
Consumer Insights to Help Sprout Success with Plant- Based Dairy

GUIDELINES FOR FOOD &
BEVERAGE MANUFACTURERS



Consumer Interest in Plant-Based Dairy Products is Growing

Plant-based milks are a multi-billion-dollar category with a CAGR of 10-14% expected to produce more than \$23 billion globally by 2025. Consumer interest in alternatives to traditional dairy milk has quickly expanded to include plant-based cheese, yogurt, creamers, butter, and frozen desserts.

Consumer demand for plant-based dairy offerings is leading producers to launch diverse options featuring soy, coconut, almond, oats, cashews, and pea protein, creating a nearly \$30 billion global market. In the US, plant-based sub-categories like milk alternatives reached \$2 billion in 2020. Other top plant-based sub-categories include frozen desserts (\$435 million), creamers (\$394 million), and yogurt (\$343 million). Although the plant-based dairy market is rapidly growing, segment shares are less than 20% of dairy categories, creating significant upside for producers.

To help you create plant-based dairy products that align with consumer needs and expectations, let's review market dynamics and findings from a FlavorSum survey of North American consumers.

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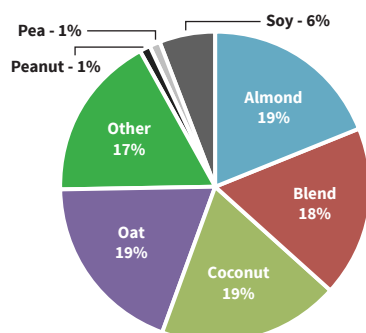
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Which Plant-Based Products are Consumers Buying?

As manufacturers recognized the appeal and value of plant-based dairy products, they stepped up new product development (NPD) and continued to explore different plant bases in 2021.

- The leading dairy alternative plant-bases for 2021 were almond, coconut, and oat, each showing similar launch activity and together accounting for 57% of launches.

Plant-Based Dairy Launches by Base
North America – 2021



The familiar taste, nutrition profile, and sustainability associated with these bases contributes to positive consumer perceptions and manufacturer interest.

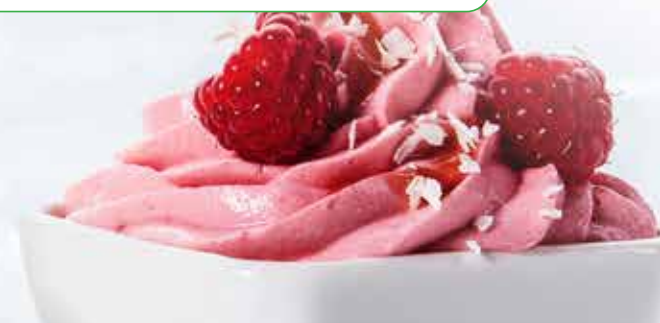
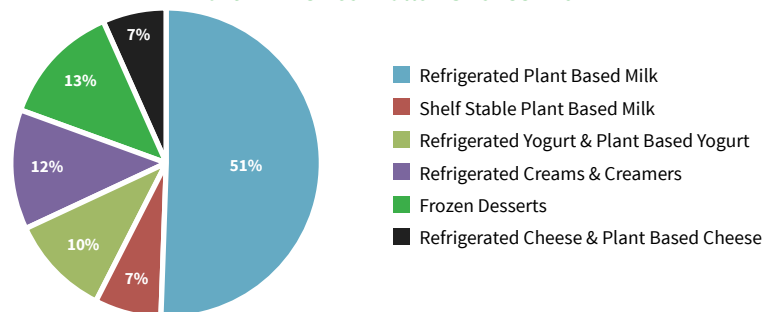
Plant-Based Dairy Products

Innovation abounds as the plant-based dairy market rapidly grows to meet evolving consumer demand. From July 2020 through July 2021, all categories within the plant-based dairy space experienced sales growth at rates outpacing their dairy-based counterparts.

Notable category comparisons include refrigerated creamers that grew 42%, compared to dairy-based at 5.4% and frozen desserts with 15% growth for dairy-free and 6% for dairy.

