

Regional Cannabis

Cannabis cultivators are eager to claim their product is unique based on how and where it is grown. Could regional designations used for wine benefit the cannabis industry?



KENNETH MORROW | SEPTEMBER 2022



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In the past few years, growers have explored identifying geographic locations for areas where cannabis is grown, inspired by terroir and appellation designations in winemaking and agriculture more broadly.

Terroir is a term used in many industries such as hops, coffee, maple syrup and chocolate to refer to the climate, soil and other environmental conditions where product batches are cultivated. It is utilized to a heavy extent by the wine industry; Northern California has a lot of wine production, so those in the cannabis industry—which also has a strong history and foothold in the same area—migrate to the terminology and mentions of geographic locations or designations that denote specific winegrowing regions.

An **appellation** is a legally defined and protected geographic location to identify exactly where the grapes for a wine were grown.

So, which of these terms or designations are most relevant regarding cannabis cultivation? And how could incorporating them into cannabis labels benefit the industry?

What Is Terroir?

Terroir is a French term used to describe geographic locations and environmental aspects, conditions and influences that affect a plant's phenotype, which includes many factors ranging from soil composition and farming practices to elevation and the surrounding environment.

Terroir is the principle behind the French appellation d'origine contrôlée (AOC) classification, which is a system for wine regulation and appellation in France. The AOC designation is based on the idea that the grapes yield distinct qualities that are specific to that geographic location and surrounding environmental influences.

The importance of terroir influence is a debated topic among the wine and other industries, as some wine experts do not agree regarding the exact definition of terroir—specifically, the influences of factors that are beyond the control of either the grape grower or winemaker, such as ambient temperatures, rainfall, etc. Some winemakers downplay terroir and its influence on taste and disagree regarding the exact definition of the term terroir.

Mark A. Matthews, a professor of viticulture and plant physiology at the University of California, Davis, described the concept of terroir as a myth in his book, "[Terroir and Other Myths of Winegrowing](#)." Yet, he does agree that climate and geographic characteristics have an influence on plant growth and the products those plants produce. He says the term is imprecisely defined and further states that the principles of terroir are based on traditional belief rather than substantiated by rigorous data or research.

Natural factors that comprise terroir include:

- soil type;
- geomorphology, or the natural landscape of the surrounding areas such as mountains, valleys or water sources that can affect how the climate interacts with the environment;
- other organisms growing on, in and around the plant plots; and
- climate.

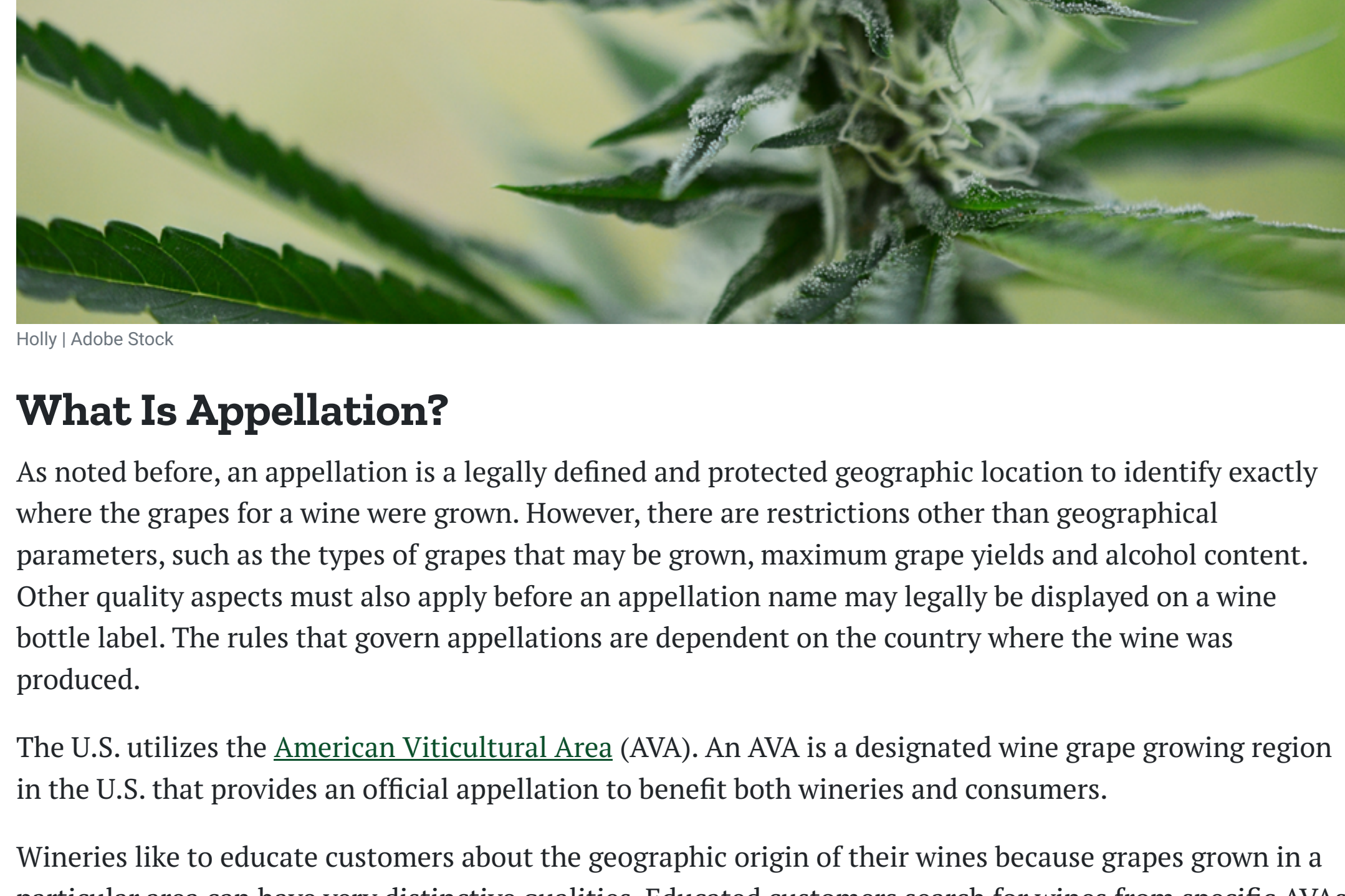
Individual vineyards have unique soil composition and qualities such as mineral contents, drainage, fertility and heat retention.

