

CANNABIS CONSUMER INSIGHT SERIES:

ALCOHOL VS LEGAL CANNABIS

CONSUMPTION IN NORTH AMERICA



ABOUT NEW FRONTIER DATA

New Frontier Data provides objective, rigorous and comprehensive analysis and reporting about the nascent and underserved cannabis industry worldwide. New Frontier Data's analytics and reports have been cited in over 80 countries around the world to inform industry leaders, investors, policymakers and others. New Frontier Data, the premiere and only Big Data shop in the sector, looks beyond plant cultivation and distribution to raise the industry bar and improve visibility into what will inevitably soon be a mature and more complex global market. Founded in 2014, New Frontier Data is headquartered in Washington, D.C., and has additional offices in Denver, Colorado.

New Frontier Data does not take a position on the merits of cannabis legalization. Rather, its mission and mandate are to inform cannabis-related policy and business decisions through rigorous, issue-neutral and comprehensive analysis of the legal cannabis industry. For more information about New Frontier Data please visit: NewFrontierData.com.

Mission

New Frontier Data's mission is to elevate the discussion around the legal cannabis industry globally by providing unbiased, vetted information, and educating stakeholders to make informed decisions.

Core Values

- Honesty
- Respect
- Understanding

Vision

Be the Global Big Data & Intelligence Authority for the Cannabis Industry.

Commitment to Our Clients

The trusted one-stop shop for actionable cannabis intelligence, New Frontier Data provides individuals and organizations operating, researching, or investing in the cannabis industry with unparalleled access to actionable industry intelligence and insight, helping them leverage the power of big data to succeed in a fast-paced and dynamic market.



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THE NEXUS OF **CANNABIS & ALCOHOL**

New Frontier Data's 2018 Cannabis Consumer Report — released November 2018 presented groundbreaking insights into cannabis consumer behavior, preferences, and emerging trends. Among the findings, the report highlighted a few conclusions regarding alcohol and cannabis consumption, including preference and usage. This report is intended to supplement those findings by providing a deeper dive into the nexus of cannabis and alcohol, including usage frequency, policy viewpoints, and the degree to which cannabis is cannibalizing alcohol sales. Data

for this report stems largely from New Frontier Data's 2018 Cannabis Consumer Survey.

Frequency of Alcohol Consumption by Cannabis Users:

The frequency of alcohol consumption by cannabis users varies in relation to the frequency of cannabis use. Table 1 (next page) reports the frequency of alcohol consumption by cannabis users, with consumption-frequency profiles.



KEY TAKEAWAYS

- 30% of cannabis users consume both alcohol and cannabis at least once per week. Nearly 50% consume both alcohol and cannabis at least once per month.
- 50% of high-frequency cannabis users (consuming at least once per week) are likewise frequent alcohol users (consuming at least once per week), while 43% of lower-frequency cannabis users are frequent alcohol users.
- The frequency of alcohol use is correlated to the frequency of cannabis use, as evidenced by the larger numbers in each row occurring along the diagonal (see gray-outlined boxes in Table 1). Specifically, daily alcohol consumers are more likely to consume cannabis daily, while those who consume alcohol once per week are more likely to consume cannabis once per week compared to any other cannabis frequency profile.
- Regardless of the frequency of cannabis consumption, the plurality of cannabis consumers indicate they drink "a few times per week."





