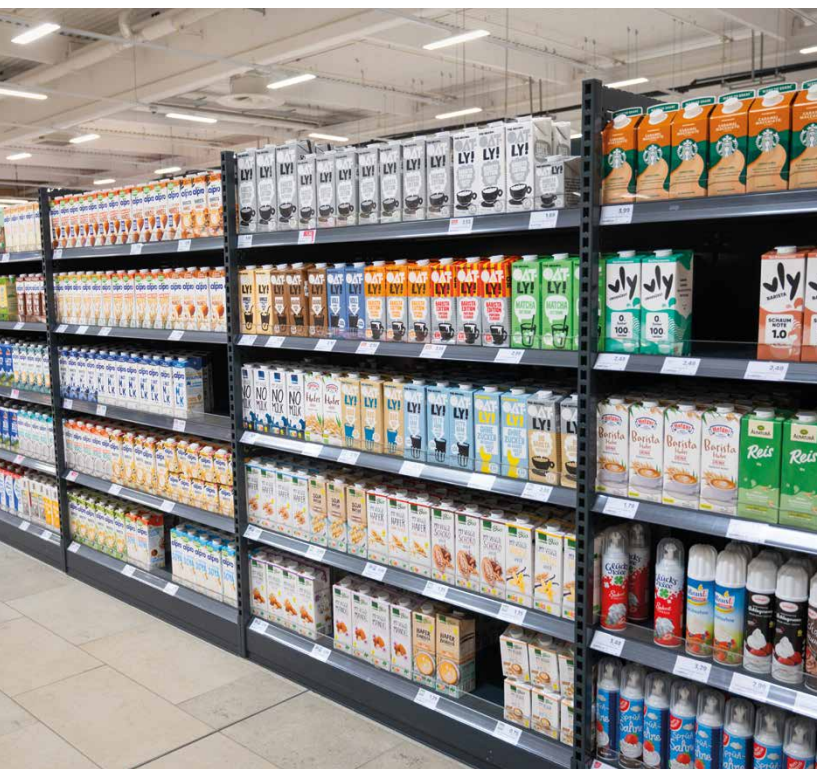
Millennials still value core drivers but increasingly incorporate ethical and sustainability-related considerations, signaling a shift toward purpose-led consumption.

iBrains (Gen Z) diverge most clearly: they are less likely to prioritize local origin and discounts, and more inclined toward healthy and sustainable options. They also place greater importance on personalization, ethical sourcing, social influence, and premium positioning, though these remain niche in overall market impact. For manufacturers and retailers, this means moving from standardization to targeted differentiation:

- iBrains (Gen Z): Engage through digital-first storytelling, ethical sourcing, and functional benefits like added protein or organic positioning.
- Older Generations: Reinforce quality, trust, and tolerability. Clear labeling, familiar formats, and regional sourcing remain essential.
- Cross-generational bridge: Product quality is the universal anchor—yet how it's communicated must adapt. For Boomers, it's about heritage; for iBrains (Gen Z), it's about transparency and values.

A future-proof strategy balances agility with credibility—grounded in data, responsive to generational shifts, and aligned with evolving values.

Anna Rademacher,  
Senior Insights Consultant at YouGov



Generational shift: the younger the consumers are the more they buy plant-based milk alternatives. Photo: Berit Kessler/stock.adobe.com

# Monomaterial in Flow Pack

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# „MUST-HAVE“ TECHNOLOGY FOR THE LEADING-EDGE DAIRY INDUSTRY

Maximum product shelf life  
and performance

Read  
more on  
page 26

Maximum flexibility  
with a small footprint



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