

# Consumer Corner

Dairy milk and non-dairy alternatives



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# Demand for dairy milk and non-dairy beverages

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## Dairy milk and non-dairy beverages

Many consumers are foregoing their usual morning coffee runs due to the COVID-19 pandemic. As a result, consumers who are working from home have increased their at-home consumption of both dairy milk and non-dairy beverage products. Nielsen concluded that the food and beverage product with the greatest sales increase amongst the COVID-19 pandemic in the US was oat beverages.<sup>1</sup> Data indicates that oat beverages experienced a 212 per cent increase in sales in the 31-week period ending October 3, 2020. On the other hand, dairy milk experienced a sales increase of nine per cent over the same period of time.<sup>1</sup>

This issue of *Consumer Corner* will examine the dairy milk and non-dairy beverage industry and historical consumption patterns and drivers of the non-dairy beverage market. In addition, this article may provide insight for potential market opportunities and information to help consumers make more informed decisions when purchasing products.

The rise of non-dairy beverage products began in the late 2000s as consumers sought out other beverage options other than traditional dairy milk. Over the past decade, the market for non-dairy beverages has grown. Now, more than ever, consumers have access to a wide range of non-dairy beverages – not only in their own homes but also in coffee shops and restaurants. As shown by

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<sup>1</sup> <https://www.fooddive.com/news/the-winners-and-losers-for-category-sales-during-the-first-7-months-of-the/587793/>

### Did you know?

**Dairy milk** is produced by milking a cow. The milk is then pasteurized to remove any organisms or pathogens and then homogenized in order to break up the fat so it is fully suspended in the milk.

**Non-dairy beverages** are produced by grinding a grain, legume, nut, seed or cereal then adding water and flavours. In some cases, vitamins and minerals are added.

Source: Corteva Agriscience

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*The views and opinions expressed in this article are those of the Economics and Competitiveness Branch and do not necessarily reflect the official policy or position of the Ministry of Agriculture and Forestry or the Government of Alberta. Analysis performed within this article is based on limited and open source information. Assumptions made within the analysis are not reflective of the position of the Ministry of Agriculture and Forestry nor the Government of Alberta.*

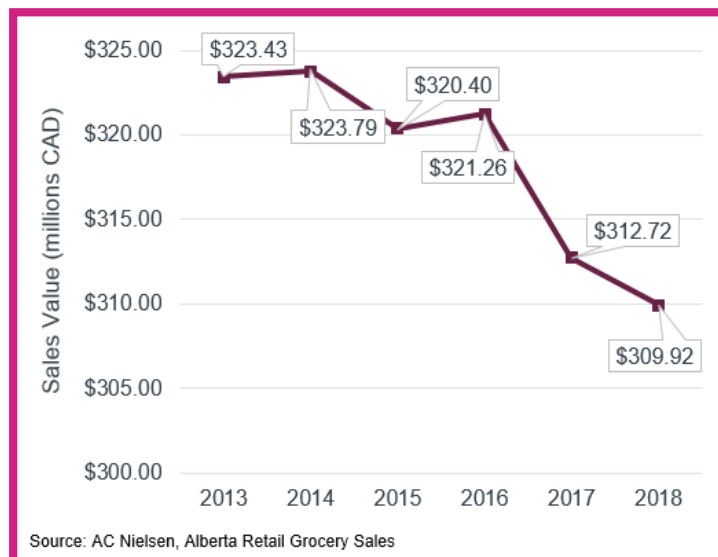
Table 1, consumers have slowly decreased their consumption of fluid milk products and this has been coupled with accelerated growth of non-dairy beverages such as almond, soy, coconut, oat, rice, cashew, flax and hemp beverages.

## Historical consumption

### Dairy milk consumption

Over the past 20 years, per capita consumption of dairy milk products has been generally declining. As shown by Table 1 between 2014 and 2019, per capita consumption of 2%, 1%, chocolate and flavoured milk and skim milk has declined. On the other hand, over the same period of time per capita consumption of 3.25% milk actually increased. The increase in sales for standard milk may be attributed to a consumer trend of greater acceptance of fat in the diet.