Human/Viticultural Influences on Terroir

Horticultural decisions also influence terroir. Decisions made during the cultivation process, as with winemaking processes, can either diminish or magnify the expression of terroir in the final product. The decisions are many and include:

- pruning style;
- irrigation methods and duration;
- harvest time selection and sugar percentages;
- use of oak as well as French versus American oak;
- cultured or ambient versus laboratory-produced yeast;
- length of maceration and time in contact with lees; and
- temperature of fermentation process.

Additionally, processes such as micro-oxygenation, chaptalization, clarification, and reverse osmosis filtration all produce contributing factors that either marginalize or amplify aspects derived from the terroir, as well as simple influences such as overripe fruit/grapes.



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What Is Appellation?

As noted before, an appellation is a legally defined and protected geographic location to identify exactly where the grapes for a wine were grown. However, there are restrictions other than geographical parameters, such as the types of grapes that may be grown, maximum grape yields and alcohol content. Other quality aspects must also apply before an appellation name may legally be displayed on a wine bottle label. The rules that govern appellations are dependent on the country where the wine was produced.

The U.S. utilizes the [American Viticultural Area \(AVA\)](#). An AVA is a designated wine grape growing region in the U.S. that provides an official appellation to benefit both wineries and consumers.

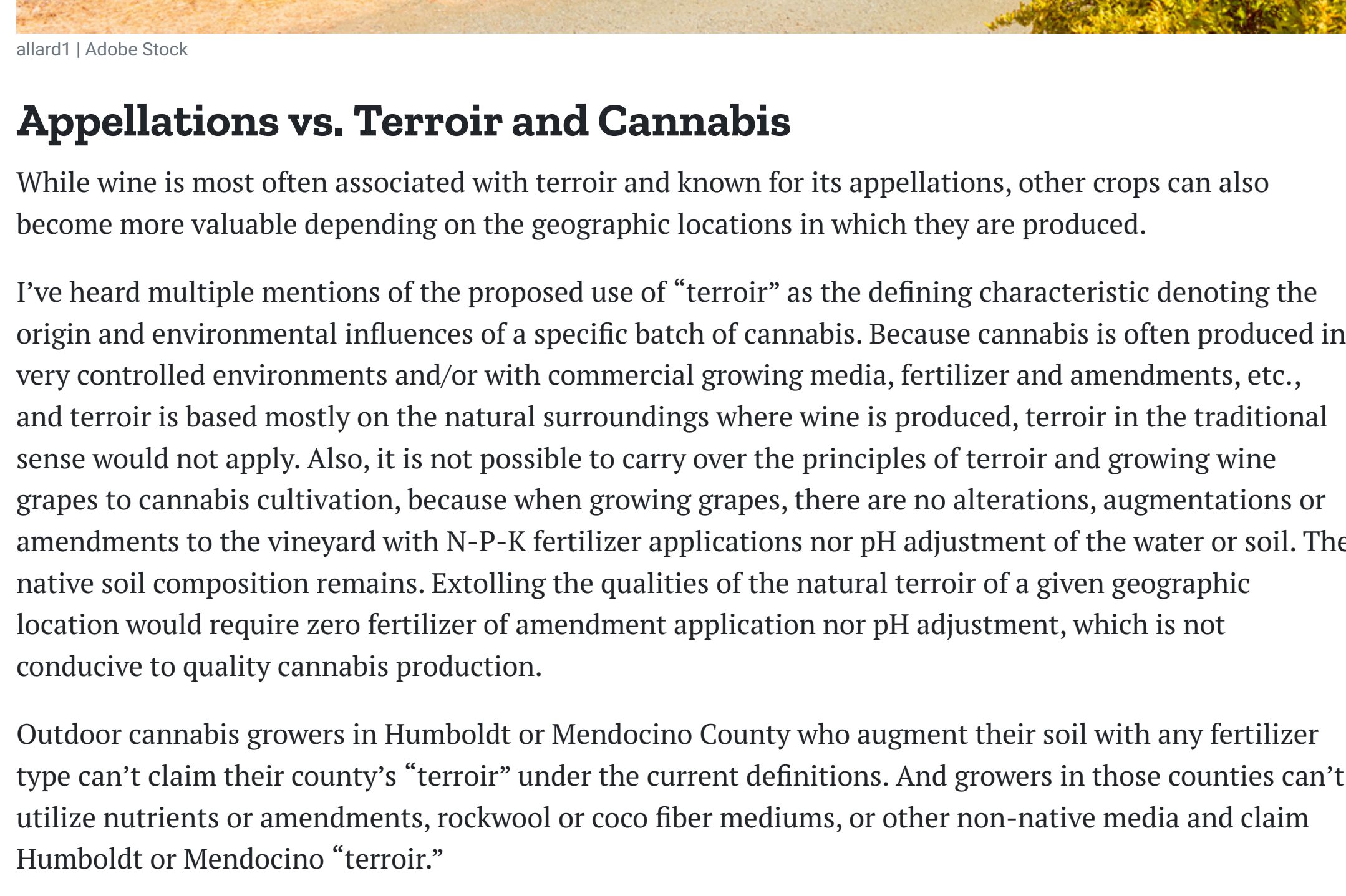
Wineries like to educate customers about the geographic origin of their wines because grapes grown in a particular area can have very distinctive qualities. Educated customers search for wines from specific AVAs as well as particular wines of certain AVAs. A certain bottle of wine from a desirable AVA can command premium prices and garner many loyal customers.