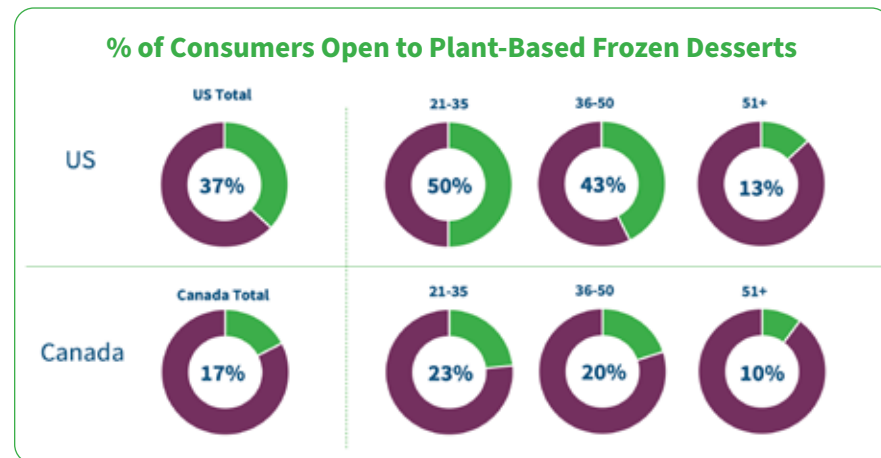
Refrigerated plant-based milks remain the dominant category, with a 15% market share, nearly \$2 billion in sales, and 12% growth for the year ending July 2021.

U.S. Plant-Based Dairy Market by Segment
North America Dollar Shares- 2021



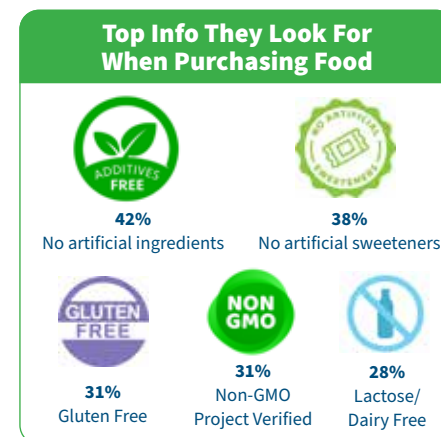
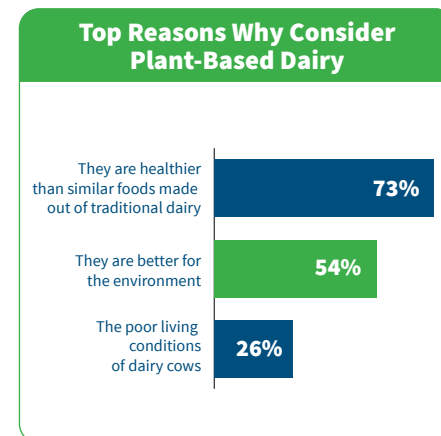
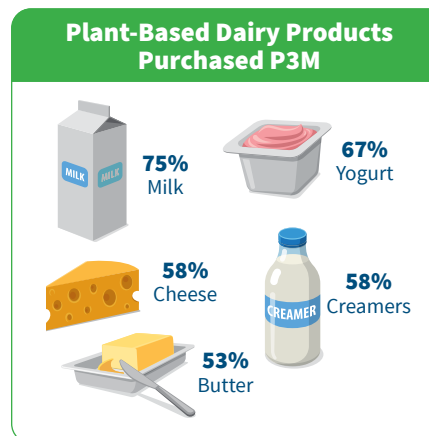
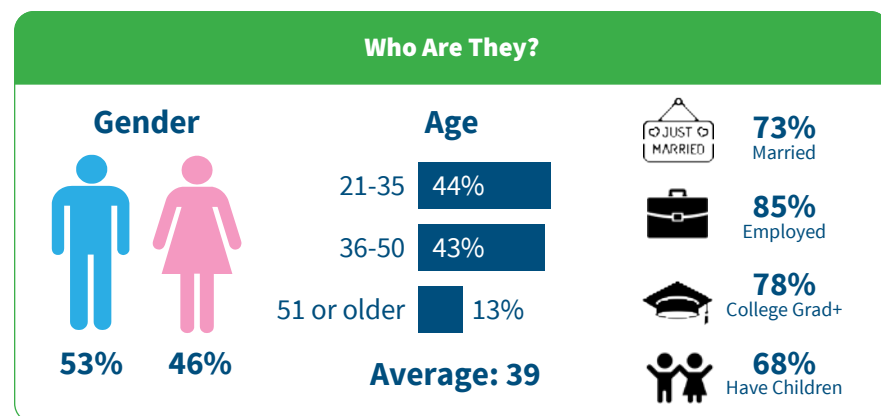
Who's Interested in Plant-Based Dairy Products?

