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The dairy industry is offsetting its challenges with continuous innovation and staying abreast of changing consumer trends.

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The dairy industry is beset by confrontation from all sides. Supermarkets and major retailers are making life difficult for farmers trying to make a livelihood from their herds, while the rise in free-from food and beverages have spawned a formidable industry in direct competition. The public perception of dairy waxes and wanes as the media pushes and pulls the industry in and out of the so-called health halo. The dairy industry is robust and stays afloat by adapting to meet the changing needs of the consumers and the food and beverage sector at large.

Founded by the Food and Agriculture Organisation of the United Nations (FAO) in 2001, World Milk Day falls on June 1 each year. It extolls the virtues of milk and its position as lifeblood in the farming industry that supports it. But despite this celebration, the industry is under increased competition from the alterative milk market and the growing public hunger for free-from foods.

Nowhere is this as prevalent as with the rise of alternative milk and cheeses. What began as a niche product, relegated to specialist suppliers and stockists, and catering to a tiny demographic, has since achieved a significant market share. Supermarkets have entire aisles sometimes more - dedicated to free from products. For dairy, alternatives either come from plants and nuts for milk, and soy and tofu products for cheese. However, labelling patently non-dairy foods as such is causing consternation amongst the industry. It's an argument that has heated up

in Europe of late. Indeed, the European Court of Justice has made history after ruling that names including "milk" and "butter" can no longer be used to describe soy and tofu products. Ergo, products that purport to take the place of dairy can no longer do so under the same labelling and semantics. The alterative dairy industry, however, has hit back, claiming that customers are not being misled, as their products - and their plant origins - are clearly stated and freely available to consumers. The court ruling has caught the industry zeitgeist, throwing fuel on a fire that has been waging for years. The meat industry is also at loggerheads over the labelling of its alterative counterparts. The free-from aisle is awash with veggie or vegan sausages and burgers et al. And who can forget the ubiquitous "facon"?

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Perhaps the other biggest enemy facing dairy is public perception. The industry exists on a pendulum in the public eye and media, where its reputation swings back and forth. One research paper might highlight the health benefits of cheese and milk while another condemns it. The most high profile example recently is butter which has, particularly in the UK, enjoyed a renaissance. Despite its higher fat content, researchers and some nutritionists argue it is better for the body than margarine. With consumers again embracing butter, sales have shot up, driving the price of butter with it. Cheese is also being seen in a new light

after it was revealed that eating cheese has a number of positive effects for the body, particular in conjuncture with mental health and physical fitness. This is ideal for the industry, as they can now market their products to a consumer base that increasingly prefers healthier food options, and win back a demographic that is slowly turning its back on dairy.

Part of the allure for dairy to consumers and producers alike, is its versatility. The UK's Kanegrade supplies a plethora of dairy ingredients which have been derived from milk. Often this is from cow's milk, though can also come from goat or other animals as specified or required. Though undoubtedly the most popular milk options, cow's milk is enjoying some healthy competition as producers turn towards goat, ewe and even donkey milk. For Kanegrade, dairy ingredients come in the form of dried powders or pieces and can fulfil any number of functions from desserts, dips and cakes, to snack flavours, biscuit fillings and coatings.

Protein is one of the big food trends of recent years, with the upsurge in exercise among the public and the search for healthier fare driving the

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Supporting hygienic and delicious dairy food production

The dairy industry is one of the most highly regulated in the world. Increasingly it is becoming one of HpE Process Ltd's core competencies.

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HpE Process Ltd was set up to place hygienic production very firmly at the heart of manufacturing. Consumers feel confident about buying brands that they trust and traceability, adherence to standards plus great taste affect their buying decisions more than any other factors.

Food producers recognise that to win consumer confidence takes a long time, to lose it seconds that is why more and more are turning to us relying on our constant attention to high standards.

Incredibly, improperly handled raw milk is responsible for more hospitalisations than any other food borne disease.

Dairy production faces three main challenges. Physical, chemical and biological. Our range of KPA centrifugal pumps have been designed to tackle these three challenges and

eradicate them from the production line. Of course, no two lines are the same and to design the right system and advise on the right implementation requires very specific skills.



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market. Dairy is perfectly aligned with this trend, and Kanegrade is taking advantage of it with its quark powder. This powder has a high protein content and can be used in a variety of different ways to appeal to consumers and add protein content to other products.

The handling, producing and processing of dairy products, both in their raw state and finished forms, requires the appropriate machinery and equipment. The production process becomes more complex when considering the number of techniques producers add into the mix. These include vitamin and mineral fortification, milk solids content control, salt and sugar dissolution and, of course, emulsification. Many of the aforementioned speak to the sensory profile and shelf life of a dairy product, though others indicate consumer preferences. Reduced fat and sugar dairy will remain popular, despite the latest findings suggesting that full fat varieties

may, in fact, be the healthier option. Nevertheless, flavoured milks and milk shakes are notorious for their sugar content and as more countries introduce their own sugar taxes, it is imperative for producers to curtail the sugars in their products. This all requires suitable equipment.

Admix, the Londonderry-based mixing specialists, supply a number of innovatively designed machines which enable dairy producers to cut batch times in half, reduce maintenance costs and eliminate air entrainment and dusting associated with convention batch mixers.

Innovation is the mother of efficiency and the need for high speed transportation of milk and its derivative products – yoghurt, cream, soft cheese – require the cutting edge in pipe and pump technology. To that end, UK-based HPE Process has recently introduced a new cream feeder. The unit, manufactured and tested in the company's workshop, is designed to feed fondant cream with a viscosity of 20,000 cps to an extruder at a rate of 7-30 kg/hr and a delivery pressure of 12 bar. The Unibloc non-galling rotors allow close working tolerances without seizure, giving more accurate flow at high pressures.

Despite threats from the alternative dairy market, and consumers turning away from dairy, the industry is holding its own. Innovation in both product design and processing equipment is ensuring the industry remains at the forefront of these changing tastes, habits and trends in the years and decades to come.

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