The boundaries of an AVA are defined by the Alcohol and Tobacco Tax and Trade Bureau (TTB), a department within the U.S. Treasury which defines these regions at the request of wineries and grape growers.

If a bottle of wine states the AVA on the label, at least 85% of the grapes that make up the wine must have been grown in the AVA. Furthermore, the wine must have been made in the AVA, and be fully finished within the state where the AVA is located.

Some individual states have even stricter rules. For instance, California requires that 100% of the grapes used to make the wine be from California, and that the wine be fully finished within the state. Washington state requires 95% of the grapes in a Washington wine be grown in the state.

Appellations can provide a basis for further categorization. Take, for instance, the 2005 "Declaration to Protect Wine Place and Origin," which states that "the geographic place names of wine regions are the sole birthright of the grapes that are grown there."



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Appellations vs. Terroir and Cannabis

While wine is most often associated with terroir and its appellations, other crops can also become more valuable depending on the geographic locations in which they are produced.

I've heard multiple mentions of the proposed use of "terroir" as the defining characteristic denoting the origin and environmental influences of a specific batch of cannabis. Because cannabis is often produced in very controlled environments and/or with commercial growing media, fertilizer and amendments, etc., and terroir is based mostly on the natural surroundings where wine is produced, terroir in the traditional sense would not apply. Also, it is not possible to carry over the principles of terroir and growing wine grapes to cannabis cultivation, because when growing grapes, there are no alterations, augmentations or amendments to the vineyard with N-P-K fertilizer applications nor pH adjustment of the water or soil. The native soil composition remains. Extolling the qualities of the natural terroir of a given geographic location would require zero fertilizer of amendment application nor pH adjustment, which is not conducive to quality cannabis production.

