

DANONE DAIRY METHANE ACTION PLAN

12 MAY 2025



DANONE
ONE PLANET. ONE HEALTH

Introduction words



Danone is proud to be a global dairy leader, and we believe in the power and relevance of dairy to deliver a healthy and sustainable future. Milk-related emissions account for just over half, 51%, of Danone's agricultural carbon footprint, and fresh milk is our number one ingredient, representing roughly 70% of our methane emissions. Therefore, decarbonizing Danone's milk supply is a priority that must be delivered while ensuring farms' efficiency and resilience, improving farmers' livelihoods and increasing the attractiveness of the dairy sector for new generations.

Cutting methane emissions is the most immediate opportunity we have to slow down global warming and prevent damage to the planet. Methane is a potent greenhouse gas, with more than 80 times the warming power of carbon dioxide over the first 20 years after it reaches the atmosphere. Dairy can play a meaningful role in reducing methane, as Methane emissions from agriculture and livestock make up approximately 40% of human induced methane emissions, with dairy cattle representing an estimated 8% of methane emissions.

Danone has already been working to reduce GHG emissions, including methane emissions from dairy, for over a decade. In 2022, Danone was among the first companies to have our 1.5°C Forest, Land and Agriculture (FLAG) target approved by the Science Based Targets initiative (SBTi). Methane reductions are essential to meeting this target and in 2023, **Danone was the first food company to align with the Global Methane Pledge to reduce 30% of methane emissions from fresh milk by 2030** (compared to a 2020 baseline).

To achieve our methane target, farmers must be equipped to lead. Since 2017, Danone has been implementing projects in the field with our farmer partners across different geographies. We are supporting dairy farmers

to reduce methane by improving herd, manure and feed management, as well as exploring innovative methane solutions. This holistic approach to identify and develop a spectrum of solutions that can offer farms a variety of practical solutions is not only important for climate mitigation but can also strengthen farm resilience and ensure dairy farming is fit for the future.

While we have made great progress to date, collective action & collaboration is key to rapidly and effectively reduce methane emissions. For example, the Environmental Defense Fund (EDF) has been a strategic partner in supporting and developing our methane ambition. Since our initial public announcement of our methane initiative in 2023, we have continued to build critical pre-competitive partnerships with like-minded companies in the Dairy Methane Action Alliance (DMAA) and are participating in the Global Methane Hub's Enteric Fermentation R&D Accelerator to help drive more innovations to commercialization for dairy farmers across the globe. We also continue to engage and build partnerships not only with farmers in our supply chain, but also with other commercial partners, trade associations and governments to implement and encourage change across the industry. We invite businesses, governments, and communities to work together on this journey.

Our Dairy Methane Action Plan, which has been years in the making, gives us a roadmap to achieve our reduction target in line with the Danone Impact Journey and put us on the pathway to reach Net-Zero emissions by 2050 across our milk value chain. We believe in our capacity to support the transition towards a more resilient, low-methane dairy industry by adopting a farmer-centric approach that ensures support for resilient and economically viable farms, benefiting broader communities and fulfilling our mission – to bring health through food to as many people as possible.

Danone’s key GHG & methane figures

Our 2024 figures & achievements

Danone is on track to achieve its 30% reduction in dairy methane emissions from fresh milk supply for its dairy products by 2030. Fresh milk is our number one ingredient and represents roughly 70% of our methane emissions. The target represents the equivalent of 1.2 million metric tons of carbon dioxide by 2030. In 2024, Danone achieved 13.9% reduction in methane (CH4) emissions compared to 2023 and 25.3% compared to our baseline 2020.

Since 2017, Danone has been conducting country-by-country assessments to track carbon (CO₂e) and methane (CH₄) performance. In 2024, 92% of our milk volumes collected from farms were assessed using the Cool Farm Tool (CFT) worldwide (18 countries) and CAP2ER tool for France.

