

Plant-based dairy alternatives

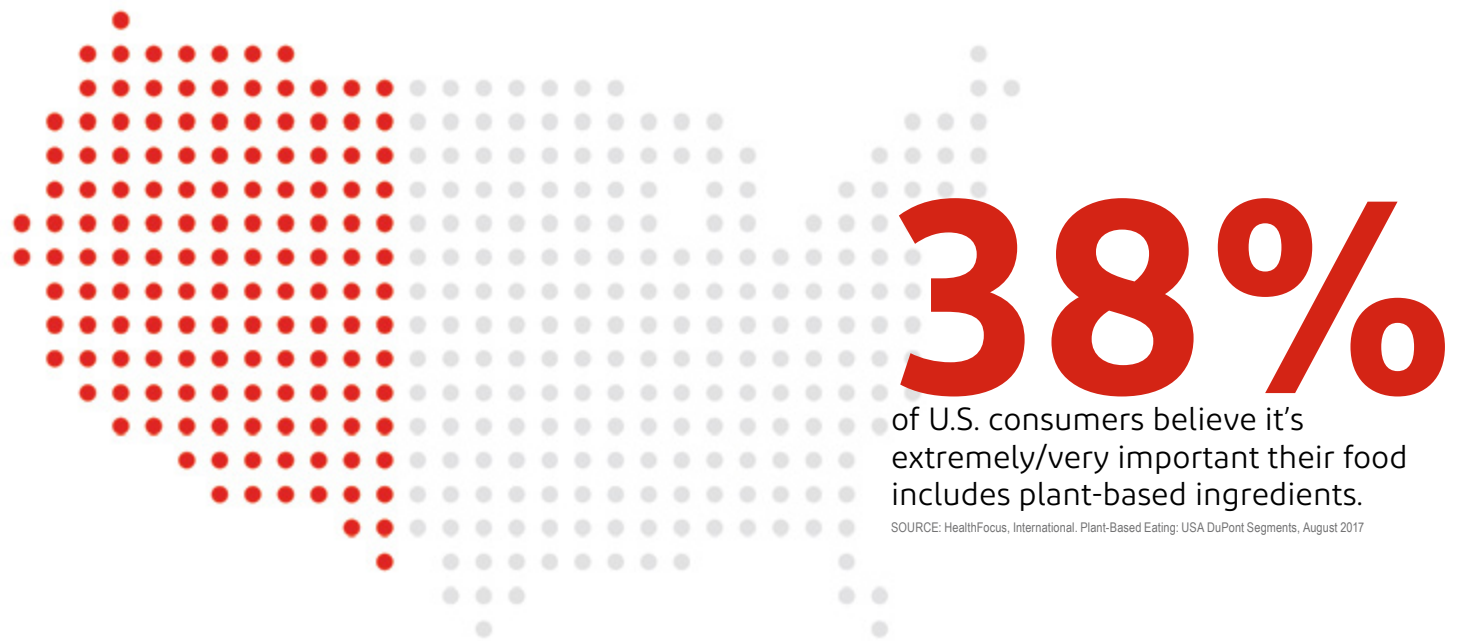
Consumer interest widens in healthier lifestyle movement



The pull of plant-based

The plant-based dietary trend is being embraced wholeheartedly by American consumers and spreading throughout the food and beverage world. While much of the focus in the plant-based sector has been on meat alternatives lately, the dairy alternative space is buzzing with activity as well, expanding with new products, new protein sources and growing consumer trial and acceptance.

Now more than ever, American consumers are making a conscious decision to incorporate plant-based products into their diets, and along the way, are reducing animal-based ones. Seventy percent of people say they are increasing their plant-based consumption, and this dietary shift appears to be permanent, according to Health Focus International. In fact, the same 2017 research study shows 38% of U.S. consumers believe it's extremely/very important their food includes plant-based ingredients.



While vegetarians and vegans are included in this shift among Americans to include more plant-based foods in their diet, it's the greater numbers of more mainstream consumers who are really fueling the interest in plant-based eating. These so-called flexitarians or healthy eaters are embracing plant-based eating, while still at times enjoying animal-based proteins. Consider that only about 12% of Millennials, 11% of boomers, 8% of Gen Xers and 7% of Gen Z, describe themselves as vegetarians or vegans, according to the NPD Group. That leaves the great majority of consumers firmly in the mainstream.

Why the plant-based shift?