**Figure 1.** Alberta retail milk sales in millions, 2013 to 2018



**Table 1.** Canadian per capita consumption of dairy milk, 1999 to 2019

	1999	2004	2009	2014	2019	2014 vs 2019
	Litres per person, per year					per cent change
<b>Partly skimmed milk 2%</b>	43.59	40.11	36.85	34.48	32.41	-6.0%
<b>Standard milk 3.25%</b>	14.13	13.09	11.18	9.7	11.2	15.5%
<b>Partly skimmed milk 1%</b>	16.56	17.91	18.16	14.97	10.9	-27.2%
<b>Chocolate and other flavored milk</b>	4.67	5.4	5.74	5.91	5.25	-11.2%
<b>Skim milk</b>	8.37	8.64	8.61	6.42	3.74	-41.7%

Source: Statistics Canada. Table 32-10-0054-01 Food available in Canada

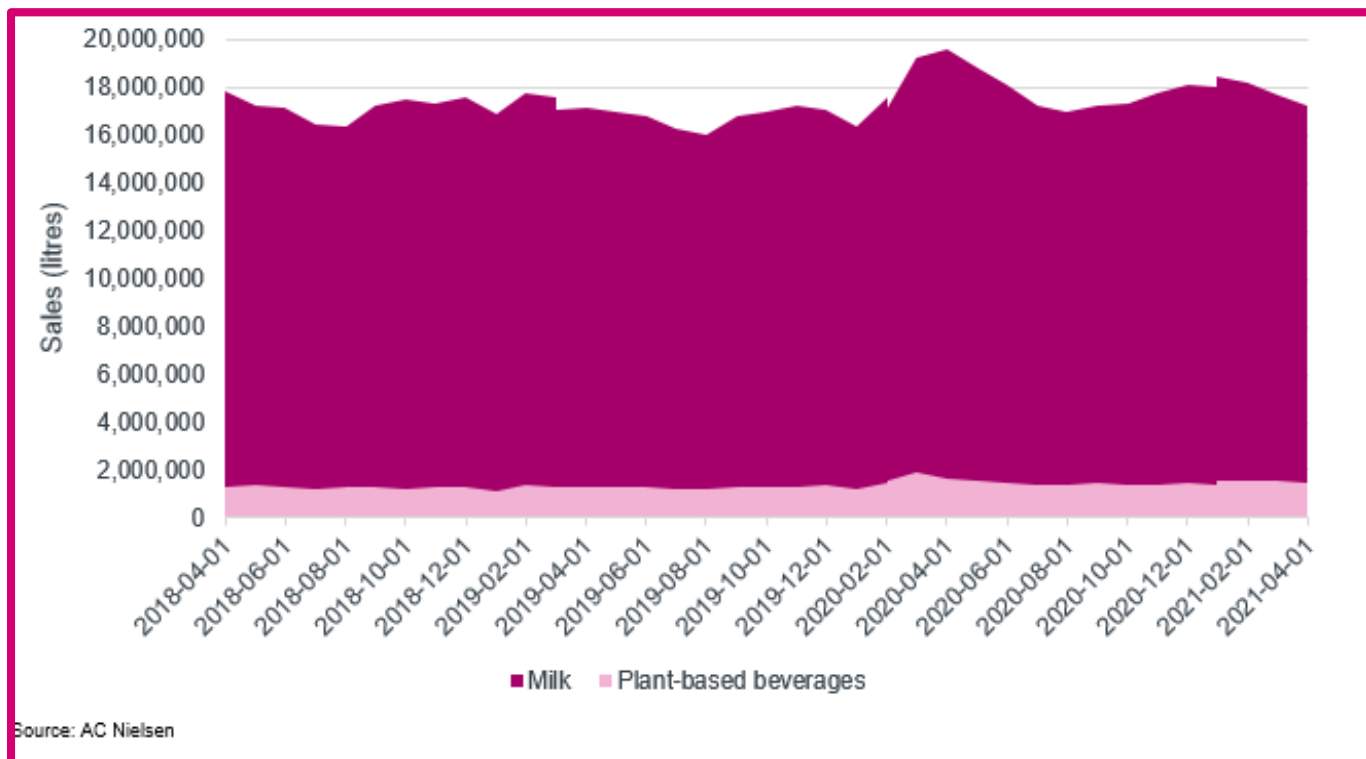
Figure 1 describes the trend in retail sales value for milk in Alberta. In Alberta specifically, retail grocery sales data indicates that milk sales have decreased between 2013 and 2018 - from \$323.4 million to \$309.9 million. On the other hand, in Canada, there has been an increase in non-dairy beverage consumption. In 2017, Nielsen sales data indicated a five per cent growth in the sales of soy, rice and alternative beverages.<sup>2</sup>

