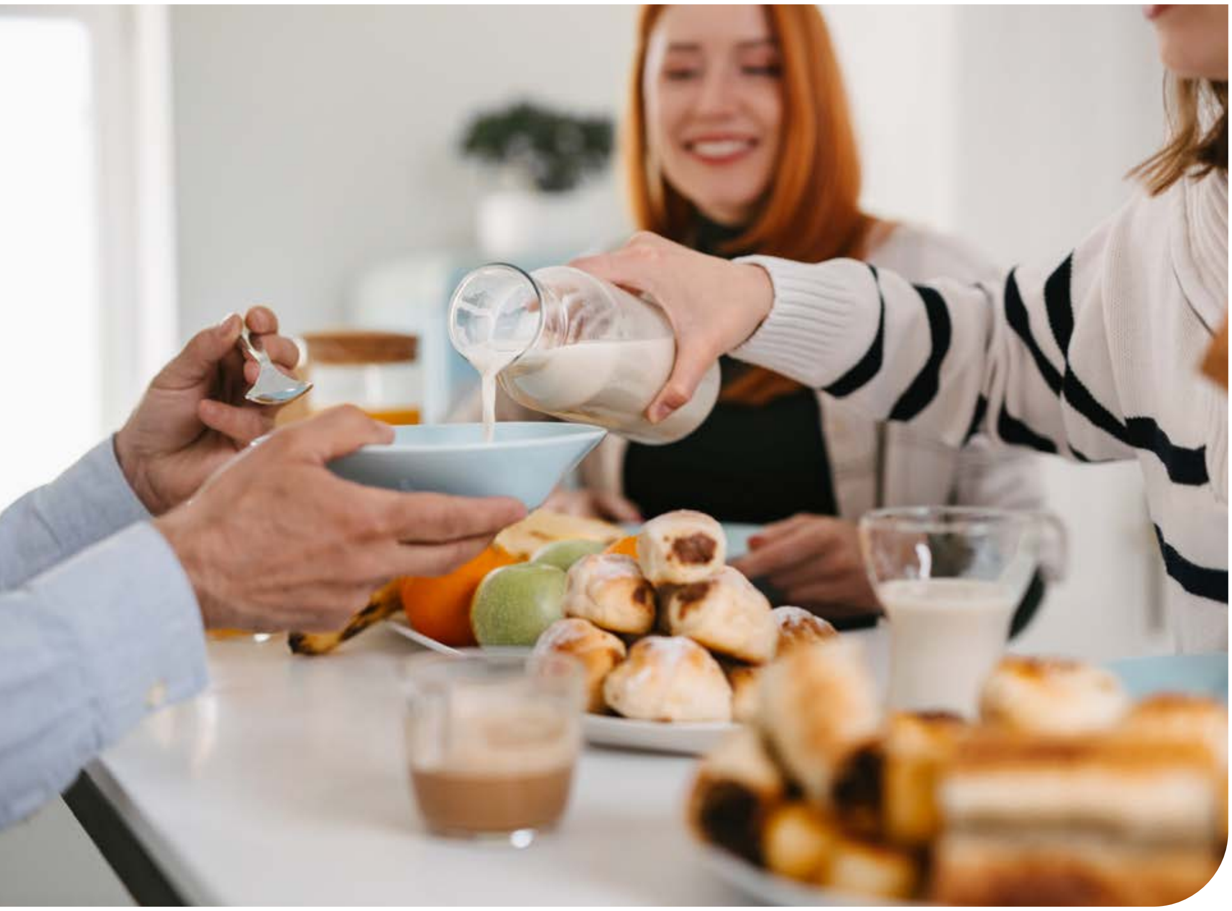

Plant-based dairy by design

What's new and next in the plant-based dairy alternatives segment

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With the meteoric rise of plant-based everything in recent years, it might be safe to assume that the trend is nearing its peak. But think again.

Most experts' opinions are that the trend is still going strong — especially in the plant-based dairy alternatives segment, where new plant-based options are emerging from sources ranging from nuts and legumes to seeds, grains and even potatoes. At the same time, new technological innovations like fermentation are helping to push the envelope.

As brands seek to appeal to a wider, more mainstream audience, the segment will also face pressures over the near term, including added competition from new dairy alternatives, as well as the traditional dairy sector. The next few years promise to be pivotal as companies grapple with challenges such as heightened expectations for taste and texture, as well as demand for accessibility and affordability of plant-based dairy alternative products.

