#WeAreDairy AWARD

Achieving sustainable and efficiency improvement goals on dairy farms

Diversey™ Agriculture | Promar International

Brought to you by Diversey Agriculture and Promar

Last year, Diversey Agriculture, in partnership with Promar, launched the #WeAreDairy Award, designed to showcase, celebrate and, most importantly, share some of the brilliant ways the world's dairy farmers are acting to make positive change to their farm businesses.

The judging team, comprising Alison Cox, Agricultural Global Application Specialist at Diversey, Daniel Daggett, Executive Director of Sustainability at Diversey, and Matt Sheehan, Principal Consultant at Promar International, were looking for dairy farmers who are excelling through improvements to the efficiency, quality or sustainability of their business.

The entries received demonstrated ingenuity and commitment to improve, from savings on fuel, energy and utilities, to a new housing design that has seen improvement in animal health.

L-R Ian Joseph - Diversey Agriculture, Jonny Crickmore - Fen Farm, Hattie Thompson - Promar

Entries were shared from across the globe, from Italy to the UK, and as far reaching as South Africa, demonstrating a willingness to share solutions so that others can also put into practice and further improve sustainable and efficient output within the industry.

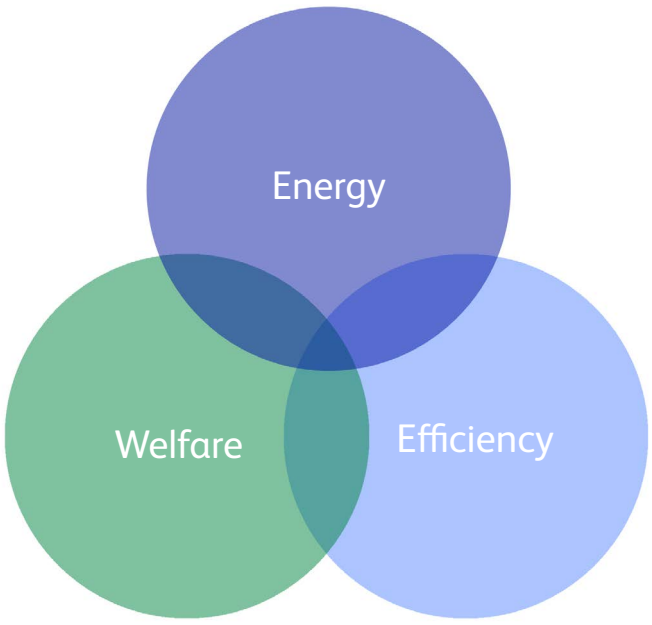
Diversey and Promar are grateful to all that took the time to enter; every entrant demonstrated ingenuity that dairy producers across the globe can take inspiration from when looking at the future of their business.

What did we learn?

Dairy farms are doing a lot more with a lot less, not only from a cost management point of view, but also taking sustainability and environmental impact into consideration. They are breaking down barriers, investing, educating and inspiring the next generation of the dairy industry to do the same. For both Promar and Diversey, operating on an international scale to provide farm consultancy and hygiene expertise to agriculture, sustainability is now at the forefront of their services and solutions.

Unlike other awards initiatives, the #WeAreDairy Award was established to **make a difference** and include not only the obvious larger solutions to farming sustainably, but also to highlight the smaller practical changes that can make a difference.

Overall, the entries summarise that dairy farmers care and think about the future, particularly when it comes to **ENERGY, EFFICIENCY AND WELFARE.**



Energy

Energy is a significant contributor to on-farm emissions, as well as cost, so targeting energy use is an obvious way to reduce a dairy farm's carbon footprint and increase efficiencies. With recent energy cost increases, the impact of **saving energy** and **being more energy efficient** has doubled and, in some cases, tripled.

Technological advancements can help farms improve their efficiency, from **installing energy-efficient LED lighting**, to **investing in new feeding equipment**. Energy on farm can also be **drawn from natural sources**, with **increasing availability of technology** making this possible.

Efficiency

Being efficient means you can achieve your results by putting the resources you have in the best way possible. Put simply, something is efficient if nothing is wasted, and all processes are optimised, and sustainability is a bi-product of this.

This was a common strength of the #WeAreDairy entrants, where farms have **found new ways to use farm waste, from plastic to feed.** For farmers, taking action through energy efficiency, waste prevention, and nutrient management is not only good for the planet but often has a healthy economic return.