Outdoor cannabis growers in Humboldt or Mendocino County who augment their soil with any fertilizer type can't claim their county's "terroir" under the current definitions. And growers in those counties can't utilize nutrients or amendments, rockwool or coco fiber mediums, or other non-native media and claim Humboldt or Mendocino "terroir."

The federal illegality of cannabis means production and sales happen at the state level, making it a locally produced and regulated product. Although a large percentage of cannabis is grown indoors, certain regions—such as Northern California's Emerald Triangle—are already known for their robust outdoor cannabis production. The Hudson Valley region of New York could become more influential as former hemp growers prepare production for adult-use sales.

The California Department of Food and Agriculture (CDFA) has introduced regulations for a [Cannabis Appellations Program](#) to "help prevent the misrepresentation of a cannabis good's origin and promote regional collaboration around cannabis production." The CDFA Cannabis Appellations Program went into effect in January 2022.

California companies' petitions for appellations must include various descriptions, such as the proposed appellation's boundary, facility acreage, the types of structures used to cultivate in (if any), and a "description and evidence of the legacy, history, reputation, and economic importance of cannabis production in the area," according to final CDFA regulations.

I could foresee an industry-wide, multi-level system that denotes exactly where the cannabis was produced, which natural factors affected its production, who produced it and how it was produced.

Also, petitions for California appellations include information about "geographical features," such as local climates, elevations and more, per the CDFA regulations. Petitioners must provide "substantial evidence that the geographical area is distinctive when compared to areas outside the proposed boundary and to other relevant areas which produce cannabis for sale into the marketplace," according to the regulations.

California companies petitioning for appellations must also identify "at least one specific standard, practice, or cultivar requirement which acts to preserve the causal link(s) between one or more distinctive geographical feature(s) and the cannabis," the regulations state. (More information can be found at [www.cdca.ca.gov/oeif/cap](#).)

Looking Ahead

Appellations may become an important consideration and designation, especially once cannabis is legalized at the federal level and interstate commerce becomes a reality.

I could foresee an industry-wide, multi-level system that denotes exactly where the cannabis was produced; which natural factors affected its production (e.g., coastal marine layers); who produced it; and how it was produced, such as indoor versus outdoor, and whether it was produced sustainably (e.g., in small, no-till garden beds).

Aside from these minimum appellation requirements proposed, any desired characteristics could be easily incorporated into a cannabis label similar to a wine label that tells a customer exactly where and how it was produced. If producers work on a family farm or want to share their passion of and relationship with cannabis, they should put it on the label.

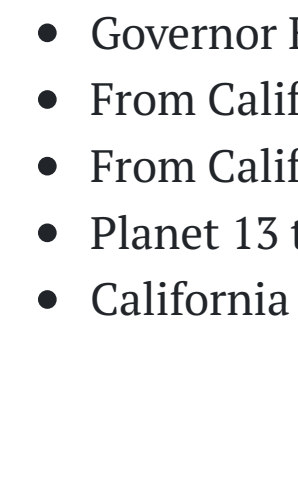
Both indoor and outdoor growers cultivating in Humboldt or Mendocino County can further state exactly which microclimate they grow in and whether it's indoor, outdoor or greenhouse. Furthermore, sustainably or not, no-till, regenerative or not, a multi-level classification system is possible to be standardized exactly the same for all states.

Possibly the best aspects of the aforementioned proposals can be formulated to create a new, consumer-friendly system to easily translate exactly where and how a given product of a batch of cannabis was produced.

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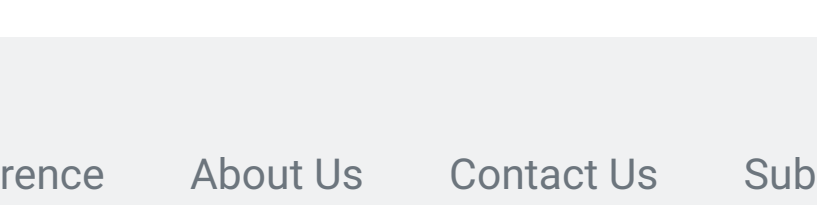
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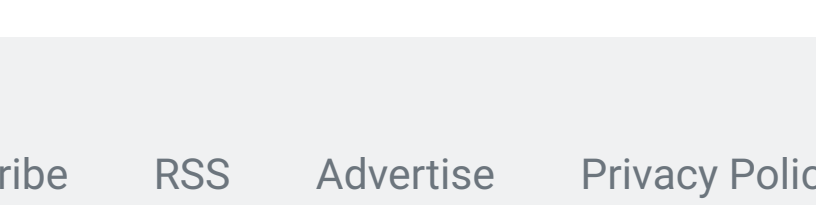
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