More consumers in the U.S. than Canada express interest in plant-based dairy, with engagement waning with age.



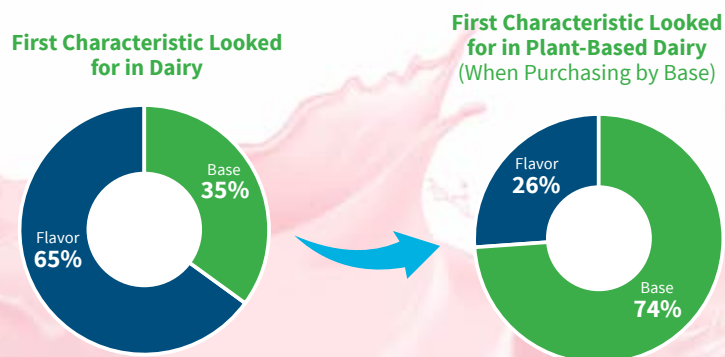
Who's Buying Plant-Based Dairy Products?

Across North America, people purchasing plant-based dairy tend to be younger, well-educated, traditional households. They're buying multiple categories of plant-based dairy alternatives primarily because of health and environmental benefits. Buying plant-based products represents a conscious choice to improve a standard diet rather than a dietary requirement.



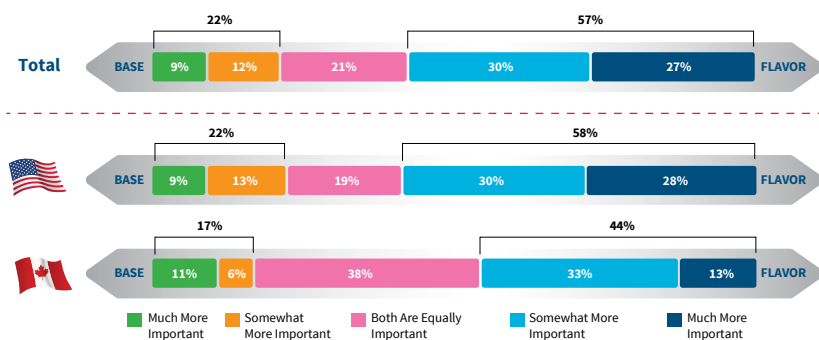
How Much Does the Base Influence Purchase of Dairy and Dairy Alternative Products?

When asked what they look for first when buying any dairy or dairy alternative product, two-thirds of consumers say the flavor is the primary driver of choice. The base becomes a more influential characteristic when buying plant-based alternatives.



While base is a compelling consideration for some purchases, most consumers agree that flavor is equal to or more important than the base.

Which is more important to your decision about Plant-Based Dairy, Base or Flavor?



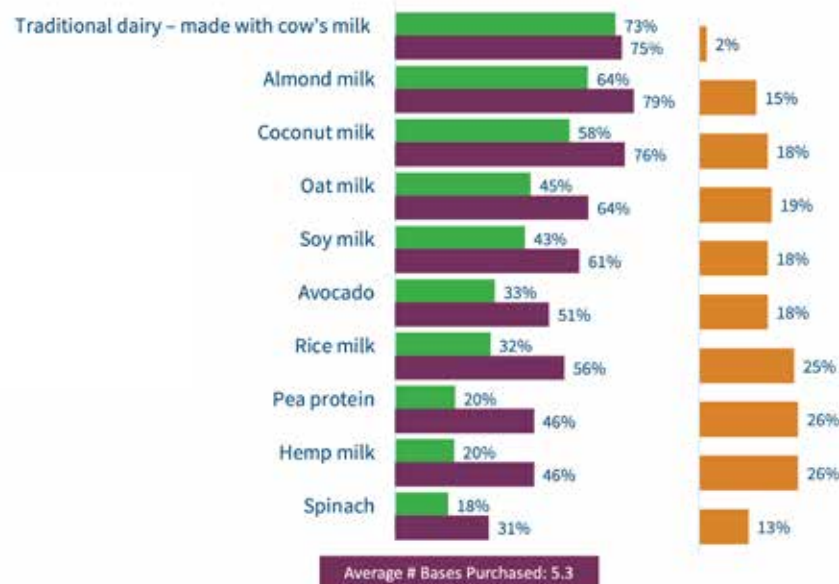
What Bases are North American Consumers Buying?