-25.3%

Methane emissions reduction in 2024 vs 2020

	Unit	2020	2021	2022	2023	2024	Target 30% by 2030
Methane emissions of dairy category fresh (or liquid) milk	Ktons CO ₂ equivalent	4,091	3,809	3,494	3,548	3,054	2,863
Methane emissions reduction vs LY	%	-	-6.9%	-8.3%	1.5%	-13.9%	
Methane emissions reduction vs 2020	%	-	-6.9%	-14.6%	-13.3%	-25.3%	-30.0%

The Cool Farm Tool (CFT) is used by Danone to determine the carbon & methane footprint for our direct fresh milk collect. The farm data is collected by the local teams for each country in which CFT is deployed. The methane and carbon results are annually audited by third-party verifiers.

Progress so far and beyond 2024

Reducing methane in the supply chain will help address the systemic effect of climate change on operations and ensure future security of supply. Danone relies on a combination of practices to tackle the methane reduction challenge.

In 2024, Danone's methane reduction was possible due to a combination of projects linked to manure management, improvement in herd management, investments in feed additives to reduce enteric fermentation related emissions, improving milk yield, data accuracy and sourcing strategy. We work closely with farmers and farm workers to ensure that these projects have a positive impact on the farmer's livelihood through improved farm resilience and economic viability.

In 2024, for example, there was an increase in milk productivity compared to 2023 in different regions around the world. Globally, there was a 25% increase in milk productivity with our smallholder farms. These improvements were due to a combination of focused investments and favorable weather conditions overall for agriculture. Additionally, milk volume changes contribute to annual methane fluctuations.

CH₄



Our approach to reduce methane emissions from dairy farming

Collective action partnerships

Danone actively participates in collective action partnerships to tackle sectoral challenges that drive complexity, redundancy or inertia. By building a critical mass of market players to work on pre-competitive topics, Danone and peers can support levelling the sustainability playing field and mitigate risks of first movers. It also supports enabling an environment that is conducive to accelerating scaling best practices in the field – unlocking barriers, sharing costs, distributing the risk and increasing value creation. For example:

- **Global Methane Hub Enteric Fermentation Accelerator:** The GMH is an international alliance of over 20 leading philanthropic organizations. They have pledged to invest at least \$200 million in developing and implementing practical solutions aimed at reducing methane emissions by 30% by 2030. Danone is the first company to join GMH's Enteric Fermentation R&D Accelerator. This commitment aims to foster new, scalable and practical solutions to help dairy farmers significantly reduce methane emissions.
- **SAI Platform:** SAI Platform was founded by Danone, Unilever and Nestle in 2002, to come together to promote sustainable agriculture practices and address common challenges in the food and beverage industry. Danone works with SAI Platform to share knowledge and support the development of solutions to overcome mutual challenges, and to promote and accelerate adoption of sustainable and regenerative agriculture practices within the food and drink sector.
- **The Cool Farm Alliance:** This pre-competitive community is dedicated to accelerating the transition to regenerative and sustainable agriculture. It offers globally aligned, credible, and science-based metrics and tools, grounded in peer-reviewed research, extensive published data, and IPCC methodologies. Danone leverages their online GHG calculator, the Cool Farm Tool, on a large scale to monitor and reduce greenhouse gas incl. methane emissions from dairy farms.

- **One Planet Business for Biodiversity (OP2B):** One Planet Business for Biodiversity (OP2B) is a business-led initiative that focuses on protecting and restoring biodiversity within agricultural systems. Danone works with the WBCSD and OP2B to support driving best ESG practices.
- **Symbrosia study with Cornell University:** In January of 2024, Danone partnered with Cornell University and Symbrosia to demonstrate the effectiveness of a new seaweed oil extract for methane reduction. Seaweed-based solutions are a key lever to farmers, to drive research further and identify on-farm transformation solutions.

For more information on our partnerships and advocacy work, please see the section “Focus on our partnerships & advocacy work”.

Farm diagnostics

Regular monitoring helps understand current performance and practices of the farms in our supply chains, and what steps Danone needs to take to support them to go further. This also enables increased supply chain transparency and continuous improvement. Danone assesses farmers' practices and their impacts using a holistic approach, supported by various tools. These include:

- The Cool Farm Tool: Since 2017, Danone has been conducting country-by-country assessments using the Cool Farm Tool and the CAP2ER tool in France, which together cover 19 countries and 92% of Danone's direct milk collection volumes from farms.
- Danone's environmental regenerative agriculture scorecard;
- Danone's animal welfare assessment.