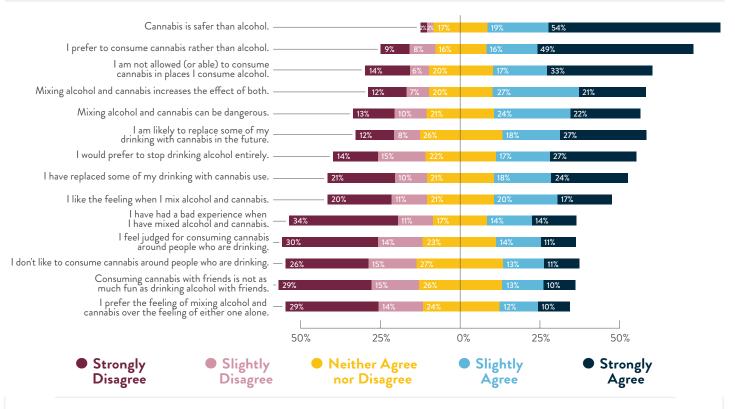
TABLE 1: FREQUENCY OF ALCOHOL CONSUMPTION BY CANNABIS USERS

		CANNABIS USE FREQUENCY —						
_		DAILY (N=1116)	A FEW TIMES A WEEK (N=588)	ONCE PER WEEK (N=123)	A FEW TIMES A MONTH (N=359)	A FEW TIMES A YEAR (N=537)	ALMOST NEVER (N=415)	ALL CONSUMERS
— ALCOHOL USE FREQUENCY	DAILY	13.5%	6.1%	5.7%	7.2%	8.0%	8.0%	9.4%
	A FEW TIMES PER WEEK	22.2%	35.5%	35.8%	26.2%	26.6%	28.7%	27.3%
	ONCE PER WEEK	10.1%	13.4%	26.0%	9.7%	9.9%	6.5%	10.8%
	A FEW TIMES PER MONTH	12.3%	14.5%	13.8%	22.0%	15.6%	17.1%	15.1%
	A FEW TIMES PER YEAR	18.7%	14.1%	9.8%	19.2%	22.2%	17.6%	18.0%
	ALMOST NEVER	4.7%	3.9%	0.8%	2.5%	4.8%	7.2%	4.5%
	NEVER	18.4%	12.4%	8.1%	13.1%	12.8%	14.9%	14.9%
	TOTAL	100%	100%	100%	100%	100%	100%	100%

Source: New Frontier Data 2018 Consumer Survey



FIGURE 1: CANNABIS & ALCOHOL VIEWS BY CANNABIS USERS



Source: New Frontier Data 2018 Consumer Survey

Note: The questions do not sum to 100%, as respondents had the option to answer, "Don't Know". It can be implied that any remainder falls into the "Don't Know" category.



Cannabis and Alcohol Views:

In the 2018 consumer survey, New Frontier Data dove deep into consumer views about cannabis and alcohol. Figure 1 (previous page) displays consumers' agreement with different statements regarding the use of cannabis and alcohol, sorted top to bottom by statements they most agree with. The blue bars represent agreement (strong agreement in dark blue), and pink bars indicate disagreement (strong disagreement in dark pink), while the yellow bars indicate the number of respondents that "neither agree nor disagree" with the statement.

Cannibalization:

There is an ongoing debate as to the degree that cannabis legalization impacts alcohol sales.

Recently, many of North America's larger alcohol producers have been downplaying the concern. In a January 2019 report, the Distilled Spirits Council (DISCUS) - a national trade association representing many of the largest distillers in the United States - concluded that "in the three states with the longest legalized recreational marijuana sales -Colorado, Washington state and Oregon - there is no evidence the legalization has had any impact of spirits sales, nor is there evidence that it has impacted total alcohol sales." The report analyzed



FOR CANNABIS & ALCOHOL VIEWS

- Cannabis users have mixed feelings about mixing alcohol and cannabis. In particular, users generally disagree with the statement "I prefer the feeling of mixing alcohol and cannabis over the feeling of either one alone", and "consuming cannabis with friends is not as much fun as drinking alcohol with friends", while agreeing with "cannabis is safer than alcohol" and "mixing alcohol and cannabis is dangerous". There is mixed agreement with the statement "I like the feeling when I mix alcohol and cannabis", suggesting that the way the two are mixed significantly influences the consumer's experience.
- A preference for cannabis over alcohol by those who consume both explains in part why major alcohol brands are aggressively entering the cannabis market: They recognize that increased access to legal markets and the elimination of the punitive risks of cannabis use will likely lead to some displacement of alcohol use by cannabis for a broad base of consumers.
- Cannabis users largely agree with statements regarding their predilection for cannabis over alcohol, as indicated by a strong agreement with the claims "I prefer to consume cannabis rather than alcohol" and, to lesser extent, "I am likely to replace some of my drinking with cannabis in the future" and "I would prefer to stop drinking alcohol entirely." Notably, nearly 3/4 (74%) of cannabis users who also drink alcohol enjoy cannabis as much or more so.