Not surprisingly, most consumers are currently buying traditional dairy and intend to stay in the category.

Leading plant-based milks, including almond, coconut, oat, and soy, make up the rest of the Top 5 bases.

Although opportunity gaps for niche bases are substantial, most have lower overall current and future purchase intent, creating challenges for NPD.

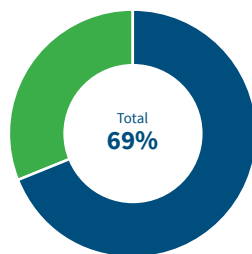
% of Consumers Agreeing



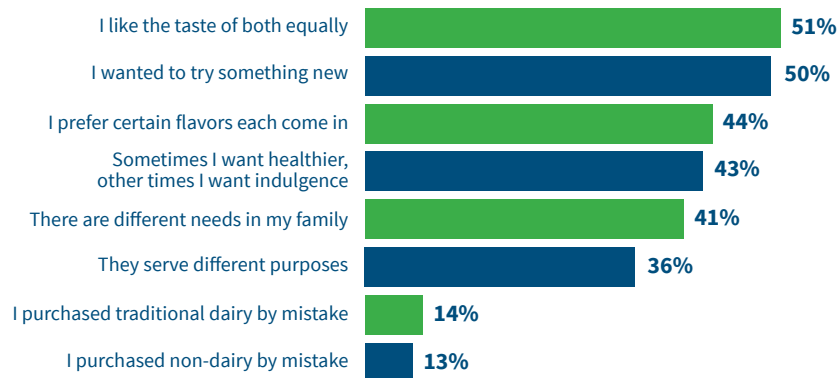
Why Consumers Buy Traditional and Plant-Based Dairy

About 70 percent of consumers buy both dairy and plant-based products because they like the taste of both or are exploring the category. Flavors can drive choice along with perceived health benefits or family needs.

Purchase Both Plant-Based and Traditional Dairy Products



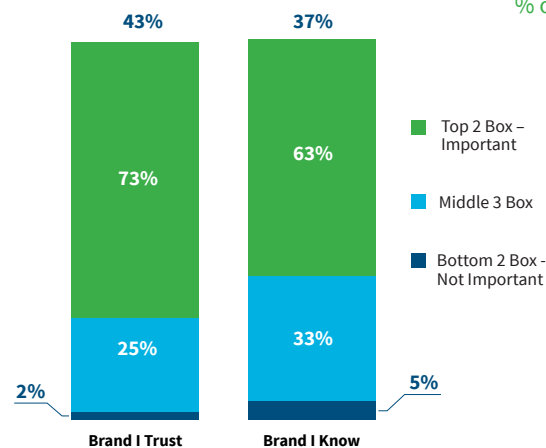
Why Buy Both? % of Consumers Agreeing



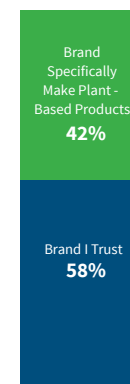
The Role of Brand in the Purchase Decision

Consumers turn to brands of dairy-based products that they know and trust. Yet, they're more open to new brands when shopping for plant-based alternatives, especially if the brand has credibility in the category.