Strategic partnerships

Danone believes in the power of collaboration and actively engages with non-governmental organizations (NGOs) to advance its climate transition. For example, Danone is the first corporate funder of the Global Methane Hub Enteric Fermentation R&D Accelerator, the largest globally coordinated research effort on enteric methane, coordinated by GMH and supported by an alliance of philanthropic organizations and governments. Additionally, Danone worked with Environmental Defense Fund to launch the Dairy Methane Action Alliance to help dairy companies catalyze accountability, transparency, and ambitious climate action – see the section “Focus on our partnerships & advocacy work” for further information.

Danone is actively exploring new technologies and innovations that can reduce emissions in our fresh milk supply. That’s why we support key partnerships to accelerate research and innovation in the public sector. In 2023, Danone launched the Partner for Growth Program and since has signed 19 new strategic agreements and eight joint business development plans, surpassing our initial targets. Danone is leveraging the expertise of businesses in the food, agriculture, and nutrition sectors to support rolling out impactful sustainable farming and carbon reduction practices, while improving agricultural resilience.

- **MSD Animal Health:** The collaboration will center around adding one lactation cycle to the productive life of each cow, reducing the farm’s CO₂ and

methane footprint. Work has already started in 4 countries, where a thorough farm assessment, using dedicated animal health KPIs, has highlighted where improvements can be made.

- **Zoetis & Danone** formed a joint business development plan centred around integrating sustainable cow genetics for long-term resilience in dairy farming. By conducting genomic testing, Zoetis delivers data-driven genetic insights to farmers, enhancing milk production with the right herd inventory and building resilience for both farms and animals.
- **Corteva:** to improve crop yields, increase resilience and enhance feed efficiency while reducing greenhouse gas emissions and water consumption, leading to improved farm profitability and economics. Building on the knowledge the companies gained in the Farming for Generations program in Europe, Danone and Corteva are now collaborating in countries across the world to scale up sustainable agriculture practices in Danone’s supply chain.

In 2025, Danone has also signed a multi-year partnership with **Sistema.bio**, a leading biogas & regenerative agriculture organization, dedicated to empowering family farmers by providing access to innovative biodigester technology. Through this partnership, Danone and Sistema.bio aim to roll out biodigesters in 6,500 smallholder dairy farms by 2030 in multiple countries, starting with Mexico, Morocco and India. The installation of these biodigesters will allow significant reduction in carbon & methane emissions

on farm, thanks to a better manure management that avoids releasing methane in the atmosphere and the access to a valuable source of renewable energy on farm. By using biodigester produced digestate as a nutrient-rich organic fertilizer, farmers will reduce their need and cost related to synthetic chemical fertilizers, while promoting regenerative agriculture practices and circularity.

Upskilling farmers

Continuous learning and improvement are key to implementing on-farm best practices in an evolving global economic and environment context. Danone will continue to support upskilling our dairy farmer partners through enhanced training programs, that include face to face training and digital learning platforms for large, medium and small farms, across our different sourcing regions.

In October 2024, for example, Danone and Danone Ecosystem hosted the ‘Milk Impact Expedition’, a week-long event focusing on upskilling local milk teams from Latin America (LATAM) and Europe, the Middle East and Africa (AMEA) on agricultural best practices (herd management, animal health and welfare, crop resilience, etc.) and milk collection improvement (improving infrastructure).





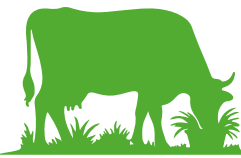
Farm programmes

Today, Danone works directly with more than 60,000 dairy farmers. We source most of our fresh milk locally, within 200 km around our factories. Danone recognizes that there are different farming models, and that they will have different paths to decarbonization and resilience. We tailor our farm roadmaps based on where farms stand in their regenerative agriculture and decarbonization journeys, and according to each farm’s challenges, to prioritize improvement practices while keeping in mind trade-offs and co-benefits.