However, consumption patterns for dairy products has shifted with COVID-19 lockdown measures. At-home consumption patterns and away-from-home consumption patterns differ. Food service places have decreased their demand for dairy products as stay-at-home orders were initiated.<sup>3</sup>

<sup>2</sup> <https://www.canadiangrocer.com/categories/dairy-deli-bakery/its-all-in-the-label-73969>

<sup>3</sup> <https://www.fcc-fac.ca/en/knowledge/ag-economics/covid-19-impacts-on-canadian-dairy.html>

**Figure 2.** Alberta volume sales of milk and plant-based beverages



### Non-dairy beverage consumption

Sales of non-dairy beverages have been continually increasing as they gain market traction with consumers. Recent Canadian sales data is unavailable, however, US-based data will provide some general insight into the trend of non-dairy beverages. In the US, the plant-based beverage category is worth US\$2 billion and accounts for 40 per cent of the total plant-based food market. Between 2017 and 2019, plant-based beverages experienced dollar sales growth of 14 per cent and accounted for 14 per cent of all retail milk sales in 2019.

In the US, almond beverages comprises the majority of plant-based beverage sales with US\$1.3 billion dollar in sales in 2019. The Good Food Institute states that retail sales of oat beverages in the US reached US\$84 million in 2019 – making oat beverages the fastest-growing non-dairy beverage segment with 686 per cent growth from 2018 and 1,946 per cent growth from 2017.<sup>4</sup>

<sup>4</sup> <https://www.gfi.org/marketresearch>

Furthermore, Figure 2 displays volume-based sales trends for both milk and plant-based products. In Alberta, volume sales for milk products has been substantially larger than plant-based beverage products. For example, in the first four weeks of 2021, milk sales totalled over 18 million litres and plant-based beverage sales totalled over 1.4 million litres.

## Trend drivers

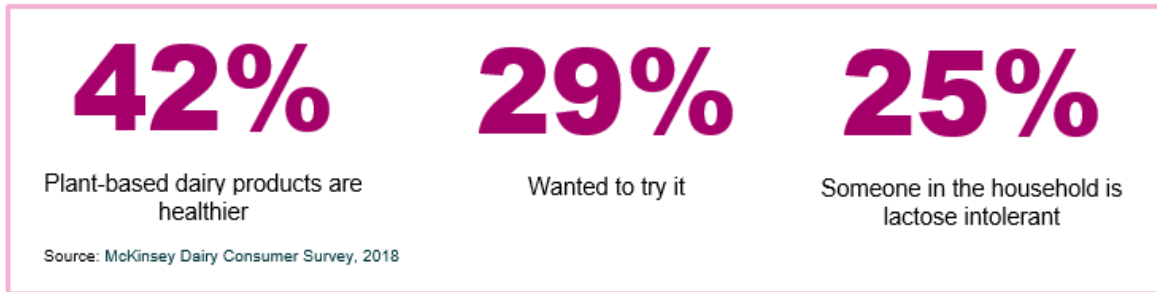
### Overview of trend drivers

A 2018 McKinsey & Company Dairy Consumer Survey concluded that plant-based beverages continue to grow in the United States. The survey determined that 62 per cent of dairy consumers also purchased non-dairy alternatives in the past year.

Figure 3 lists reasons for purchasing non-dairy beverage, which include the perception that plant-based products are healthier, general curiosity or someone in the household is lactose-intolerant.

Figure 4 lists reasons for not purchasing non-dairy alternatives which include not liking the taste, not good value/more expensive than dairy or the desire to support dairy farmers.