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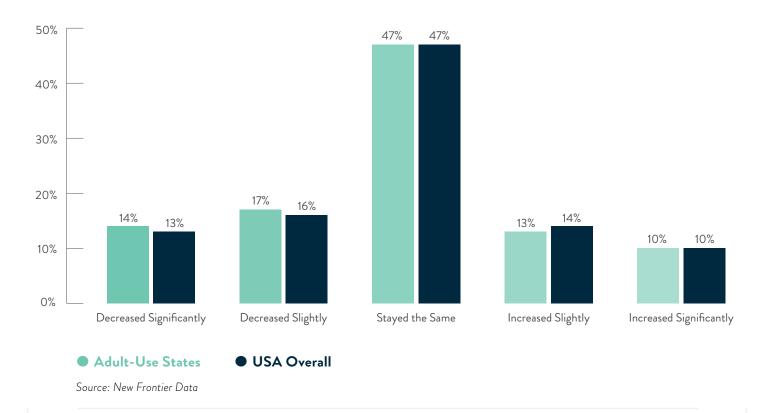








FIGURE 2: COMPARED TO TWO YEARS AGO, HAS THE AMOUNT OF ALCOHOL YOU DRINK:



per capita alcohol sales by reviewing sales data both preceding and following legalization.

Constellation Brands CEO Rob Sands concurred with the DISCUS findings when in October 2018 he said there is "no evidence whatsoever" that alcohol sales in states with legalized marijuana would be displaced by cannabis. Similarly, Anheuser-Busch CEO Carlos Brito in January 2019 noted that the company does not have any data suggesting that cannabis sales are hurting beer sales in North America. Brito said that "we still don't have enough data points... to prove that beer, alcoholic beverages, suffers... it's hard to do a same-store analysis."

On the other hand, in the October 2018 report Helping Settle the Marijuana and Alcohol Debate:

Evidence from Scanner Data, researchers from the University of Connecticut and Georgia State University show that the degree of cannibalization could be substantial. "We find that marijuana and alcohol are strong substitutes. Counties located in MML (Medical Marijuana Law) states reduced monthly alcohol sales by 15%, which is a consistent finding across several empirical specifications." Notably, while the study uses retail alcohol-sales data (similar to the DISCUS study), it implements a "local identification strategy that takes advantage of differences in medical marijuana laws between pairs of contiguous counties".2 Another key difference between the studies is that the DISCUS report only considers adultuse states, while Helping Settle the Marijuana and Alcohol Debate considers both medical and adult-use states.

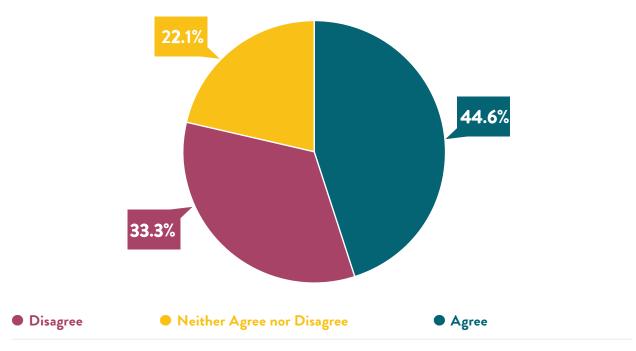


Results from New Frontier Data's 2018 Consumer Survey suggest that it is likely that some cannibalization is occurring. First, as shown in Figure 2, in both adult-use states and across the United States in general, while almost 50% of the populations report no change in their alcohol consumption habits from two years previously, there is a slight trend toward consuming less alcohol compared to two years previously. Secondly, nearly 45% of cannabis users agree with "I have replaced some of my drinking with cannabis use", as opposed to 33% who disagree with that claim (see Figure 3). Additionally, 44% of all cannabis consumers indicate that they intend to replace some of their drinking with cannabis in the future, suggesting that the impact of the displacement will be more acute in the future.

