

FREQUENTLY ASKED QUESTIONS

Brewing Beer with Honey



National
Honey
Board™

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WHAT TYPE OF HONEY WORKS BEST IN BEER?

From a technical standpoint, any type of honey can be used in the brewing process. The United States produces more than 300 types of honey, with the colors ranging from water white to dark amber and the tastes from delectably mild to distinctively bold. Each type of honey contributes something different in terms of end-product color, aroma, rounding effect and flavor.

In lagers, brewers tend to prefer mild honeys such as clover honey. Other floral sources such as alfalfa, wildflower, buckwheat, sage or orange blossom are excellent ingredients in porters, stouts, and herb or spice beers. From a marketing standpoint, brewers also may consider using honeys which are unique to their regions or that will appeal to specific consumer segments.

HOW SHOULD HONEY BE USED IN THE BREWING PROCESS?

Brewers generally add honey to the kettle toward the end of fermentation and avoid exposing honey to high temperatures for an extended period of time. This is done to prevent the loss of honey volatiles, which contribute to the flavor of the final brew.

IS HONEY CONSIDERED A BREWING ADJUNCT?

Brewers consider honey to be a high-value functional ingredient, not just a brewing adjunct. Brewing adjuncts are typically added to extend capacity and they contribute little to the quality of the product. Honey does contribute fermentable sugars, and the ingredient also contributes a flavor and aroma of its own and adds value to beers by increasing their consumer appeal.

ARE BEERS WITH HONEY SWEET?

Not always. Honey's carbohydrates are more than 95% fermentable and adding honey early in the brewing process will yield a product with no residual sweetness. Honey is often used to obtain a lighter, dryer, more refreshing beer than an all-malt beer. However, brewers may choose to add honey late in the process and stop fermentation shortly after the addition of honey to preserve a sweet flavor. This technique yields excellent results for the development of some herb and spice beers in which honey helps balance and smooth bitter or sour-tasting flavor compounds.

DOES HONEY BEER TASTE LIKE HONEY?

The typical flavor of honey is a combination of sweetness, acidity and aromatics. Honey's carbohydrates are fermentable, so it is honey's flavor compounds that remain in beer. In other words, honey beer as it is produced in the United States does not taste like a diluted, alcoholic solution of honey.

This being said, in some countries, or in products such as mead, honey is used as the unique or major fermentable ingredient (as opposed to using malt), and these products tend to have a strong honey flavor, but they would not be marketed as "beers."

The strength of the honey flavor in honey beer depends upon four major factors: the stage of the brewing process at which the honey is added; the type of beer; the quantity of honey used; and the type of honey used. To best preserve the aromatics of honey and obtain a stronger honey flavor, brewers pre-process honey at low temperatures and add it at the end of the kettle boil so it is exposed to high temperatures for a minimal amount of time.

HOW DOES HONEY AFFECT THE FLAVOR OF BEER?

Honey influences flavor through several mechanisms. First, honey contributes its own flavor; second, honey has an impact on how the four basic tastes are perceived; and third, honey has a smoothing effect on the overall flavor profile.

The extent to which honey affects the flavor of beers depends upon the type of honey (floral source) used, the amount of honey added and the brewing technique applied.

Sensory research conducted for the National Honey Board has shown that honey can decrease the perception of sourness and bitterness.¹ When added to beer, this means that honey tends to reduce the bitterness provided by hops (to which some consumers may object) without masking the desirable flavor components that hops provide. Brewers say that honey gives a nice “roundness” to the beer, which is very desirable.

DOES HONEY REDUCE THE SHELF-LIFE OF BEERS?

There is no evidence that it does or reason that it would. In fact, brewers have reported that some honey beers improve with age. For example, the maker of a holiday spice beer, who uses one pound of honey per gallon of beer and obtains a product with a higher alcohol content, claims honey beer can be aged like wine and tastes better after two years of storage.

CAN HONEY BE USED IN LARGE-SCALE BREWING OPERATIONS?

Yes. Manufacturers who use large volumes of honey in their products often require a high level of ingredient consistency, and therefore use a blend of honeys, which is custom-prepared by suppliers. The honey industry is well equipped to supply brewers, small and large, with consistent and high-quality products.

CAN HONEY HELP A BREWERY DIFFERENTIATE ITS PRODUCTS?

Yes, honey helps brewers expand their product ranges in many ways. With more than 300 different types of honey in the United States to choose from, brewers can use honey to help them add value and attract specific consumer segments. Honey can provide consumers with a local connection to a particular floral source and help create a regional beer that is favored by locals.

ARE MELOMEL AND CYSER SOME TYPES OF HONEY BEERS?

Melomel is a type of mead which is flavored with fruits other than apple. Cyser is a type of melomel made with honey and apple juice. These products are types of meads, which are fermented beverages made from honey. Meads are sometimes called “honey wines” or “honey beers” (in the case of sparkling mead), but they are not truly beers that are grain-based.



¹ Resurreccion, A. 1995. Effect of Enhancement of the Basic Tastes and Desirable Flavors by Honey. Unpublished manuscript. Dept. of Food Science, University of Georgia, Athens, Georgia.