Importance of Brand When Purchasing



Role of Brand When Shopping for Plant-Based % of Consumer Agreeing

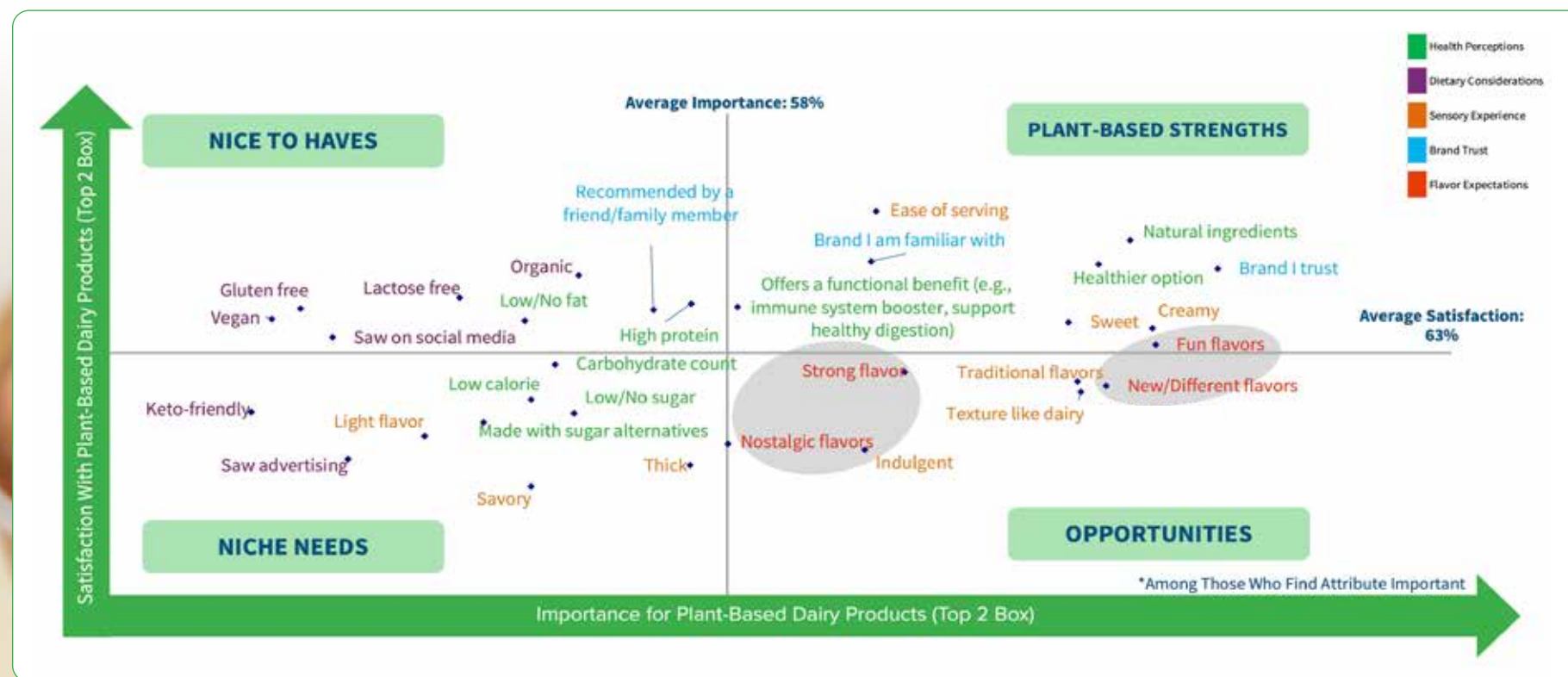


How Well Do Plant-Based Dairy Products Meet Expectations?

Flavor – whether strong, fun, innovative, traditional, or nostalgic – is the most encompassing opportunity for plant-based dairy products to tackle to meet consumer expectations better. Delivering a recognizable eating experience is also high on the priority list.

Current offerings deliver the natural, healthier options that consumers seek. People also recognize the availability of high protein, low/no fat, and organic options and acknowledge the dietary considerations plant-based dairy products address.

Less essential characteristics for the plant-based segment include low calorie and low/no sugar, which could reflect consumers' desire for permissible-to-full-on indulgence, even from plant-based alternatives.



Finding the Flavors that Align with Your Objectives

Because flavors evoke memories and emotions that create connections and expectations, getting the right flavor for your dairy product is essential for generating trial and acceptance. We gathered consumers' perspectives about the link between flavors and needs. After sharing several flavor families (with the specific examples shown below), we asked consumers about the associations they have with each.

Analysis of the consumer feedback helps identify the types of flavors that best 'fit' with audiences and brand positionings.