Danone has been working with our farmer partners to define and deploy regenerative agriculture and decarbonisation practices on dairy farms, including the following levers for methane reduction:



• **Herd management:** Strategic herd management practices encompass the well-being and productivity of the animals within the herd. This includes their basic needs, such as water, feed, shelter and comfort, as well as regular health assessments and disease prevention, and meticulous planning of breeding, calving, and culling schedules.



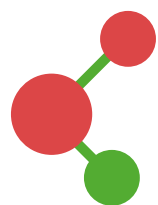
• **Feed management:** Ensuring the herd receives high-quality feed and the optimal feed composition throughout their life cycle, to improve yield and feed efficiency.

This will reduce the carbon intensity and enteric methane emissions associated with each litre of milk.



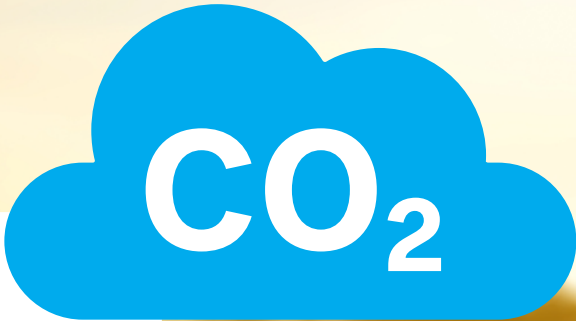
• **Manure management:** Animal manure contains important nutrients to support crop growth and reduce reliance on chemical fertilizers. Emissions can be minimised through improved manure storage and using a variety

of solutions adapted to farms’ needs such as manure pits with slurry store, liquid-solid separators or anaerobic digesters to decrease methane emissions. There is a spectrum of options available, depending on a farm’s needs, which can also help improve local cropland with supplanting synthetic fertilizer. Anaerobic biodigesters can also convert methane from manure into biogas, which can then be used as an energy source on farm or injected back into the main energy grid.



• **Breakthrough methane innovations:** investing and exploring promising innovative methane reduction solutions, such as inhibitors or feed additives that can directly prevent micro-organisms’ production of methane in the rumen. These include breakthrough

innovations that can reduce enteric fermentation embracing both scalability and accessibility at farm level, whilst ensuring animal welfare is respected.



Supplier engagement

In addition to our direct farmer strategy for most fresh milk, it is also crucial to build a supplier engagement strategy related to purchased dairy ingredients (this work is in addition to our current methane commitment and consistent with our Science-based Target and climate transition plan roadmaps). Danone has been actively engaging with its suppliers to highlight the importance of emissions reductions and set GHG targets and reduction plans.

- Currently, we are embarking a Supplier Engagement Program, which seeks to embed decarbonization goals of at least 30% between 2020 and 2030 into all Danone’s supplier contracts.
- Danone actively encourages its suppliers to join the Sustainable Dairy Partnership (SDP).
- Investing in on-the-ground projects: Danone is actively engaging & co-building with its dairy ingredient suppliers to foster opportunities for collaboration which accelerate the decarbonization of its dairy ingredients.
- Danone plans to increase the volumes sourced from suppliers with accelerated decarbonization projects with Danone.

By the end of 2024, 82% of Danone’s suppliers (in volumes) were Sustainable Dairy Partnership (SDP) members, of which nearly half have externally verified their sustainability programs. The SDP is designed to provide a consistent global approach to dairy

sustainability in commercial relationships between dairy buyers and processors. By the end of 2024, 30% of Danone’s total dairy ingredient volumes were covered by contracts that included GHG emissions reduction targets, and the Group is working to extend this initiative to its entire supply base.

In 2025, Danone signed two partnerships to accelerate the decarbonization of dairy ingredients:

FrieslandCampina: We are extending our partnership with FrieslandCampina to further reduce GHG emissions from dairy ingredients, with a target of 44% reduction of on-farm GHG emissions by 2030 (compared to 2020). Through this partnership, FrieslandCampina member farmers will be supported and incentivized to apply additional on farm measures such as innovative manure management.

