

Maple Sports Drink Fills a Niche in Performance Beverage Market

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Sports drinks bring in huge revenues each year, \$7 billion in 2020 according to Beverage Industry Magazine, but maple has yet to tap into that market. According to Forbes, Gatorade had a huge share at 77% in 2015, while Powerade had 20%. That's a formidable 97% of the market in total. But with the recent development of natural sports drink options, and major investments from big players like Coca-Cola, PepsiCo, and Dr Pepper, it looks as though the share held by alternatives may begin to grow rapidly. Cornell has developed two maple sports drink formulas to meet demand for all-natural options in the functional beverage aisle and tap into potential profits in this growing market sector.

Athletes have long been concerned with nutrition. Between workouts and rest, proper nutrition is a key element of improved performance. There are all sorts of products designed to help athletes prepare for, endure, and recover from physical activity. However, the top products on the market contain ingredients that certain types of consumers look to avoid, namely, artificial flavors and colors, corn syrup, and maltodextrin. Many athletes have been on the hunt for healthier, more natural options that are easier on the stomach and on the taste buds. This is reflected in some of the newer products on the market such as those produced by Honey Stinger, a company that formed in 2002 and sells several honey-based products including: protein bars, energy gels, and powdered sports drink mix. There is clear demand for products like these, and maple could help meet that demand.

Product Development

The Cornell Maple Program has been working on developing athletics-oriented maple products for several years. Our latest work has led to a "maple sports drink", a hydrating, nourishing electrolyte-replacement beverage that meets the same nutritional standards as Gatorade and Powerade. Two flavors were developed: Tangerine and Tart Cherry, both flavored with all-natural juice concentrate and sweetened with maple syrup. For performance, the beverages contain glycerol (glycerin) to aid hydration, electrolyte levels in accordance with recommendations by sports nutrition scientists, and of course, pure water. The drinks contain only these five simple ingredients in order to appeal to health-conscious consumers seeking out "clean label" products.

Flavor development was a significant portion of our research. We wanted to create a refreshing beverage suitable for rapid consumption. It would be easy to wind up with a product that is too sickly sweet or too intensely flavored – it's one thing for a product to taste good in the lab, and quite another for it to still taste good after running twelve miles. Exhaustion and thirst bring on a sensitive palette. That's why we turned to elite athletes for feedback.

Market Testing with Elite Athletes

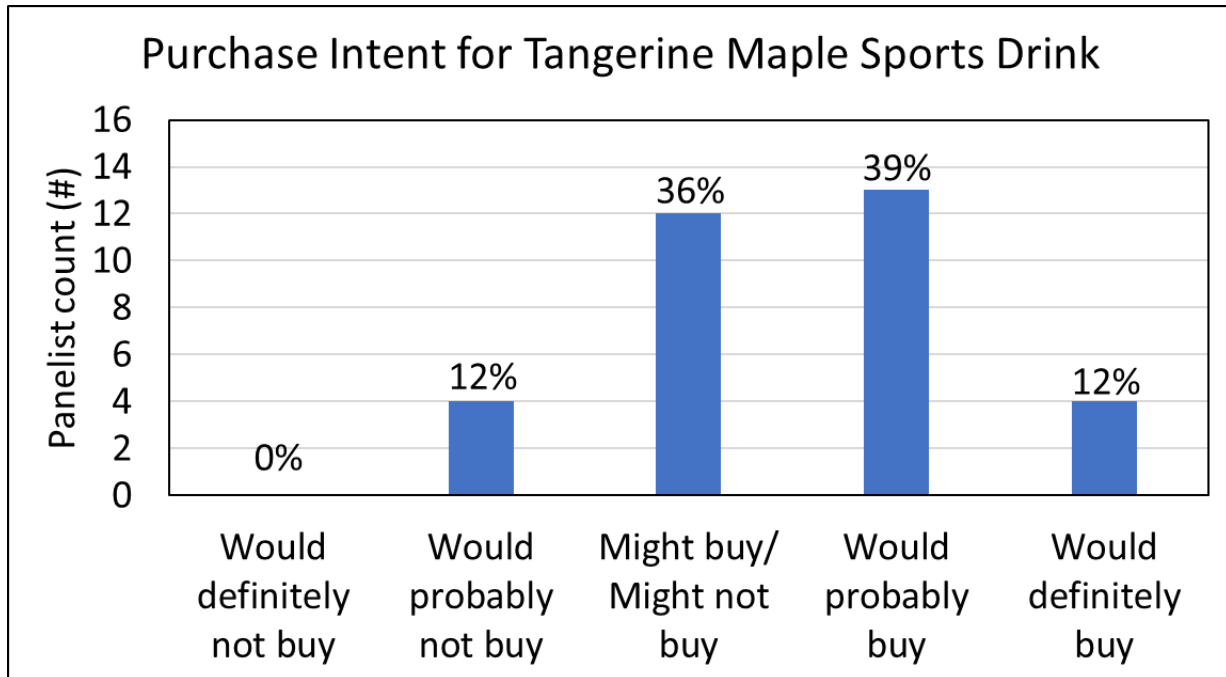
Members of the Cornell Division I Cross Country and Track & Field teams came out to two tasting sessions, one for each flavor, to give feedback on the products. In total, there were over 100 respondents at the two sessions. At each session, the athletes were offered product samples directly after exercise. Their feedback was used to improve the products' formulations, gauge interest in natural alternatives to mainstream performance beverages, and understand how such a product could be

priced. The student athletes were asked how often they currently consume electrolyte beverages, how well they liked the maple-based beverages overall, and to assess the intensity of different flavor attributes. Additionally, they were asked the following two questions in order to gauge purchase intent:

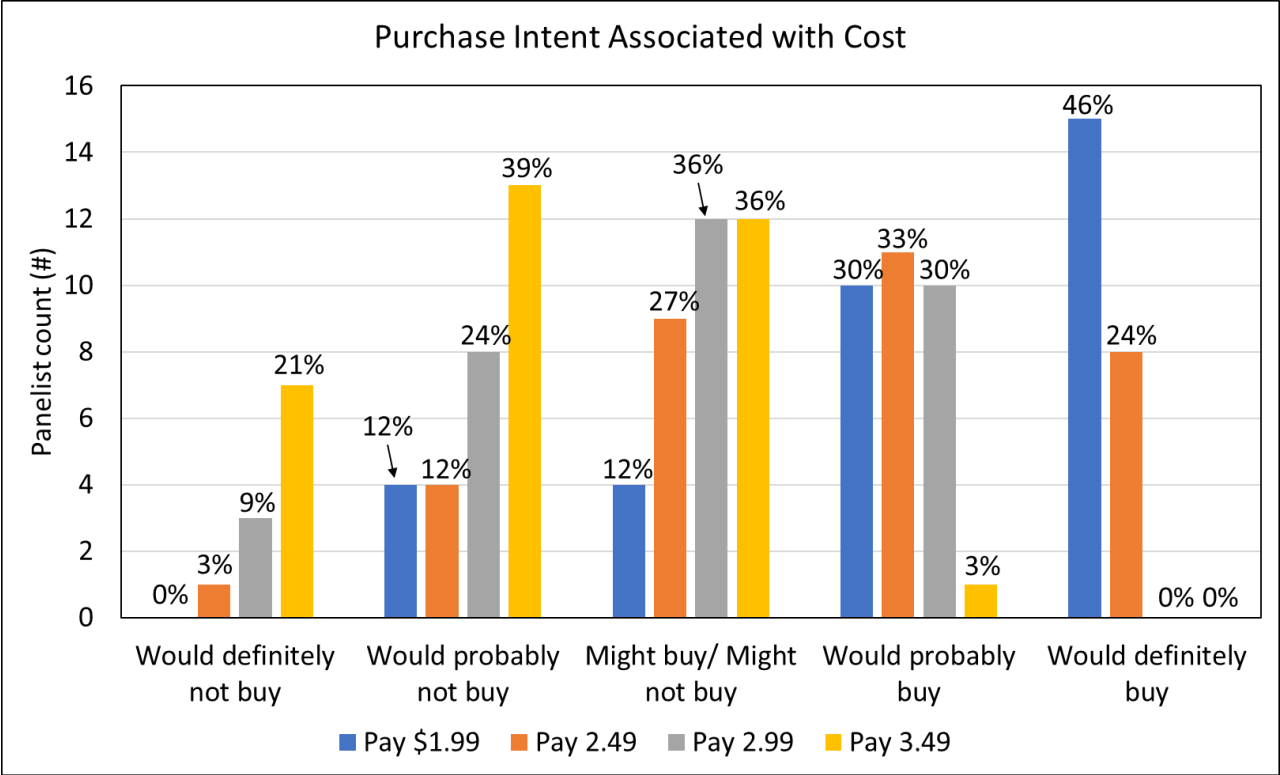
“Would you be **more likely to PURCHASE** this product knowing that it is made from all-natural ingredients (maple syrup, juice concentrate)?”

“The current market price for Gatorade/electrolyte beverages is \$1.99 for 24 oz. Knowing this sample is made from all-natural ingredients (maple syrup, juice concentrate), how likely is it that you would **BUY** a **24 oz bottle** at the following prices? \$1.99, \$2.49, \$2.99, \$3.49.

The results of these two questions are shared below.



CAPTION: Cornell student athletes were asked how likely they were to purchase what they sampled. These answers are in response to the Tangerine flavor maple sports drink, and only include respondents who consume electrolyte beverages such as Gatorade *at least* once per week. Figure by Catherine Belisle Ph.D.



CAPTION: Gatorade currently sells for \$1.99 for a 24 fl. oz. bottle. Cornell student athletes were asked how much they would pay for an all-natural, maple-based alternative to Gatorade. These answers are in response to the Tangerine flavor maple sports drink, and only include respondents who consume electrolyte beverages such as Gatorade *at least* once per week. Figure by Catherine Belisle Ph.D.

In general, the Tangerine flavor was better received (88% of respondents liked the product), but the Tart Cherry flavor had its fans as well (70%). Ultimately, an array of flavors should be developed to suit individual tastes and offer athletes several new options for wholesome nutrition.

Maple is a unique ingredient that has potential to fit into all kinds of niche markets. In the realm of athletics, there are many potential consumers who have not yet been reached. The benefits of maple compared to other sweeteners should be promoted in the marketing of a maple-based sports drinks. Maple is considered a healthy alternative to refined sugar due to the presence of vitamins, minerals, amino acids, and antioxidants. The trace minerals found naturally in maple syrup give a subtle boost to electrolyte replacement capabilities, while antioxidants are known to reduce inflammation and aid muscle recovery. Whether marketing to self-identified “clean eaters”, those looking to buy local, vegan athletes, or simply athletes who want to enjoy the taste of their high-performance nutrition products, everyone can find something to love about maple.

If you are interested in producing a product like this, information on production, food safety regulation, our market-testing findings, and more is soon to be available on the Cornell Maple Program website. Look for the Maple Sports Drink Fact Sheet on the New Product Development page.

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