



SOUR STATS



In the past 3 years, product and dining introductions featuring sour have had an overall positive feedback from consumers. In social media posts, sour shows a 48% increase and 90% positivity from consumers. In product launches, we see 1,846 global new product introductions.

We have also noticed a few rising flavors and categories related to sour. The adaptability of sour flavor is evident – tropical, bubble gum and kiwi are growing companion flavors. Meanwhile salmon and potato reveal sour's growing presence in snack applications. From a category perspective, sour spans the spectrum from meal centers to gum and confectionery.

Fastest Growing Companion Flavors:

- Potato
- Tropical
- Kiwi
- Salmon
- Bubble Gum
- Cake/Pie/Tart

Top Categories:

- Snacks
- Sugar & Gum Confectionery
- Meals & Meal Centers
- Bakery
- Dairy



SOUR'S FUNCTIONAL CONNECTION

The power of sour often comes from the connection to functionality and the health and wellness movement. We noted some of the top growing claims related to sour that may explain consumer interest.

SOUR'S TOP GROWING CLAIMS: 2016-2019

1.	Functional- Brain & Nervous System	+300%
2.	Functional- Energy	+200%
3.	Functional- Digestive	+200%
4.	Low/No/Reduced Carb	+200%
5.	Functional- Weight	+200%

With 80% of sour's top growing claims related to functional benefit, there is a great opportunity in providing a product that is functional and provides great taste.

"The days when appearance, taste, texture and smell were the only variables consumers thought about when choosing what to eat are long gone. And while those are still important, manufacturers looking to invigorate their sales and profits should look to bring additional benefits to their products"



FERMENTED FINDS & VINEGARY VARIETIES

Health & wellness has become a priority for many consumers, which has led to increased popularity for fermented, vinegar-based, pro-biotic and pre-biotic foods. Let's take a look at what's standing out in this space.

Food Navigator calls the flavor trend of sour kombucha, apple cider vinegar and other fermented foods the "adult version of sour."



Apple Cider Vinegar

Increasing in popularity for its claimed health benefits such as gut health and weight management, apple cider vinegar is a fermented product that is becoming more mainstream. Seen in products from beauty masks to food and beverage, ACV has shown itself as a versatile crosscategory ingredient.



ORANGE ELDERFLOWER SPARKLING WELLNESS

WATER from kombucha brand GT's Living Foods is described as containing antioxidants, organic caffeine, zero sugar, and apple cider vinegar that helps promote digestive support and focused energy.

 25% of consumers responded that they likely or definitely would buy this product, significantly under performing its subcategory.



SPARKLING APPLE CIDER VINEGAR JUICE with mango, tumeric and ginger is described as a 100% natural product that is low in sugar and vegan friendly. It is said to feature sparkling

water, fruits and botanicals, and a natural taste.



FERMENTED FINDS & VINEGARY VARIETIES, continued

Sauerkraut

Often used as a condiment or side dish, sauerkraut is a fermented food made from cabbage and salt. It provides loads of fiber and probiotics to the body as well as enzymes that help break down nutrients for easier digestion. Living up to its name, the ingredient has a distinctive flavor that tastes... well, sour.



HAT CREEK PROVISION SAUERKRAUT is described as a fermented, probiotic, non-cooked sauerkraut that is kosher certified and contains live cultures

 35% of consumers responded that they likely or definitely would buy this product, outperforming its subcategory.



FARMHOUSE CULTURE SEA SALT KRAUT KRISPS

contain vegetables and 1 billion probiotic cultures per serving that are plant based and support digestive and immune health.

 22% of consumers responded that they likely or definitely would buy this product, significantly underperforming its subcategory.

Kimchi

Common in Korean cuisine, kimchi shares some similarities with sauerkraut. Made from salted cabbage and other fermented vegetables, kimchi enhances the flavor with mixed with garlic, ginger and a Korean spice called gochugaru. According to the National Center for Biotechnology Information, the product has health claims such as providing probiotic properties, helping with weight management, brain health promotion and more.



SPICY KIMCHI is

described as a natural probiotic that is raw, healthy and made with premium fermented napa cabbage.

 25% of consumers responded that they likely or definitely would buy this product, underperforming its subcategory.



KIMCHI SPRING ROLLS

are described as a vegan and vegetarian product free of MSG, trans fat, preservatives and GMOs.

 42% of consumers said they likely or definitely would buy this product, outperforming its subcategory.



KOMBUCHA: SOUR'S STAR PLAYER

Kombucha has become a hit with consumers for health claims from improving the immune system to preventing and managing health conditions such as blood pressure and cancer. Regardless of whether the beverage provides actual benefit, consumers are on board. In fact, so much so that it has had a 158% growth in the past 3 years as well as become a \$700 million category.

Fermented tea with a culture of yeast and bacteria sounds like a combination most consumers might run from, yet consumers show 79% positivity for the sour and acidic drink. Kombucha has become a standout in the world of sour for its tart flavor, slight alcohol content, and claimed health benefits.

Kombucha's taste can initially be off putting for many consumers who are used to sugary drinks, but most consumer appeal toward kombucha stems from its claimed health benefits. According to Restaurant Hospitality, the drink has a reputation of improving digestion, boosting the immune system, and energizing those who drink it, but has limited scientific evidence backing up its claims.

Kombucha has seen **158% growth** in the past 3 years and is now a **\$700 million** industry.





KOMBUCHA: SOUR'S STAR PLAYER, continued

Kombucha has a unique flavor that may be an acquired taste for some consumers. With taste as a consumer priority, there is great opportunity in providing a more "drinkable" sour flavor or adding a balancing sweet flavor.