Leprino: Danone has partnered with Leprino to reduce on-farm emissions by approximately 50% by 2030 compared to 2020 levels. The first significant project involves installing BioFiltro’s innovative wastewater treatment technology on two farms in California. This on-farm technology uses worms to process liquid from cows’ manure, potentially reducing methane emissions from manure storage by 90%. Additionally, it offers co-benefits such as improved water availability, soil health, and nutrient management.



Our methane reduction geographies across the globe

IN EUROPE

Launched in 2024, Danone **Poland**’s program supports farmers in developing micro biogas installations up to 0.5 MW, utilizing agricultural waste. Biogas production at the farm level prevents methane emissions from manure by converting it into biogas, providing a source of energy additional for the farms. In 2024, Danone supported 4 farms, with 4 installations now operational and 4 more planned for 2026. The program is already scaling up in 2025, with 8 new farms set to install micro biogas systems. Danone collaborates with Naturalna Energia Plus to provide training, investment guidance, installation, and follow-up maintenance. Financial support from Danone includes studying biogas production potential and preparing necessary documentation for micro-installations. This complements the national “Energy for the Countryside” program, which offers grants and loans for biogas plant construction, making it accessible for Danone’s farmers to establish their biogas projects.

In **Romania**, Danone under its P4G initiative has started in 2024 a collaboration with Zoetis to enhance the profitability, welfare, and sustainability of dairy herds through genomic testing using the CLARIFIDE Plus test. This genomic testing helps identify and select cows with desirable traits, potentially reducing methane emissions by improving herd efficiency and health. Currently, the program involves 9 farms. The initiative includes training on genetic selection, reviewing test results, defining breeding objectives, and continuous follow-up with farmers. Funded entirely by Danone for the first year, the program has seen significant engagement, with each farm averaging 200 tests. Its success is already evident as farmers have decided to continue investing in genomic testing independently for the coming years, convinced of the added value in better managing their herds. Over the next 3 years, 4 farms already confirmed they will continue the testing on their own.

IN NORTH AFRICA

In 2016, Danone, Danone Ecosystem and GIZ launched the Hlib Bladi project in **Morocco** to enable smallholder dairy farmers to reduce GHG emissions, improve farmers livelihoods, and strengthen farm resilience and local milk production. The project has trained farmers to optimize feed production and improve local feed autonomy, improve herd, manure and water management and implement agroforestry practices. Hlib Bladi has also improved local infrastructure, upgrading milk collection centers (MCC) through cold-chain management and digitalization, increased milk production and quality, and introduced innovations, such as piloting biodigesters that will now be rolled out in 4000 dairy farms by 2030.

As of 2024, the project has engaged 4,000 farmers, upgraded 170 milk collection centres (cool-chain management and digitalisation) and increased milk quality and production, and farmers revenues by 50%. In September 2023, we launched phase 2

of the project, to scale reaching 10,000 farmers by 2026 and upgrade 300 milk collection centres. For phase 2, GHG baselines were calculated on farm from extending our Cool Farm Tool campaign to Morocco in 2024, with detailed figures of emissions reduction available in Q4 2025. More information available on the project here: [H’lib Bladi - Danone Ecosystem](#).





IN LATIN AMERICA

In 2021, Danone **Brazil** and SEBRAE launched the Flora project, a learning program, through which farmers are supported to gain fresh insights and knowledge, financial management skills and technical know-how. The Program has focused on supporting farmers to improve herd (including genetics) and feed management, via technical assistance and monthly on-farm visits. We are currently supporting 108 farms out of a total of approximately 230 farms that supply milk to Danone Brazil. This program improved productivity per cow by 17.6% on average for farmers participating in the program, between 2020 and 2024.