One of the most prevalent consumer trends over the past decade is health & wellness. So, it's no surprise health was claimed to be the No. 1 motivator for eating more plant-based foods (60%). People generally consider plant-based products healthier, and they often say they feel better after eating them. Other motivators cited for consuming plant-based foods also tied to personal health are— provides more energy (57%); promotes healthy digestion (57%); to manage/lose weight (56%); and contains less sugar (55%). Taste is also a factor; slightly more than half of respondents say they prefer the taste of plant-based products.

Within the non-dairy/dairy alternative segment, some consumers attach specific health benefits to the dairy-free aspect of plant-based products. For these consumers, avoidance of dairy products is often because of lactose-intolerance or an allergy. Eating dairy is not an option for these consumers, so they welcome plant-based options.



Plant-based diet motivators

60% Healthier product

57% Provides more energy

57% Digestive health

56% Weight management

55% Less sugar

53% Taste

SOURCE: HealthFocus, International. Plant-Based Eating: USA DuPont Segments, August 2017

Non-dairy appeal

Within the plant-based sphere, dairy alternatives are gaining a lot of consumer attention. People are interested in trying plant-based dairy for various health reasons, but also to follow specific dietary plans or lifestyle choices. This can be seen in the increasing sales of plant-based dairy products, excluding milk, which reached \$697 million, for the 52 weeks, ending June 2018, according to Nielsen data—a growth of 50% within the period. Non-dairy ice cream, yogurt, cheese, creamer, butter and dressings sales are included in these figures. Breaking these figures down further to see key areas of growth in plant-based dairy alternatives in 2018, double-digit growth was recorded in plant-based ice cream, 38%; yogurt, 55% and cheese, 43%.

The non-dairy frozen dessert category offers indulgent products for those who must avoid dairy and others exploring plant-based options. Interest in plant-based frozen desserts is reflected in the new product activity in the category. In 2018, Innova Market Insights data showed 72% of non-dairy ice cream and frozen yogurt product launches in the U.S. and Canada were vegan, while 100% were labeled nonallergenic, and 62% were gluten free.

Non-dairy frozen desserts are also taking up a lot of the oxygen in online discussions. The MotiveQuest research found that consumers view plant-based frozen desserts in a positive light and are interested in brand discovery, experimenting with different protein sources and scrutinizing label claims. Plant-based frozen desserts offer consumers a tasty indulgence with a similar creamy consistency to that of dairy-based products, while allowing them to avoid allergens and other perceived negatives of dairy products. All in all, consumers see most plant-based frozen dessert brands as “stepping it up” in taste, texture and health expectations. The one area where consumers are disappointed in plant-based frozen desserts is when they realize dairy-free doesn’t necessarily mean unprocessed, low sugar, low fat or healthy. This remains an opportunity for manufacturers to deliver on these unmet expectations, though.

50%

growth in plant-based dairy alternatives, excluding milk.

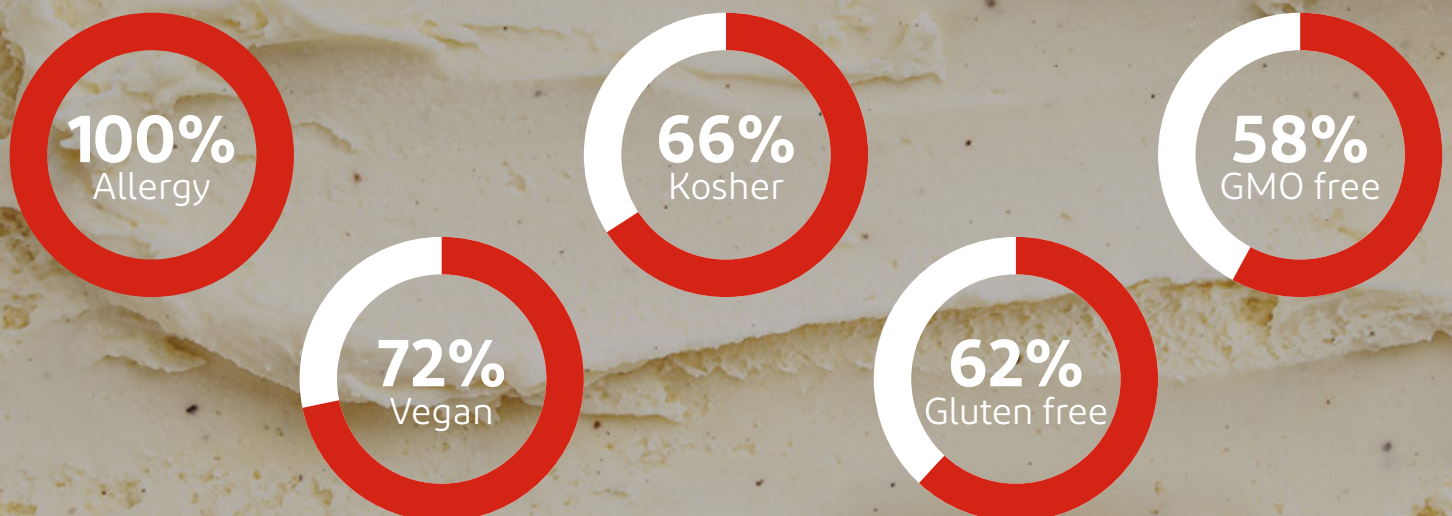
SOURCE: Nielsen data: 52-week dollar sales ending June 2018