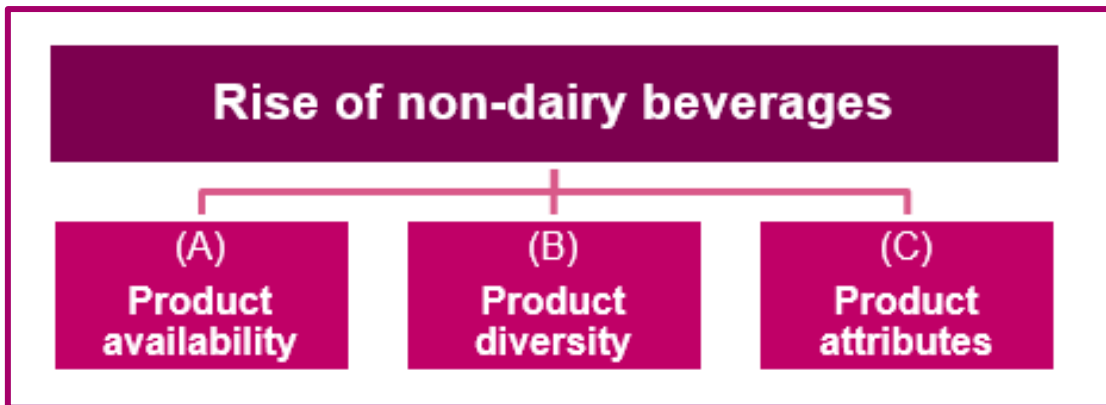
**Figure 3.** Reason for purchasing non-dairy alternatives, % of respondents



**Figure 4.** Reason for not purchasing non-dairy alternatives, % of respondents



**Figure 5.** What has led to the rise of non-dairy beverages?



A number of consumer trends have led to an increase in non-dairy beverages. Figure 5 lists three drivers: (a) **product availability**, (b) **product diversity**, and (c) **product attributes**.

**Product availability**

Non-dairy beverages were once considered niche products only found in speciality stores. However, non-dairy beverages may now be found at almost every grocery store, coffee shop and restaurant. In



2019, 41.3 per cent – or 53 million households – in the US reported purchasing plant-based milk.<sup>1</sup> For example, Tim Hortons – after many years of only having dairy options – introduced non-dairy beverages to their menu in 2020. At most Starbucks locations, consumers have many non-dairy beverages to choose from including coconut, soy, almond and oat beverages. Canadian chain Second Cup Coffee Co. announced the arrival of an oat beverage-based drink on their menu. In Canada, statistics indicate that the availability of oat beverages on menus has increased by 300 per cent.<sup>5</sup>

“One of the key things we can point to in plant-based growth is the move to the refrigerated dairy set”

“Now, almost all mainstream retailers have them in the same aisles with conventional products, which is the way consumers shop”

- Caroline Bushnell, Associate Director of Corporate Engagement at Good Food Institute

Source: Forbes

Non-dairy beverages have found their place in grocery stores across North America. Currently, plant-based beverages are the most developed of all plant-based categories – followed by other plant-based dairy and then plant-based meats.<sup>3</sup>

**Table 2.** Non-dairy beverage product and plant types

Non-dairy beverage	Plant types	
<b>Cereal based</b>	- Oat	- Corn
	- Rice	- Spelt
<b>Legume based</b>	- Soy	- Lupin
	- Peanut	- Cowpea
<b>Nut based</b>	- Almond	- Pistachio
	- Coconut	- Walnut
	- Hazelnut	
<b>Seed based</b>	- Sesame	- Hemp
	- Flax	- Sunflower
<b>Pseudo-cereal based</b>	- Quinoa	- Amaranth
	- Teff	

Source: Sethi, Swati, Sanjeev K. Tyagi, and Rahul K. Anurag. "Plant-based milk alternatives an emerging segment of functional beverages: a review." *Journal of food science and technology* 53.9 (2016): 3408-3423.

### Product diversity

The variety of non-dairy beverage products has grown substantially. Initially, nut-based options – like almond, cashew and hazelnut beverages – dominated the market; however, food allergies have initiated growth for products like soy, rice and coconut beverages. However, it should also be noted that the variety of dairy milk products has also

increased and this includes the introduction of ultra and micro filtrated milk and A2 milk. Table 2 provides a list of non-dairy beverages with plant types and speaks directly to increased diversity in the types of non-dairy beverage.

<sup>5</sup> <https://www.foodservicedirector.com/menu/plant-based-milks-flow-mainstream-menus>

### Product attributes

Many consumers have increased their consumption of non-dairy beverage products. For some consumers, food sensitivities and allergies have prompted the switch. On the other hand, some consumers may choose to consume non-dairy

beverage products for their specific nutritional attributes.