KOMBUCHA PRODUCTS OF NOTE



GT'S LEMONADE FLAVORED ORGANIC RAW KOMBUCHA is

described as a koshercertified, gluten and GMOfree product, with a blend of proprietary probiotics and powerful antioxidants to nourish the body from the inside out.

27% of consumers responded they would likely or definitely buy this product, significantly outperforming its subcategory.



KOE MANGO ORGANIC KOMBUCHA is described as a shelf stable and naturally flavored sparkling kombucha beverage. It is said to be easy to drink with a "fruit forward" taste



BONSAN ORGANIC CLASSIC KOFU (UK) is

described as a plant-based kofu made with fermented kombucha cultured tofu that can be pan-fried.

 16% of consumers responded that they likely or definitely would buy this product, significantly underperforming its subcategory.



ALCOHOL SOURS

Though kombucha has a slight alcohol content and sour flavor, alcohol focused beverages have long been a space to not only introduce sour into the equation but also promote innovation.



Sour Beer

Complex and unique, sour beer comes in multiple styles such as lambics, flanders reds, oud bruin, and gose. Due to the specific microorganisms and bacteria involved during fermentation, the outcome is a lip puckering unique taste that breweries have jumped on board for. Though often pricier than your average beer, sour beer has seen an increase of 122% in global social posts in the past year – certainly becoming a topic to buzz about.

Hybrid Drinks

Hybrid drinks, a mixture of two or more beverage categories in one product, can be seen combining alcohol and functional focused beverages. This helps to cater to consumers' wellness focused mindset as well as their enjoyment for alcoholic beverages. For example, "In spring 2018, Oregon beer marker Rogue Ales & Spirits released Kulture Clash, an imperial blonde ale blended with kombucha tea from Oregon-based Brew Dr. Kombucha."





ALCOHOL SOURS, continued

Sour Cocktails

For a hint of tartness, many classic cocktails include the addition of lime, lemon, or other sour components. From whiskey sours to creatively flavored margaritas and mixed drinks, the opportunities for sour flavor additions in alcohol are seemingly endless. Simple consumer favorites can be dressed up or dressed down to create the perfect level of sour.





FIRST THERE'S SOUR THEN THERE'S SWEET

The sweet and sour combo has long been a common theme in confections and desserts, but it's now transitioning further to cereal, snacking products, and more.

With snacking and sugar & gum confectionery being the first and second top categories related to sour respectively, there is much opportunity for sour products to emerge in new products, especially accompanied with a sweet flavor. In addition, the classic combo shows 86% positivity from social listening and a 35% change in past 3 years.

SOUR TOP CATEGORIES:

- Snacks
- Sugar & Gum Confectionery
- Bakery
- Sauces & Seasonings
- Meals & Meal Centers



FIRST THERE'S SOUR THEN THERE'S SWEET, continued

Consumers get the best of both worlds with sweet and sour flavored products. Let's take a look at a few global new product introductions.



SOUR PATCH KIDS RED, WHITE & BLUE SORBET is described as a lemon sorbet and vanilla light ice cream with a redberry swirl and blue Sour Patch Kid blitz.

• 19% of consumers responded that they likely or definitely would buy this product, significantly underperforming its subcategory. Consumers perceived this product as being unique and fun.



Relaying the sour & sweet trend to snacking, LAY'S SWEET CHILI & SOUR CREAM FLAVORED POTATO CHIPS are described as chips featuring spicy and sweet chilies paired with smooth sour cream.

• 46% of consumers responded that they likely or definitely would buy this product, outperforming its subcategory.



PEEPS SOUR WATERMELON FLAVORED MARSHMALLOW CHICKS are described as an artificially flavored product featuring the sweet and sour taste of a watermelon flavor.

• 36% of consumers responded that they likely or definitely would buy this product, outperforming its subcategory.



SOUR PATCH KIDS FLAVORED CEREAL is described as kosher certified product that has sour then sweet flavor.

• 30% of consumers responded that they likely or definitely would buy this product, underperforming its subcategory.



THE TAKEAWAYS

From functional benefits, to alcoholic beverages and paired with sweet treats, sour seems to be soaring in recent years. We believe that consumer interest in wellness has contributed to this growth, with fermented, and vinegar-based products finding an audience thanks to claimed health benefits. On a related note, we believe consumer interest in sour stems from their belief that sour flavored products are inherently good for them -- the idea of "tasting the goodness." Meanwhile, oldschool sweet-and-sour combos are still well-loved, rounding out the opportunity in both indulgent and wellness-focused markets. With sour spanning the spectrum of segments, what stands out for you and your product development needs?

SOURCES

- Mintel
- Food Navigator
- Thrillist
- Infegy
- Restaurant Hospitality
- Mayo Clinic
- Healthline
- Food Dive
- Eating Well
- National Center for Biotechnology Information



YOU DESERVE MORE, LET'S GET STARTED.

What does true partnership look like? You deserve a flavor partner ready to turn these trends into the tangible.

Let FONA's market insight and research experts get to work for you. Translate these trends into bold new ideas for your brand. Increase market share and get to your "what's next." Our technical flavor and product development experts are also at your service to help meet the labeling and flavor profile needs for your products to capitalize on this consumer trend. Let's mesh the complexities of flavor with your brand development, technical requirements and regulatory needs to deliver a complete taste solution.

From concept to manufacturing, we're here for you — every step of the way. Contact our sales service department at 630.578.8600 to request a flavor sample or chat us up at www.fona.com/contact-fona/

