



# Honey in Beer

## What type of honey works best in microbrewed beers?

From a technical standpoint, virtually any type of honey can be used in the brewing process. The United States produces over 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 citrus are excellent ingredients in porters, stouts and herb or spice beers.

From a marketing standpoint, brewers may also consider using honeys which are unique to their regions or that will specially appeal to specific consumer groups.

Retailers say one reason for the growth of the microbrews is that people like to buy locally produced products. Some brewers have capitalized on this preference and even add statements on their labels such as “made with honey from our county.

## 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 products.

Please contact the National Honey Board for documents with practical recommendations for processing honey prior to usage and for incorporating honey in various types of beer.

## Is honey considered a brewing adjunct?

Brewing adjuncts are added, among other reasons, to extend capacity and they contribute little to the quality of the product. For this reason, microbrewers generally avoid brewing adjuncts. Honey does contribute fermentable sugars but it also contributes a flavor and aroma of its own and adds value to beers by increasing their consumer appeal. Honey beer is often lighter and “crisper” than all-malt beer, but it does not lack character. In the United States, there is a consensus among brewers: they consider honey to be a high-value functional ingredient, not just a brewing adjunct.

## Are all honey beers sweet?

No. Honey’s carbohydrates are over 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 manufacture 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?**

Consumers often ask this question and there is no single answer. The typical flavor of honey is a combination of sweetness, acidity and aromatics. Honey's carbohydrates being fermentable, 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" in the United States.

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 microbrewed beers?**

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" or "rounding" effect on the overall flavor profile.

Obviously, the extent to which honey affects the flavor of beers depends upon the type of honey selected (floral source), the amount of honey added and the brewing technique used. Sensory research conducted for the National Honey Board has shown that honey can decrease the perception of sourness and bitterness. 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 microbrewed 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 larger-scale brewing operations?**

Honey is used successfully in very large scale operations such as in the production of breakfast cereals. Manufacturers who use large volumes of honey in their products and who require a high level of ingredient consistency, simply use a blend of honeys which is custom-prepared for them by their suppliers. The honey industry is well equipped to supply brewers, small and large, with consistent and high-quality products.

### **How can honey help a small brewer make unique products?**

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 market segments.

sparkling mead), but they are not truly beers that are grain-based.

**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 variety 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

**Which are some of the major floral sources of honey and which ones work best in each type of beer?**

Table 1 summarizes the flavor and color profiles of some typical American honeys. Variations may occur within a floral source, depending upon the geographic origin of the honey.

Floral Source	Typical Color	Typical Flavor	Suggested Use in Beers*
<b>Clover</b>	Light	Mild	<ul style="list-style-type: none"> <li>• Herb beers, spice beers</li> <li>• Ales, brown ales, stouts</li> <li>• Light beers, dry beers</li> </ul>
<b>Alfalfa</b>	Light	Mild	<ul style="list-style-type: none"> <li>• Ales, lagers</li> </ul>
<b>Sage</b>	Light	Mild	<ul style="list-style-type: none"> <li>• Pale ales</li> </ul>
<b>Tupelo</b>	Light	Distinct, delicate	<ul style="list-style-type: none"> <li>• Ales, lagers</li> </ul>
<b>Orange Blossom</b>	Light	Mild, heavy bodied	<ul style="list-style-type: none"> <li>• Ginger, spice beers</li> <li>• Holiday beers</li> <li>• Light beers</li> </ul>
<b>Raspberry</b>	White to light	Delicate	<ul style="list-style-type: none"> <li>• Ales</li> <li>• Spice, fruit beers</li> </ul>
<b>Blueberry</b>	Medium to dark	Distinct, fruity	<ul style="list-style-type: none"> <li>• Spice, fruit beers</li> <li>• Stouts</li> </ul>
<b>Wildflower</b>	Medium to dark	Medium to strong	<ul style="list-style-type: none"> <li>• Pale ales</li> <li>• Specialty beers</li> </ul>
<b>“Industrial” blend</b>	Medium	Medium	<ul style="list-style-type: none"> <li>• Cream stouts, porters</li> </ul>
<b>Buckwheat</b>	Dark	Strong	<ul style="list-style-type: none"> <li>• Stouts, porters</li> </ul>

\*Data in this table are based recommendations made by brewers. Please note that many other floral sources exist that may yield excellent results. These are suggestions only.