It has certainly been a good run so far. Plant-based foods overall have seen sustained growth in the past three years, according to data from the Plant Based Foods Association (PBFA), reaching $7.4 billion in 2021 with 54% growth over three years. Plant-based dairy alternatives grew across all subcategories, with plant-based milk alternatives at the top of the list by a significant margin, reaching $2.6 billion. Other plant-based dairy alternative categories are also on the rise, as consumers try the newer and better-tasting plant-based milk alternatives and come back for more.[1] Creamer was a particular success, with 33% growth in 2021.

As consumers opt in to the plant-based lifestyle in ever-greater numbers, it means that the segment has tipped into the mainstream.

62%	79%
Household penetration of plant-based products	**Repeat purchase of plant-based products**

Source: Plant Based Foods Association, 2021.

One of the reasons the plant-based dairy alternative sector looms so large is that plant-based eating is central to a number of broad dietary trends. First, plants have wide appeal for not just vegans and vegetarians, but also flexitarians and those who simply want to consume more plants.[2] Second, consumers have a good understanding of their need for protein. The melding of these two ideas makes consumption of plant-based protein a no-brainer.

The trend is reiterated by data from the 2022 Food and Health Survey from the International Food Information Council, which found that 31% of consumers now eat more protein from whole-plant sources.[3]

Eating plant-based products also ties in well with other top trends named in *New Nutrition Business*' "Ten Key Trends in Food, Nutrition and Health" report, including the desire to eat fewer, better and greener carbohydrates, as well as the desire to support digestive wellness.[4]

Multi-dimensional market

This also means that as a market, plant-based is no longer one-dimensional, according to insights from a 2021 Plant-Based Foods Market Analysis from *Nutrition Business Journal*/NEXT New Hope Network. The report suggests that brands wanting to be relevant in this space first need to think broadly about the customers they are serving – customers who are no longer just affluent, well-educated women. In other words, plant-based consumers are highly engaged and now value a wide variety of progressive and health-related attributes.[5]

With this expansion, a paradox is also developing in which the power of plant-based may be changing. According to Julian Mellentin, editor of New Nutrition Business and author of the "Ten Key Trends" report, brands will have to work harder to distinguish themselves in the face of this growing competition.

What's more, he noted that the appeal of plant-based as a positioning may be losing some of its luster as consumers gravitate toward other protein messaging, including taste, naturalness, quality and sustainability.

Take sustainability. Plant-based dairy alternative producers have long made the point that their approach is more sustainable than traditional dairy operations, but Mellentin suggests that after a decade of disruption, traditional dairy producers are responding… which means the "window of opportunity for plant-based dairy alternatives to sell itself as the environmentally-plus-healthier choice is closing and such brands will find it harder to break beyond their current niche status."[6]

Plant-based dairy alternatives will also face increasing scrutiny for their overall healthfulness, use of label-friendly ingredients and minimal processing, while keeping sugar content low and the sensory experience high. With more than seven in 10 consumers striving to limit or avoid sugars,[7] it is not surprising that plant-based dairy alternative consumers are paying attention to sugar content.[8]

67% **of plant-based dairy alternative consumers are looking for products with reduced sugar content[8]**

All this means that plant-based dairy alternative brands – which have been setting a high bar in innovation and sourcing – will have to continue pushing the envelope. Blends may provide emerging new options by helping to address ongoing challenges in plant-based dairy alternatives. For example, formulators can use more than one plant-based protein, such as pea protein with rice proteins, to create a complete amino acid score and put plant-based on a more equal footing with animal-based proteins. Some plant-based proteins lack certain amino acids, so adding them in a blend might be a plus for protein-savvy consumers. While no plant-based protein can absolutely mimic the qualities of dairy-based proteins, pea protein does come close, addressing issues of taste with a clean, neutral flavor profile, and improving solubility (poor solubility can lead to negative texture issues, especially when plant proteins are used at high levels).

Another way to handle these issues is by creating hybrid products that contain both plant-based and animal-based proteins. With many consumers not averse to eating animal-based products at least sometimes (especially if they are sustainably produced), these foods can offer a better sensory experience and a complete protein score. Dairy proteins tend to be more soluble than plant-based proteins, so a combination of the two also allows for higher protein levels without compromising taste or texture.

Innovations and expanded choice

Innovations in technologies like fermentation and cell fractionation are also emerging in the alternative dairy category. As these approaches gain more traction and the products become more accessible and affordable, they could add even more options in the market.