Berry – strawberry, raspberry, blackberry, blueberry



Fruit – pear, peach, apple, cherry



Citrus – lemon, orange, lime, grapefruit



Melon – watermelon, honeydew, cantaloupe



Simple Sweet – chocolate, vanilla, honey



Tropical – pineapple, mango, banana



Fun Flavors – cotton candy, tutti frutti



Indulgent – cheesecake, cookie, fudge, caramel, coffee



Spice – mint, cinnamon, ginger, cardamom



Botanical – lavender, hibiscus, matcha

Good for adults

Good for kids

Healthier

Familiar/Known

Comforting

Exciting/New

Nostalgic

Indulgent

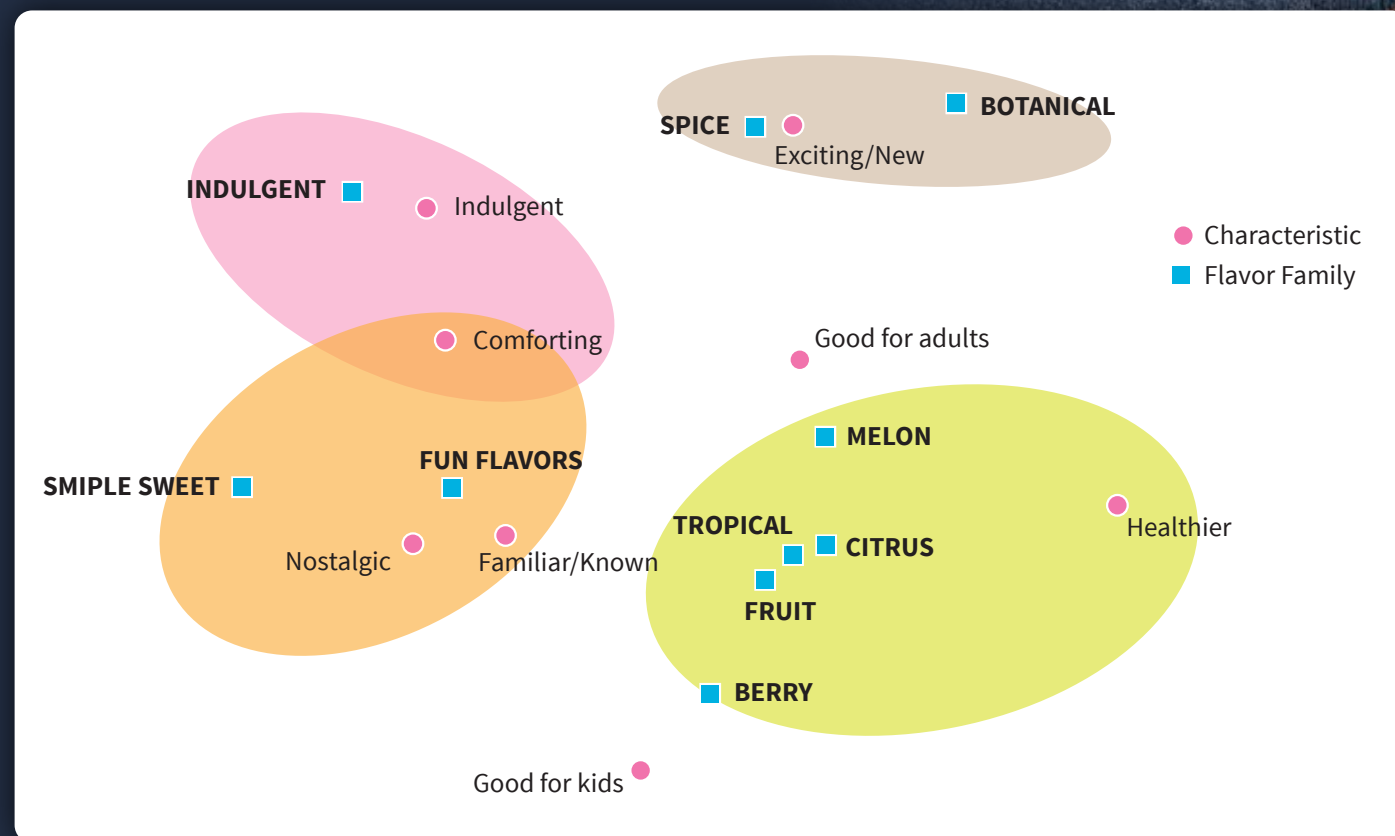


A perceptual map provides guidelines to use when creating products for specific brands and target audiences.