New Frontier Data predicts that cannibalization will likely increase in the future, since most current consumers have been consuming cannabis since before legalization, and thus had already established their cannabis and alcohol consumption habits. Conversely, some younger consumers who either have not developed strong alcohol-brand preferences nor have a discerning palate for alcohol may be likelier to develop an affinity for cannabis over alcohol as they come of age in an environment where cannabis is as accessible and socially accepted as alcohol.

Additionally, the cannabis industry is creating a new, wide-ranging array of cannabis products, resulting in new standards for how and why cannabis is consumed, and thus increasing opportunities to displace alcohol as the legal market

FIGURE 3: I HAVE REPLACED SOME OF MY DRINKING WITH CANNABIS USE



Source: New Frontier Data

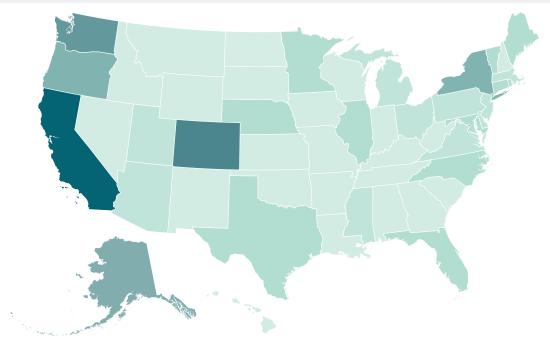


matures. With the new raft of cannabis products offering convenience (e.g., no need either to roll a joint or pack a pipe), discretion (due to odorless and highly portable options), tailored experiences (i.e., replicable, effect-based experiences such as "energy" or "calm"), and rapid uptake (with faster onset than the typical 30-60 minutes from edibles), New Frontier Data projects that such products will present significant new opportunities for alcohol substitution relative to when consumers predominantly smoked flower.

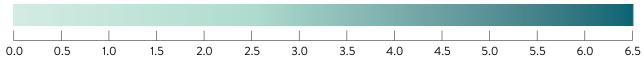
The map below shows New Frontier Data's estimates in the national spending shift to cannabis from the alcohol markets. Specifically, it illustrates the year-over-year monetary decline in alcohol sales throughout the 50 U.S. states due to cannabis. Such metrics are crucial to understanding how shifts in consumer spending affect a given region, and help to qualify the market opportunity for demand of cannabis products. Most importantly, such critical information affords mature financial stakeholders (such as traders following the industries) to project trading fluctuation and make investment decisions over time. For the most updated, interactive version of the map, please visit New Frontier Data's Equio dashboard at equio.newfrontierdata.com.



NATIONAL SPENDING SHIFTS TO CANNABIS



Percentage of alcohol sales declines as a result of cannabis cannibalization



Source: New Frontier Data





KEY TAKEAWAYS

ALCOHOL COMPANIES

- Cannabis can position itself as an alternative to alcohol. A comprehensive global review of alcohol research concluded that "alcohol use is a leading risk factor for disease burden worldwide, accounting for nearly 10% of global deaths among populations aged 15-49 years. The widely held view of the health benefits of alcohol needs revising, particularly as improved methods and analyses continue to show how much alcohol use contributes to global death and disability. Our results show that the safest level of drinking is none." Coupled with cannabis users across the usage-frequency spectrum already eager to replace drinking with cannabis (while having a preference not to mix the two substances), and recognizing that mixing alcohol and cannabis can be dangerous, there are significant tailwinds helping cannabis to garner a portion of alcohol sales.
- Prudent alcohol companies must pay close attention to the evolving cannabis industry, specifically to shifting consumer preferences. While the impact of cannibalization is somewhat constrained thus far, the loss of the lifetime value of younger consumers who never develop a taste for alcohol will be significant, and impact all alcohol types. With a majority of cannabis consumers indicating a preference for cannabis over alcohol (and a desire to replace some drinking with cannabis in the future), as cannabis product access improves it will be interesting to see whether it will translate into significant declines of alcohol sales.
- Non-alcoholic, cannabis-infused beverages (including beers) represent a substantial market opportunity. The innovations around cannabis products' flavor profiles, and the rapid onset of formulations, make such an attractive category for consumers who want to replace their drinking but do not want to use combusted products.

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