IN NORTH AMERICA

In September 2017, Danone **North America** launched a five-year program, working closely with our farm partners to assist them in implementing regenerative practices on farms. These practices enable farmer partners to lower their GHG, and specifically methane impact for the milk and dairy ingredients that we can

- incorporate into our products, while also supporting farmers’ resilience and long-term profitability.
- Through the partnership, we have supported a variety of on-farm projects that have significant methane reductions & positive regenerative agriculture impact, including:
- Reducing methane emissions from dairy through innovative manure management systems. For example, we have found that liquid-solid separators and manure injection systems can have many benefits. These include increasing efficiency and reducing energy usage of handling and transportation, minimizing the use of commercial fertilizers, improving management of nutrients and mitigating environmental impacts.
 - Implementing nutrient management systems such as a technology called 360 Rain. We began using 360 Rain – an autonomous system that delivers water and nutrients directly to the root zone of crops which helps improve their production for feed and reduces methane emissions.

IN NORTH AMERICA

360 Rain

Nutrient management systems

IN EUROPE

+0.5MW

Danone Poland’s program supports farmers in developing micro biogas installations up to 0.5 MW, utilizing agricultural waste



IN LATIN AMERICA

17.6%

improved productivity per cow on average

IN NORTH AFRICA

+50%

of milk quality and production, and farmers revenues

Focus on our partnerships & advocacy work



Danone has a longstanding and close relationship with its farmers, especially smallholder farmers and recognizes their essential role in the global food system and economy. We are committed to supporting farmers in their journey toward more resilient, sustainable and economically viable farms.

To help enable on-farm investments and solutions, Danone is actively participating in cross-industry pre-competitive partnerships that can build better sector systems.

In November 2022, EDF and Danone signed a partnership to 1) support Danone's commitment to reduce agricultural methane emissions by at least 30% by 2030 against a 2020 baseline; and 2) to increase livestock and dairy industry ambition around agricultural methane reductions and positive farmer livelihoods. We are working together



in areas such as improved science, data and reporting standards, innovative financing models to help farmers of all sizes, and catalyzing industry and policy leadership through advocacy.

In 2023, in the framework of COP28 in Dubai, Danone, together with other global dairy companies (Bel Group, General Mills, Kraft Heinz, Lactalis USA and Nestlé), announced the launch of the Dairy Methane Action Alliance (DMAA) under the leadership of the Environmental Defense Fund (EDF). DMAA aims to mobilize others in the dairy industry, drive pre-competitive collaboration and send a clear market signal that the future of dairy is low methane. DMAA members are working together to drive harmonization in measurement and reporting, support enabling policies and tackle other methane reduction challenges in the dairy industry. In 2024, Starbucks and Clover Sonoma joined DMAA.

We have established public-private partnerships to leverage United States public resources to match private resources.

In the US, we have built innovative partnerships across our value chain, from seed suppliers to retailers. Through these projects, we will direct

fundings to dairies to reduce methane emissions through improved manure management practices, such as liquid-solid separators, which can reduce methane emissions by 25-35% from manure.

We are building coalitions and engaging policy makers.

In December 2024, we joined other dairy industry leaders in co-signing a letter to the Greenhouse Gas (GHG) Protocol, requesting clear guidance on reporting GHG emissions at the farm-gate level, with a specific focus on methane reduction taking place from biodigesters. In February 2025, alongside EDF and Bel Group, we advocated for the inclusion of methane emission reduction in the Vision for Agriculture and Food, aiming to develop a comprehensive plan for reducing methane in the dairy sector for the inclusion of methane emission reduction in the Vision for Agriculture and Food, aiming to develop a comprehensive plan for reducing methane in the dairy sector.

Challenges and next steps

To withstand the increasing impact of climate change, we need to prioritise farm practices and innovative solutions that can enhance the resilience of dairy supply chain.

However, today the dairy sector faces challenges that sometimes limit near-term implementation. Some of these barriers include:

- New technologies and solutions are often expensive and do not offer a clear ROI for farmers to invest.
- Government policy and regulations vary significantly across our farming networks.
- Farmer's require financial support and additional development of public-private partnerships is needed to help leverage public & private resources to support farm practice changes.

Danone is committed to collaboratively address these issues with our value chain partners. As we move towards building resilient supply chains, our focus will be on strengthening our supply chain partnerships, advocating for practical regulatory and policy frameworks, investing in innovative solutions, and supporting farmers in their transition to sustainable practices. By working together, we can achieve our goals and create a more resilient and sustainable future for generations to come.