Growth of plant-based dairy alternatives by category



SOURCE: Nielsen data: 52-week dollar sales ending June 2018

Label claims on new non-dairy frozen desserts



SOURCE: Launches in 2018. Innova Market Insights, May 2019

Plant-based milks

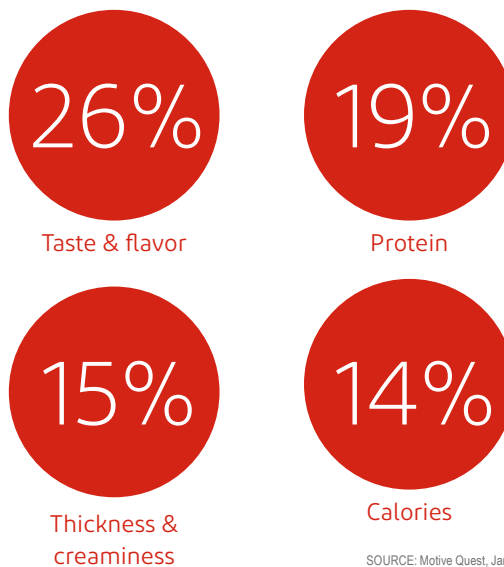
In the more established milk alternative category, plant-based milk sales exceeded \$1.8 billion in 2018, a 9% rise from 2017, per Nielsen data for the 52 weeks ending, Aug. 11, 2018. And more than one in three U.S. households purchase plant-based milk. People with dairy allergies and intolerances find plant-based beverages a great alternative to dairy milk. Dairy allergies and intolerances top the reasons why mainstream consumers buy plant-based beverages.

Research analysis of online conversations by MotiveQuest, reveals protein and fat content in plant-based milk alternatives is important to moms. According to the conversational research, moms are 50% more likely to engage in conversations about protein levels in plant-based beverages compared to the category in general. Also, plant-based beverages are perceived as having less fat than dairy milk. Moms are particularly concerned about feeding their young children healthy fats and generate 36.6% of plant-based beverage vs. dairy fat content comparisons.

When choosing a non-dairy milk, taste and/or flavor consistently tops the list of consumer discussions (26.3%). Yet, the MotiveQuest research found, there is less comparison being made with the taste of dairy milk today than there was previously. Protein was next at 19%, followed by thickness/creaminess at 14.8%, then calories at 13.8%, sugar at 13.3% and health/healthy at 11.9%. Consumers may not expect plant-based milks to taste like dairy milk, but they still must taste good and provide the nutritional benefits of dairy milk.



What consumers want from dairy alternatives



SOURCE: Motive Quest, January 2019

Sales surge for plant-based milk

Plant-based milk sales exceed

**\$1.8
Billion**
(A 9% rise from 2017)

SOURCE: Nielsen data: 52-week ending Aug. 11, 2018

Dairy-free yogurt

As mentioned earlier, sales of plant-based yogurts increased significantly in 2018, growing 55% to \$162 million. The segment is primed for growth, as currently there are only a limited number of brands, formats and flavors. People buying plant-based yogurts, much like those of other non-dairy alternatives, are interested in plant-based yogurts for their perceived health benefits and because they want to avoid dairy products.