Because some consumers still feel that plant-based products don't offer enough choice and are generally too expensive,[9] new choices will become increasingly important. Plant-based milk alternatives, for example, have long been a popular entry point for the category, and improvements in taste, texture and affordability have helped drive consumers further into the realm of plant-based eating. The opportunity to develop plant-based milk alternatives from new sources is virtually limitless, so this will keep the subcategory offering new choices and better experiences.

The plant-based milk alternative category is also helping to improve product accessibility and affordability.

Plant-based milk alternatives now provide:

16% **of the retail milk sales in conventional supermarkets**

40% **of sales in the natural channel …**

while at the same time, the average price of plant-based milk alternatives dropped 2% in 2021.[10]

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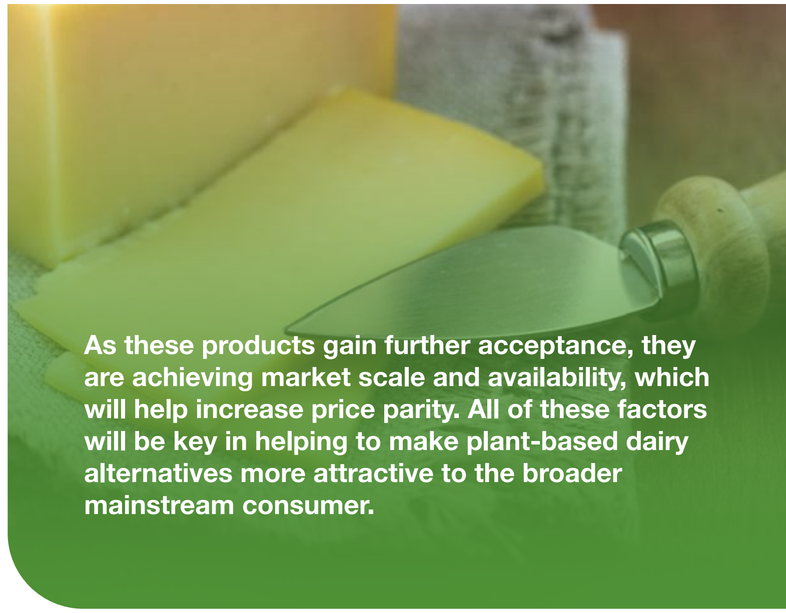
Keeping up with innovation, ingredient diversification and new product development with good nutritional profiles will help keep the category on solid footing.

Innovating and addressing sensory issues will also help other plant-based dairy alternative sub-segments better meet consumer expectations. An interesting development in the space is the use of functional ingredients like mushrooms in plant-based creamers, watermelon seeds in plant-based cottage cheese alternatives and cashews in block cheese.[11] Cheese has lagged behind when it comes to sensory performance, including taste and that all-important melt factor. However, use of these functional ingredients is helping to produce new plant-based alternative cheeses that could help take them to a new level.



As these products gain further acceptance, they are achieving market scale and availability, which will help increase price parity. All of these factors will be key in helping to make plant-based dairy alternatives more attractive to the broader mainstream consumer.

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[1] Plant Based Foods Association (PBFA). "2021 U.S. Retail Sales Data for the Plant-Based Foods Industry." https://www.plantbasedfoods.org/2021-u-s-retail-sales-data-for-the-plant-based-foods-industry/

[2] Mellentin, H. "Ten Key Trends in Food, Nutrition and Health 2022." *New Nutrition Business*. https://www.new-nutrition.com/company

[3] International Food Information Council (IFIC). "2022 Food and Health Survey." May 18, 2022. https://foodinsight.org/2022-food-and-health-survey/

[4] Ibid. New Nutrition Business.

[5] *Nutrition Business Journal*/NEXT New Hope Network. "Plant-Based Food Market Analysis: Attitudes and Opportunities in a Thriving Market." 2021.

[6] Mellentin, J. "Sustainability Strategy Boosts Dairy Consumer Credibility." *New Nutrition Business.* June 2022.

[7] Ibid. IFIC.

[8] Cargill Proprietary Research. "Plant-Based Dairy and Meat: Consumer Research." February 2021.

[9] Innova Market Insights. Choice and Price Key to Continued Boom in Plant-Based Foods. November 8, 2021. https://www.innovamarketinsights.com/press-release/choice-and-price-key-to-continued-boom-in-plant-based-foods/

[10] Ibid. PBFA.

[11] Ibid.