MOOTRAL™

THE BUSINESS OF BEING CLIMATE-SMART

Value creation
for farmers

ZALUVIDA

OVERCOMING DECLINING MARGINS FOR FARMERS

The market landscape for food, particularly in developed countries, has become increasingly competitive. Fierce competition between retailers and food manufacturers has resulted in profit margin erosion in the livestock supply chain, including the beef and dairy farmers. The livestock industry is also facing pressure due to it being the third largest emitter of greenhouse gases. Policymakers and environment agencies have recently been pushing for an increase in the value-added tax on agricultural products and/or public education to reduce consumption of beef and dairy. A solution is needed to empower the global farming community and to grow the economic value of agriculture and industry. Consumers still want beef and dairy products to remain on the menu but at the same time they understand that they need to reduce the environmental impact of these purchases. Mootral™ offers the technology to quickly and significantly reduce methane emissions from livestock and harness consumer choice as a driving force to grow profitability for farmers, feed manufacturers and other businesses.

A research supported market mechanism that increases the economic value of the agriculture industry

Mootral™ conducted consumer research in Europe on a new "Climate-Smart Cow" standard (similar to organic) and an innovative approach using the cow ("CowCredit") as a carbon offset. The research shows that climate change ranks among the top three concerns of consumers in Europe and that consumers are aware that the cow is a significant contributor to GHG emissions. Also, consumers confirmed that they are willing to get behind climate change programs personally. However, they are sceptical of current approaches such as taxation because they do not know where their money goes, and they do not want regulations intruding into areas of consumption of products like beef and dairy, which have been part of the culture for generations.

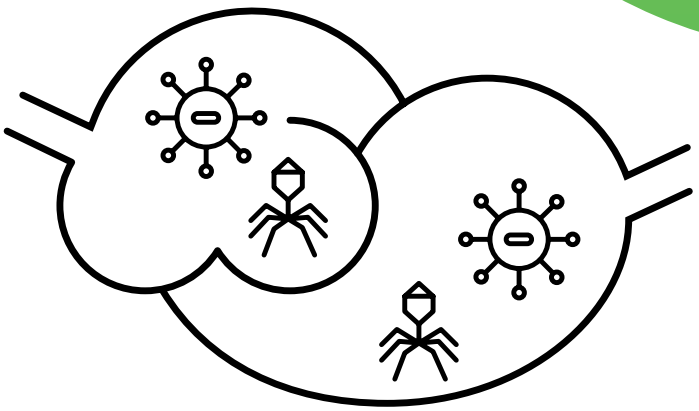
The research presented the concept of reducing methane emissions from cows, and consumers easily understood this. The idea of paying more for dairy and beef products from "Climate-Smart Cows", or buying a product like a car where the emission is offset through purchasing a "CowCredit" was very compelling. Consumers understood it costs slightly more to make a cow "Climate-Smart" and were happy that the additional money they paid was going back **directly to the farmer**, and that the direct investment had an immediate effect on carbon reduction globally.

The majority of consumers have a preference for meat and dairy products and are willing to pay more for sustainable food if they can ensure better health for the cows and the environment. Cows are likeable animals that people can relate to. Unlike a typical carbon reduction technology such as renewable energy, cows are tangible and visible, and can be used to create an emotional link and attachment between stakeholders, ensuring a faster penetration of a market-compliant solution that builds on value creation, responsible consumption and ensures a big contribution towards fighting human-made climate change.

MOOTRAL™ PILOT PROJECTS

Mootral™ Pilot Projects are a first step towards implementing a new approach to climate change. In each project, Mootral™ will showcase a farming enterprise where we can validate the "Climate-Smart Cow" and "CowCredit" market mechanisms within the political and economic context and value chain of that pilot territory. The focus for the first Mootral™ Pilot Projects is in developed markets and will enable us to showcase the positive and tangible impact on consumers, farmers, businesses and governments. The Mootral™ pilots will also allow us to further refine and develop the approach for the roll out in additional countries (including emerging economies).

Create economic value and instantly tackle climate change by reducing livestock's greenhouse gas (GHG) emissions



Cows have four stomachs to help them digest food into the nutrients they need. In the biggest stomach – the "rumen" – there are billions of different microbes that help with the digestion process. While many of the microbes are "good" and actually assist the digestion, there are "bad" ones which effectively steal nutrients from the cow. As a by-product, they create methane which mostly comes out through the mouth. **Methane gas is 84 times more potent than Carbon Dioxide (CO2) over the first 20 years of its lifespan**. Because we have less than 15 years to massively reduce global emissions, there is a huge incentive for the world to tackle methane emissions from cows immediately.

Scientists have called for urgent attention to quantify and reduce methane emissions, stressing methane mitigation's rapid climate benefits and economic, health and agricultural co-benefits.