For some #WeAreDairy entrants, **cutting down on plastic** use is their strategy to reduce their carbon footprint; from **buying feed in bulk to eliminate the use of 20kg bags**, or **swapping wrapped bales for a silage bunker**, as well as **purchasing dairy chemicals in an IBC instead of drums** and **using washable udder cloths instead of disposable wipes in the parlour.**

Welfare

While energy use and farm efficiency is becoming more measurable, with likes of the GFLI database and modern technology, tools and devices, and waste management can be assessed on an individual level, welfare is not as straight forward.

A measure of cows' happiness has never been defined, but experience tells us that positive herd welfare often results in increased productivity, and is closely linked to efficiency. It is therefore beneficial for farmers to keep their cows comfortable and well cared for, because **healthy cows are happy cows, and happy cows = more milk.**

Award entries demonstrated the proactive role that dairy farmers are playing in improving the health and welfare of herds around the world. Changes and improvements to farm design and management practices, including **cow comfort, lameness, health and hygiene** and **breeding**, were a key feature of many of the entries, with the welfare of the cow at its heart.

Our winner was Fen Farm Dairy, a third-generation family dairy farm and cheese producer in Suffolk, UK, milking 300 Montbeliarde cows. The judging panel was particularly impressed with Fen Farm's ingenuity and thorough research into each of their sustainability and energy saving projects, which began as early as 2011, with the installation of solar panels on their 950 acre farm.

Drawing energy from natural resources

#WeAreDairy Award winner Fen Farm's sustainability activity largely focusses on energy use and focussing on reducing fixed costs in order to achieve a greater return for the business as a whole. Harnessing energy from across the farm through various innovative investments, the business is aiming for complete self-sufficiency as an end goal.

The most creative and interesting concept to take from them is their decision to lay 1500 metres of water pipes into a bed of sand when they erected a new cattle shed in 2019. The pipes harness the heat generated by the cows, using it to heat water in cheese and butter production buildings, as well as the parlour and other buildings on-farm. The most energy exorbitant part of heating water is getting it from cold to warm, and they now rarely need to use electricity to heat water at all.

Costing only £2,500 to install, and saving the business in the region of £1,800 per year in water heating costs, the return on investment is clear, and can be easily adopted by other dairy farm businesses. The installation of a straw burner in October has further reduced electricity usage on the farm. The burner uses one bale per day (all baled on the farm) to heat the 44,000-litrewater tank. The water is circulating constantly to reach 90 degrees C, and with the use of a heat exchange from the straw burner, is used for washing the parlour.

Rapid adoption of technology

In January 2021, Fen Farm also installed heat exchanges, a high-tech solution to harness further heat from the existing operations of a busy dairy farm. Powered by an ice bank, the fridge units cool the milk that comes from the parlour to the milk tank; gas is put under presure to create ice, to take the heat out of the milk to cool it down. Once it has collected the heat, the gas would usually be chilled back down again, but instead, this gas is diverted through a heat exchange, using this heat to take the waterin the preheat tank from +/-30 degrees C to 60 degrees C.

Solar systems are not a new concept, but with further technology advances, they are more accessible and affordable than ever. Fen Farm's new 100kw solar system will generate 90,000kwh per year from a natural resource, saving the business a minimum of £12,600 per year, and reducing their overall carbon footprint.

In sunny South Africa, solar power has become a very reliable source of electricity. #WeAreDairy entrants Ocean Breeze Dairy and Droëvlei Dairy in Western Cape told us how they make use of solar energy on farm to supply electricity to the milking parlour, sheds and offices at the massive rate of 50kW of electricity per hour.

Chemical choice

By re-evaluating their choice of chemicals, farmers can significantly reduce carbon emissions and reduce water heating costs. Diversey research undertaken in 2019 found that by using modern hygiene products that are effective when used in lower water temperatures, farmers are able to remove one hot wash from a twice, or three times, per day parlour wash routine. This can reduce carbon emissions by up to 1.6 Metric Tonnes per year, without compromising hygiene efficiency.

Summary

The Diversey and Promar teams have been extremely impressed by the long-term developments and progress being made on farms across the globe. These long-term plans come hand in hand with efficiency, welfare and sustainability and are not in competition with economic growth. With the examples provided, the future of dairy looks to be in good hands.

Diversey™

Agriculture