A perceptual map uses distance to uncover associations. Flavor families closer to a characteristic have stronger links in consumers' minds.

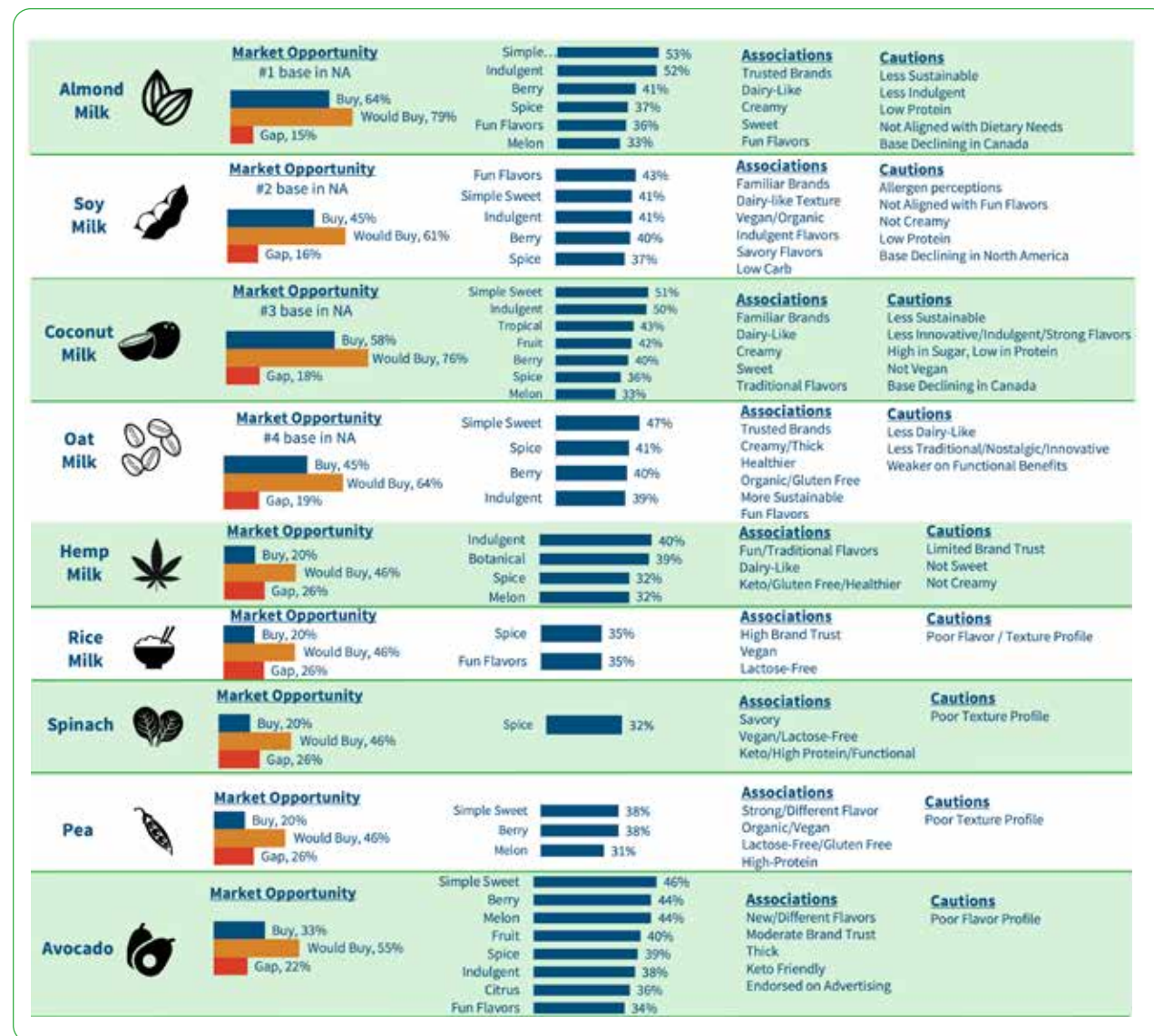
For example:

- Flavors 'good for kids' include berry, fruit, or fun flavors.
- If you're interested in tapping into the nostalgia trend, choose simple sweet, or fun flavors.
- Botanical and spicier flavor profiles meet consumer needs for innovative and exciting tastes that fit the adult palate.