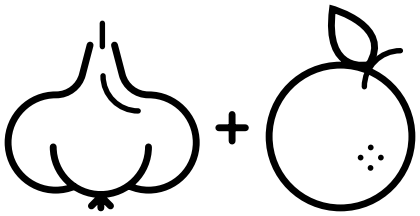
A cow produces more carbon emissions than an average car, and the global livestock industry is responsible for 15% of all global greenhouse gas emissions.

They are the third largest contributor of GHGs after energy and industry, and they exceed the emissions of the transportation sector.

Even when farmers may want to mitigate methane emissions, the cost increase of the feed has not been immediately offset by the potential yield increase, and thus the **feed has not been affordable**.

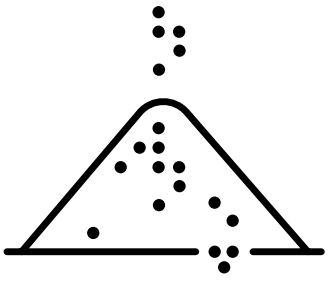
THE POWER OF MOOTRAL™

Mootral™ can significantly reduce methane emissions globally. At full scale Mootral™ has the potential to reduce methane emissions by at least 1.3 Gigaton CO2-eq[17], and because of the global warming potential of methane gas, it would be much higher within the next 20 years. When 40% of all cows are given Mootral™, it will represent taking at least 200 million cars off the road. To achieve the global carbon reduction goals under the UN Paris Agreement, we need to implement an instant and massive carbon reduction. There is currently no faster or more sustainable technology to ensure an instant reduction of GHG emissions.



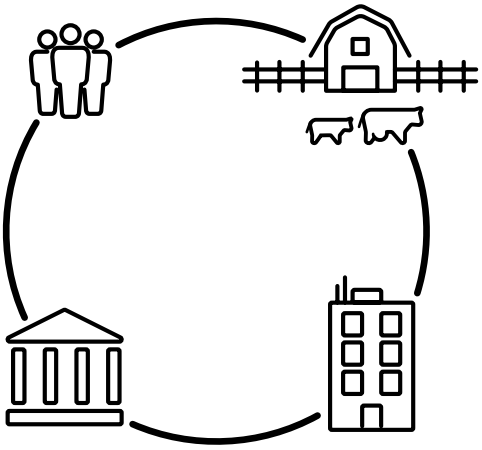
A natural solution and scientific breakthrough

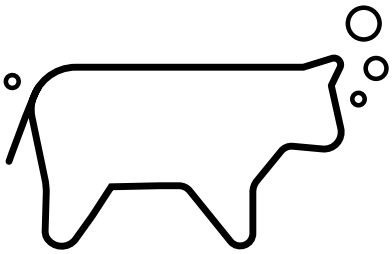
Our proprietary feed supplement is made from natural ingredients: garlic powder and citric extracts (originates as a by-product from the processing of oranges), uniquely standardised in active ingredients. There are opportunities to locally source the ingredients, making the production of Mootral™ low carbon. The Mootral™ feed supplement is easy to produce, and market access does not encounter regulatory hurdles as it is made from natural feed components. Mootral™ has been at the forefront of understanding enteric fermentation methane for over ten years. Extensive international research has been undertaken with leading institutions including the EU to determine how to extract the right compounds, understand the correct ratio of the active components and manufacture the product into the right format. Our scientists had to balance the reduction in methane emissions with achieving a positive impact on the animals' health and growth. Mootral™ is continuing to innovate and push leadership thinking and research in this field.



MOOTRAL™ — A NEW APPROACH TO GHG EMISSIONS AND VALUE CREATION

At Mootral™ we are proposing a new approach to mitigating methane emissions from cows. It is an approach that provides both a market mechanism so that governments, businesses, consumers and farmers are positively engaged by means of value creation, and a technical solution (a natural feed supplement) that is easy to incorporate into the feed chain and has a proven immediate methane reduction ability. This is a win-win-win-win for all.





The benefits of Mootral™

1. **A cost efficient, sustained and effective approach**. Economic analysis shows that Mootral™ is an extremely cost efficient solution when compared to the "true cost" of other carbon reduction technologies. Mootral™ results in the long-lasting reduction of methanogenic bacteria in the biome of the animal and the reduction of methane in cows by a minimum of 30%. Benchmarked against other known solutions, Mootral™ delivers the highest reduction of enteric methane emissions.

2. **A natural, instant and scalable solution for governments to jumpstart progress on meeting their goals**. The feed supplement is available now and commercially scalable. It is made from natural ingredients that are widely available. Because of this, Mootral™ can be produced with a low environmental impact, provides health benefits to the animal, ensures food safety adherence and a shorter time to market.

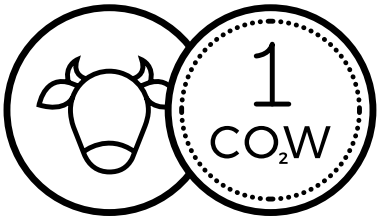
3. **A cross-industry approach, which encourages all sectors to work together towards the common goal of reducing CO2 emissions**. The livestock industry can be an area of focus because there is a mechanism to finance the additional cost of the feed.

