



June 2018

Competition is Reshaping the Milk Business

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Inside...

<i>Introduction</i>	1
<i>Evolution and market share of plant based milks</i>	2
<i>Dairy differentiation</i>	2
<i>Higher costs and strained supply chains</i>	3
<i>Outlook</i>	4
<i>References</i>	4

Key Points:

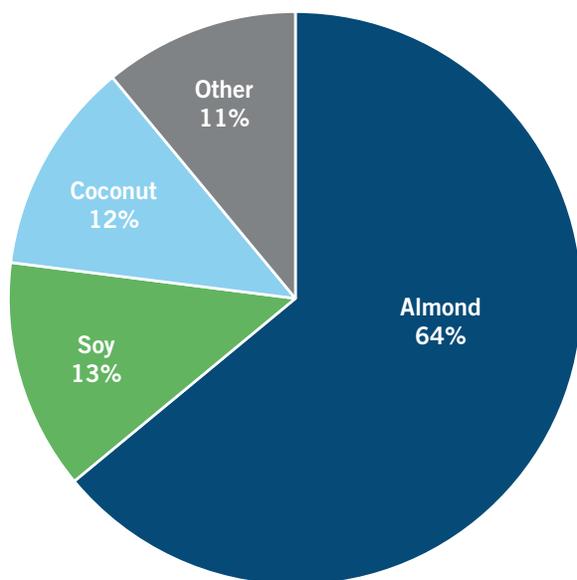
- Consumer lifestyle changes and cultural shifts are the main drivers behind declining fluid milk demand. Meanwhile, sales of plant-based milk alternatives have surged in recent years.
- Sales of plant-based milk alternatives should continue to grow by 15 to 25 percent by 2022. But, given the small size of the market, further expansion of plant-based milk sales will play only a minor role in the decline of fluid milk consumption.
- New value-added and niche dairy products are slowing the rate of decline in milk sales in a highly competitive beverage market.
- As cow's milk differentiates itself into a variety of premium products, supply chains will be challenged to handle smaller volumes of a wider selection of products.
- Plant-based milk alternatives will hasten change in the dairy industry as marketing costs and slotting fees increase across the dairy case and further pressure the already low-margin gallon-jug business.

Introduction

Consumption of traditional cow's milk as a beverage has been declining for decades due to lifestyle changes and cultural shifts that have led to fewer occasions at which Americans drink milk. Meanwhile, plant-based alternatives made from soy, almond, pea and a myriad of other non-mammalian sources have surged in recent years. In the past five years, sales of milk alternatives have grown 61 percent to over \$2 billion in 2017.¹ However, total volume sales of alternative milk products are relatively small and contribute to only a small portion of the decline in milk consumption. In fact, if cow's milk and its plant-based counterparts are combined, the category is still declining as a whole, suggesting that the decline may be due to a more competitive beverage market overall.

Nonetheless, plant-based milks are helping revolutionize how the dairy industry does business. The plethora of niche products competing more fiercely for shelf space across the beverage industry is forcing the dairy industry to adapt. The rise of slotting fees in the dairy case and other increased marketing costs are putting the squeeze on fluid milk profitability. This increased competition from plant-based milk alternatives has forced dairy milks to differentiate into value-added products like organic, grass fed, ultra-filtered and a2 milk to remain competitive. This new premium segment has generally bucked the trend of declining consumption.

EXHIBIT 1: Market Share of Milk Alternatives, 2017



Source: Mintel

In the years ahead, new entrants in the plant based milk market will add to the competitiveness and propel growth in the milk alternative market as a whole, creating an even more challenging market for traditional cow's milk in the future. Certain segments of value-added dairy milk products will experience growth alongside plant-based milks, but this growth will strain the more traditional milk business and will continue contributing to the eroding market share of cow's milk sold as a staple in a plastic jug.

Evolution and market share of plant based milks

The first plant-based milk alternative to gain mainstream popularity in the U.S. was soy milk. In 1999, the Food and Drug Administration began allowing health claims linking soy protein to a reduced risk of heart disease, which launched soy milk on an upward trajectory toward a peak of \$1.2 billion in sales in 2008.²

Meanwhile, nuts were gaining in popularity as a healthy snack, and concerns about GMOs and the validity of the health claims around soy began to shift the balance in favor of almond milk. In 2017, almond milk was the clear leader with \$1.35 billion in sales, well ahead of the \$274 million for soy, followed by coconut, rice and others. (See Exhibit 1.) Today, new entrants to the alternative milk market, like pea-based Ripple brand and oat-based

Swedish brand Oatly, are primarily competing for consumers who already drink almond and other existing plant-based products rather than converting cow's milk consumers.

The heightened competition and rapid development of new products within plant-based milk alternatives, though, has captured the attention of other consumers. The acceleration of product innovation is driving the plant-based segment as a whole to compete more aggressively with other beverages – including cow's milk. As the market matures, sales of plant-based milk alternatives are expected to grow 15 to 25 percent over the next five years, down from a rate of 61 percent over the previous five years, based on industry estimates.