What's Your Opportunity for a Plant-Based Frozen Dessert?

The chart below shows that each plant base carries strengths, cautions, and specific flavor associations. While single bases remain popular in many plant-based dairy alternatives, blends can bring the best characteristics of several bases together to create a taste experience that satisfies consumers.



Base = Interested In Flavor, Would Consider Purchasing Base In The Future, And Evaluated Q30. Of the flavors you would be interested in trying, which bases would you be interested in trying them with?



*Note: only showing flavors that have significant differences when compared to other bases

Formulating Flavor into Plant-Based Dairy

How to deliver a delicious eating experience in plant-based dairy products.

Formulating plant-based dairy products can present unique challenges. But when armed with the right information and ingredient solutions, developers can deliver a recognizable and enjoyable eating experience for consumers. Plant-based dairy formulators typically leverage an array of textural components to ensure consumers enjoy the mouthfeel of products, but what about delicious taste? That's where flavors come in.

Masking Off-Notes from Plant Bases

In the dairy alternative category, off-notes (such as earthiness or nuttiness) are inherent characteristics of the plant bases. Formulators must consider their end flavor goals and think about how flavors can mask or complement those additional flavor components. The chart below showcases a few flavor profiles that pair well with popular plant bases.

Base	Flavor Types
Coconut	Tropical
Almond	Berry
Soy	Spice
Oat	Vanilla

Masking technology capabilities also extend to support label claim goals such as sugar-free, giving formulators another tool for managing how ingredients will affect the finished product's taste.



The Intersection of Dairy-Free, Sugar-Free, and Flavor Masking

Many plant-based categories, including yogurt, frozen desserts, and flavored milk, rely on sweetness as a core characteristic. With 55% of U.S. adult consumers striving to reduce sugar in their diets, the plant-based market is keeping pace by innovating in sugar reduction. Plant-based dairy launches in 2021 featured sweetener solutions such as stevia and monk fruit to deliver sweetness without calories. The challenge with these sweetener ingredients is that both can produce unwanted off-notes. Flavors can help to not only mask those notes but combined with modulators and formulation expertise, can also deliver the desired and ideal flavor profile.

Recent Launches Leverage Flavor

The end flavor goal drives the product design, whether formulators use flavors to mask, complement, or add taste. Recent plant-based dairy launch data shows the prevalence of sweet brown flavor profiles, but fruit pairings are showing growth. Fruit flavors like blueberry (+300%) and strawberry (+60%) are becoming more popular in the plant-based dairy world.

Top Flavors for Plant-Based Dairy Launches in 2021	
Vanilla	Chocolate & Raspberry
Chocolate	Coffee
Strawberry	Mango
Blueberry	Strawberry & Graham
Chocolate & Peanut Butter	Salted Caramel

Let's Partner to Develop Your Delicious Plant-Based Dairy Product

At FlavorSum, our mission is to provide you with the solutions, expertise, responsiveness, and infrastructure that you need to accelerate your success.



Speed Your Time-To-Market: From hundreds of trending flavor sample options that ship in 24-hours, to on-line, on-demand ordering capabilities and documentation, FlavorSum helps you keep your projects moving.



Extend Your In-House Capabilities: Our cross-functional teams have supported the development of flavors by using consumer insights, industry knowledge, and commercialization expertise.



Achieve Unmatched Reliability: When it's time to ramp up production, you can count on FlavorSum. We have maintained an industry leading on-time-in-full delivery performance over the last 3 years.



Access Reasonable Minimum Order Quantities: Whether you need product for trials, small runs, limited time offers, or scaleup, our minimum order quantities make it easy to stay on schedule.

Contact our team today to get started on your next launch!

Sources:

www.ibisworld.com/industry-statistics/market-size/ice-cream-production-united-states

<https://www.fooddive.com/news/plant-based-sales-merchandising-data-charts/608236>

www.statista.com/statistics/481048/forecasted-retail-sales-of-ice-cream-canada

www.Mintel.com

www.researchandmarkets.com

<https://gfi.org>

FlavorSum Proprietary Consumer Research, March 2021



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