4. **The livestock industry is no longer perceived as a problem and becomes part of the solution to climate change**. The perception that the public has of the industry becomes more positive than before, and the industry will welcome a favourable government action.

5. **Steer society towards a more responsible consumption of meat and dairy products**. The introduction of a trusted new premium standard for Climate-Smart dairy and beef products will positively change people's eating habits.

6. **The public approves government action**. Mootral™ is a solution which empowers consumers to pay for the products that they want, knowing that part of what they pay for is going to reduce cows' methane emissions in a direct and transparent way.

A PARADIGM SHIFT: THE COWCREDIT



Mootral™ is a Gigaton carbon solution that can help the world reach the ambitious goal of keeping global warming under two degrees within the next 20 years. It can support governments around the world to kick-start their carbon reductions. Mootral™ does not require massive infrastructure investments and the supply chain already exists.

Mootral™ is more than just a product. It is a solution that includes market mechanisms to finance, market and scale methane emissions reduction from the livestock industry. It enables all stakeholders to be part of that climate solution and creates value for all. This holistic approach called Mootual Benefits creates a win-win-win-win situation for all parties: from consumers to industry, to governments, to farmers.

Mootral™ is both a natural feed supplement for reducing methane from cows by a minimum of 30% AND a new market mechanism to accelerate and scale methane reductions globally, including a "Climate-Smart Cow" standard and a "CowCredit" currency.

A global cross-sector approach

An essential part of the approach to tackle climate change has been to identify specific sectors and focus technological and financial efforts **within that area** (e.g. Power and Transportation). While a "sector-by-sector" approach has encouraged focused and targeted solutions, it has also meant that financing and prioritisation of climate-mitigating activities are solely conducted within the sector. **With no overall prioritisation** across sectors within a country, **easy and cost efficient solutions have been overlooked**.

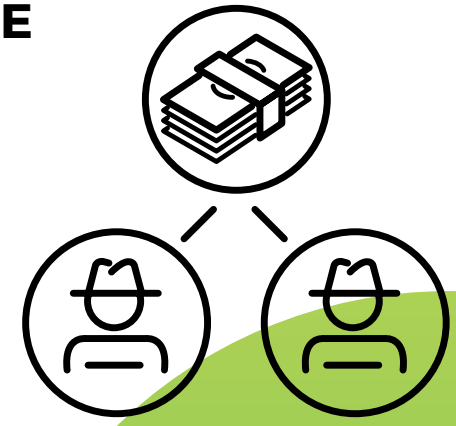
Also, prioritisation of climate mitigation is often **not done on the real cost** of the solution. This is particularly the case of solutions that require substantial investment in new technologies and infrastructure. As a result, the true cost of these solutions is **under-reported**. A further consequence of a "sector by sector" approach is that industries within the target sectors encounter progressively more difficulties to reach their specific mitigation targets in time, as is increasingly evident in the automotive industry.

By enabling **a cross-sector approach** new, easy, cost efficient and timely solutions can also be considered. This enables companies to achieve their short-term CO2 mitigation goals while at the same time allowing them to continue to develop their longer-term solutions.

Financial support mechanisms for reducing carbon emissions, such as carbon credits have also supported progress in key industries. However, the **livestock industry has been largely ignored**, and farmers have not been able to benefit from these alternate mechanisms for financing strategies to mitigate carbon emissions from their cows.

In the current "sector by sector" approach, the global livestock industry would continue to be isolated and increasingly under pressure from governments to take action. With a cross-sector approach combined with an **affordable, commercially available solution** for tackling enteric methane emissions, a new future for the livestock farmer is possible – one where the "Climate-Smart Cow" becomes a new tangible carbon credit and new revenue source.

SUPPORTING FARMERS TO CREATE VALUE AND MAKE A RAPID AND LARGE CONTRIBUTION TO FIGHTING CLIMATE CHANGE



We want to help farmers globally, and position them as part of the solution to reducing carbon emissions. Mootral™ aims to encourage farmers to tackle climate change in a positive and engaging way. Mootral™ believes that it can reduce methane emissions while helping farmers have healthier, more productive and less polluting cows. In addition, "CowCredits" open new areas to generate additional revenue, and give the livestock industry a positive image and new ways to improve their profitability.

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MOOTRAL™

#MooveWithUs

A global campaign will be supporting the launch and development of the Mootral™ Pilot Projects. The aim is to harness the power of stakeholders and help refine “CowCredits” and “Climate-Smart Cow” marketing concepts, and engage them with the showcase farm.

Mootral™ is now ready to implement our win-win-win-win approach with partners around the world, start the pilot projects, and conquer the hearts and minds of society, businesses, farmers and governments alike.

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