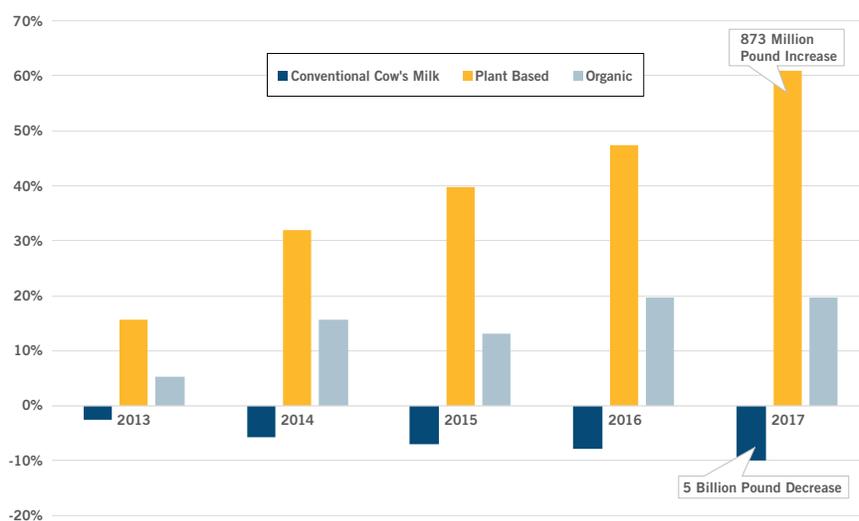
Still, plant-based milk alternatives make up only a small share of the total beverage market, but the strong growth so far and the expected continued growth suggest that these products are here to stay. As the market for plant-based milk alternatives matures, they will continue to force change in the way traditional milk bottlers do business in the future.

Dairy differentiation

The entry of and excitement around plant-based milk alternatives has forced traditional dairy milk to differentiate into a number of premium products in order to compete. No longer are the choices simply between jugs or cartons of milk containing various percentages of fat reduction represented by color-coded caps. Now the choices include glass bottles, ultra-filtered brands like Fairlife, lactose-free, organic, grass-fed and a2 brand milk which contains a specific type of beta-casein protein that may help ease digestion for some consumers.

These premium dairy milk brands are commanding a higher price and are more directly competing with plant-based alternatives. Although they compete, there is also a significant amount of overlap. Nine in ten households who purchase plant-based milk alternatives also buy cow's milk.³ And, among these households that purchase both, it is much more likely that the cow's milk they purchase is organic, or from the premium tier of products.

EXHIBIT 2: Cumulative Percent Change in Milk and Alternative Sales (2012 - 2017)



Source: USDA - AMS, USDA - ERS, CoBank

While fluid milk consumption has been on a steady and well-documented decline, these premium milks along with plant based alternatives have been growing. (See Exhibit 2.) Although it slowed somewhat in 2017, demand for organic milk had experienced strong growth over the past several years. Ultra-filtered milk brand Fairlife milk has experienced stronger growth than the combined plant-based sector since its introduction in 2015. Others like whole and flavored milks are also bucking the downward trend.

These developments in cow's milk are partly taking consumers away from traditional plastic jugs, but the innovation and competition is already helping to slow down the trend of declining demand, which will likely continue in the years ahead. As opposed to plant-based alternatives, which are growing by gaining new consumers, the decline in milk is driven mostly by existing consumers drinking milk on fewer occasions.⁴

Higher costs and strained supply chains

As plant-based milks have moved into the milk case, and as the remaining shelves devoted to cow's milk are divided between the plastic jugs and the many new premium milks, the milk industry is being forced to change how it does business.

In some cases, traditional dairy companies have incorporated value-added and plant-based products into their portfolio. An extreme example of this is Elmhurst Dairy, which was the oldest and last remaining milk company in New York City. Elmhurst Dairy stopped making milk in 2016 and pivoted to "Elmhurst Milked" branded nut-based alternatives. Dean Foods, the largest milk bottler in the U.S. has invested in Good Karma foods, a plant-based milk and yogurt company. Danone merged with WhiteWave Foods to acquire their organic and plant-based portfolio of products.

The differentiation in the dairy case that was largely spawned by competition from the plant-based segment has caused strain on traditional dairy supply chains. The industry is now dealing with managing a greater number of smaller product lines, which cannot be comingled. Organic milk, for example, must be handled separately from organic grass-fed milk from the farm to the milk truck straight through the bottling plant and onto the retail shelves. These logistical challenges are a departure from the more commoditized structure of the industry in the past and they will continue to challenge the industry in the future.

Marketing costs are also increasing in the form of slotting fees in the dairy case. As plant-based milks entered the milk case, and the wide variety of other premium milks all began to compete for space, many grocers increased slotting fees, forcing brands to pay up for the increasingly valuable real estate. This alters the cost structure of the traditionally low margin staple gallon jug business. These milk bottlers have traditionally focused on minimizing cost and have avoided raising prices out of fear that it could accelerate the trend of declining demand among core consumers.

Outlook

In the years ahead, the market for plant-based milk alternatives will continue to grow, though it will be at a slower rate than in recent history. The segment is maturing and new entrants over time will increasingly be competing to take share from almond milk rather than from cow's milk. Meanwhile, the decline in cow's milk consumption will continue, but the rate of decrease will slow as premium products capture attention from consumers who would otherwise switch to plant-based milks, or may consume both.

As cow's milk segments into new offerings, the efficiencies of traditional large-scale supply chains will be challenged to work with smaller volumes of a wider variety of more specialized products. Additionally, marketing costs and slotting fees at grocery stores will increase across the board and pressure the already low-margin traditional milk business. ■

References

- ¹ Mintel. (2018). *US Non-Dairy Milk Sales Grow 61% Over the Last Five Years*.
- ² Kowitz, B. (2016, July 21). *The Fall of Soy Milk*. Fortune.
- ³ U.S. Department of Agriculture, Economic Research Service. (2017). *On Different Trajectories: A Look at Sales of Cow's Milk and Plant-Based Milk Analogs*. Washington, DC.
- ⁴ U.S. Department of Agriculture, Economic Research Service. (2013). *Why Are Americans Consuming Less Fluid Milk*. Washington, DC.

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