While plant-based yogurt consumers may be seeking better health and wellness by incorporating more plant-based foods into their diets, they're not willing to compromise on taste and texture. Thickness and creaminess are important to consumers—and they want the texture of plant-based yogurts to mimic that of dairy yogurts. In the MotiveQuest conversational research, plant-based yogurt consumers express concerns about low protein levels, high sugar contents, and some gums and thickeners in the products. A high-protein Greek-style, plant-based yogurt is also on the consumer wish-list. Since the plant-based yogurt category is still developing, opportunity exists for innovation to fulfill these consumer desires for better taste and texture, along with cleaner labels, higher protein levels and less sweetness.



Delivering the health promise

In general, mainstream consumers or flexitarians who are interested in dairy-free products are more focused on taste, texture and nutritional profile than the actual ingredients used in say a frozen dessert, yogurt or cheese. The same trends pervasive throughout the entire food and beverage space are relevant here, such as higher protein, reduced sugar/lower sugar and indulgent flavors. For brands to be successful in the plant-based dairy alternative space, they need to focus on taste and improve the nutritional aspects of products, so they can deliver on the expectation of flexitarian consumers that plant-based products are healthier for them.

Plant-based Product Development Ingredient Solutions

DuPont has decades of experience working with plant-based proteins in food and beverage applications and an extensive portfolio of functional ingredients to use to optimize product flavor, texture and overall eating experience.

Plant-based proteins

When selecting a plant protein ingredient, multiple factors are essential beyond the plant source. Other important considerations include taste, nutrition, cost and sustainability. Our global leadership in plant proteins along with our complementary ingredient portfolio and in-depth formulation, sensory, and nutrition expertise give us the unique tools and capability to help formulate better-tasting products.

Texturants/Stabilizers

The DuPont™ Danisco® range of hydrocolloids is one of the most expansive in the industry. Our application scientists can help select an appropriate system for your processing environment, while optimizing the texture, taste and appearance of non-dairy applications. Functionality, cost, availability, label acceptance, process tolerance, ingredient interactions and more are key considerations when selecting hydrocolloids that will perform over the shelf-life of your plant-based/dairy alternative. We can help guide you to the optimal texturant for your product.

VEGE cultures

Danisco® VEGE Cultures are designed specifically for use in a variety of plant-based fermented products. Using our knowledge of the plant bases used by the food industry, we selected the best microorganism strains for optimizing the fermentation profile and taste of each plant source. The culture taste profiles range from a fresh, clean and mild flavor to a more acidic profile and are suitable with varied textures.

Our cultures are composed of different species – including the highly-documented probiotics *Lactobacillus acidophilus* NCFM® and *Bifidobacterium lactis* HN019™. The result is healthy plant-based fermented products – all non-allergenic and adhering to all required certifications.

Food safety/Shelf-life

Plant-based consumers want products that remain food safe throughout their shelf-life. Yet at the same time, they want natural, clean label ingredients. Our HOLDBAC® protective cultures and MicroGARD® fermentates meet this consumer demand for natural antimicrobials and food protection solutions. HOLDBAC® cultures have a natural ability to inhibit specific contamination flora, such as visible mold, yeasts and *Listeria*, while protecting a product's shelf-life. MicroGARD® is a patented natural, clean-label range for shelf-life protection.

NPD reference: <https://www.forbes.com/sites/michelinemaynard/2019/06/06/the-food-worlds-next-big-question-what-does-generation-z-want-to-eat/#2c1a6f2f2684>



About DuPont™ Danisco®

DuPont™ Danisco® is the brand for a range of products that help provide enhanced bioprotection, an improved nutritional profile, and better taste and texture with greater cost efficiency and lower environmental impact, meeting the needs of manufacturers of food and beverages and dietary supplements. Through the work of the global network of food scientists and technologists in DuPont, the Danisco® range is supported by a uniquely broad spectrum of know-how across applications and processing.

About DuPont Nutrition & Biosciences

DuPont Nutrition & Biosciences applies expert science to advance market-driven, healthy and sustainable solutions for the food, beverage, dietary supplement and pharmaceutical industries. We also use cutting-edge biotechnology across a range of markets to advance bio-based solutions to meet the needs of a growing population, while protecting our environment for future generations. We are innovative solvers who help our customers turn challenges into high-value business opportunities. For more information: www.dupontnutritionandhealth.com or www.biosciences.dupont.com



Nutrition & Biosciences
www.dupontnutritionandhealth.com

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