Table 3 provides a comparison of nutritional value of dairy milks and specific non-dairy beverage products based on calories, sugar content, protein content and fat content.

**Table 3.** Comparing nutritional value of dairy milk and non-dairy beverages

	Calories	Sugar	Protein	Fat
<i>per serving = one cup</i>				
● = lowest ● = average ● = highest				
<b>0% Skim Milk</b> <small>Dairyland</small>	● ● ● (90 calories)	● ● ● (13 grams)	● ● ● (9 grams)	● ● ● (0 grams)
<b>1% Milk</b> <small>Dairyland</small>	● ● ● (110 calories)	● ● ● (12 grams)	● ● ● (9 grams)	● ● ● (2.5 grams)
<b>2% Milk</b> <small>Dairyland</small>	● ● ● (130 calories)	● ● ● (12 grams)	● ● ● (9 grams)	● ● ● (5 grams)
<b>3.25% Milk</b> <small>Dairyland</small>	● ● ● (160 calories)	● ● ● (12 grams)	● ● ● (8 grams)	● ● ● (8 grams)
<b>Soy Milk</b> <small>Silk Original</small>	● ● ● (110 calories)	● ● ● (6 grams)	● ● ● (8 grams)	● ● ● (4.5 grams)
<b>Oat Milk</b> <small>Oatly</small>	● ● ● (120 calories)	● ● ● (7 grams)	● ● ● (2 grams)	● ● ● (5 grams)
<b>Almond Milk</b> <small>Silk Unsweetened</small>	● ● ● (30 calories)	● ● ● (0 grams)	● ● ● (1 gram)	● ● ● (2.5 grams)
<b>Cashew Milk</b> <small>Silk Unsweetened</small>	● ● ● (25 calories)	● ● ● (0 grams)	● ● ● (<1 gram)	● ● ● (2 grams)
<b>Coconut Milk</b> <small>Silk Unsweetened</small>	● ● ● (40 calories)	● ● ● (<1 gram)	● ● ● (0 grams)	● ● ● (4 grams)
<b>Flax Milk</b> <small>Good Karma Unsweetened</small>	● ● ● (25 calories)	● ● ● (0 grams)	● ● ● (0 grams)	● ● ● (2.5 grams)
<b>Hemp Milk</b> <small>Pacific Natural Foods Unsweetened Original</small>	● ● ● (70 calories)	● ● ● (0 grams)	● ● ● (3 grams)	● ● ● (5 grams)
<b>Pea Milk</b> <small>Ripple Unsweetened Original</small>	● ● ● (70 calories)	● ● ● (0 grams)	● ● ● (8 grams)	● ● ● (4.5 grams)
<b>Quinoa Milk</b> <small>Suzie's Unsweetened Plain</small>	● ● ● (70 calories)	● ● ● (5 grams)	● ● ● (2 grams)	● ● ● (1 gram)
<b>Rice Milk</b> <small>Rice Dreama Unsweetened Original Enriched</small>	● ● ● (70 calories)	● ● ● (<1 gram)	● ● ● (8 grams)	● ● ● (2.5 grams)

Table adapted from Ohio Health, *Sip Or Skip: Non-Dairy Milk Explained*  
Source: Ohio Health

## Key Take-Aways

- The COVID-19 pandemic has changed consumer purchasing patterns. Instead of the usual morning coffee run, more consumers are now using non-dairy beverage products at-home.
- In Canada, per capita consumption of dairy milks have been declining – especially those with lower fat content.
- Consumers may choose to consume non-dairy beverage products for a variety of reasons including perceived health benefits, to simply try a new product or for allergies or intolerances to lactose.
- Consumers may also choose to consume dairy milk. Some reasons consumers may choose to consume dairy milk include product taste, cost or value considerations and to support dairy farmers and agriculture.
- Three major drivers exist in the non-dairy beverage industry that has led to an increase in consumption. These drivers include increased product availability, diversification of products and the communication of product attributes.
- Nutritional profiles differ across dairy milk and non-dairy beverage products. Understanding these profiles – including calories, protein, sugar and fat – will help consumers choose the product that is right for them.
- The market for non-dairy beverage products has been growing and this may provide a unique opportunity for some entrepreneurs.