An Introduction to Beer

History of Beer

Beer has been enjoyed by man for thousands of years. Historians speculate that man drank his diet in the form of beer before he ate it in the form of bread. By the time man was able to record his history in writing, approximately 5,000 years ago, the brewing industry was already well-established. By medieval times, although brewers knew what was required to ensure fermentation of certain ingredients resulting in beer, they didn't know how the process worked. For lack of scientific terminology, they simply called the process "God is Good"!

So when you suggest a cool, refreshing micro-brew to a guest, you are taking part in a tradition that dates back thousands of years. Any product that endures that long has got to be good!

Ingredients Found in Beer

Beer's basic ingredients are:

- Barley
- Hops
- Yeast
- Water

Barley is a grain that goes through a process called malting. Barley malt results when the barley grain is dampened, allowed to germinate or sprout, and then roasted. Malted barley gives beer its sweetness and body. In certain styles of beer, malted **wheat** is used in place of barley.

Some brewers use cheaper sources of sugar other than barley or wheat. These cheaper ingredients are called **adjuncts** and the most common adjuncts are corn or rice.

Hops contribute both the seasoning and natural preservatives in beer. They grow on vines and resemble small, green, fluffy "pine cones". The flower or cone of the female hop contains the necessary brewing compounds; the glands produce resins and essential oils which provide aroma and bitterness, and the baracteoles contain tannin to help clarify and preserve the brew.

Yeast is a living organism which converts sugar into alcohol and carbon dioxide.

The Beer Making Process

At its simplest level, beer results when yeast reacts with a mixture of barley, hops and water. Introduce yeast to grapes and you get wine; introduce yeast to a mixture of malted barley and water and you get beer (hops are added for additional flavoring and as a preservative).

The basic steps in making beer are:

1. Malted barley is ground, and hot water is added to convert the barley's starches to sugar.
2. The liquid (called **wort**) is drawn off and cooled to the brewing kettle and the grains are rinsed (called **sparging**).
3. The wort is brought to a rolling boil during which hops are added to enhance flavor and aromas.
4. The hopped wort is strained and cooled.
5. Yeast is added and the fermentation process begins.
6. When fermentation is complete (5-10 days) the beer is transferred off the yeast sediment to bottles or kegs (called **racking**), where it is carbonated.
7. It's beer!

Characteristics of Beer

Generally, beer displays four different characteristics:

- Color
- Aroma
- Taste
- Body

Color comes from the amount and type of roasted barley used (or type of adjunct if no barley is used). Colors can range from pale straw to amber to brown to black.

The **aroma** of beer should be a savory experience for your senses. The aroma of malted barley is sweet and intensifies with dark beers. Hops impart a pleasant, flowery, bitter aroma that balances the sweet smell of malt. Fruity aromas add to the complexity of ales' bouquet. Any unpleasant smells including skunky or leathery pungent odors indicate "off" beer.

Taste in beers ranges from sweet to bitter. The tastebuds that concentrate on sweet are located at the front of the mouth and pick up the malt tastes in beer. Bitter tastebuds are located in the back and emphasize the hop characteristics. The lingering aftertaste should be pleasing, not sour or harsh.

Body can be detected as beer rolls across the tongue. The beer can feel watery (light in body) all the way through thick and chewy (full body).

Styles of Beer

Beers are classified as either **ales** or **lagers**.

Ales are generally top fermented beers. Ale yeast works best in warmer temperatures (55-70°). Because of the relatively high fermentation temps, ales often extract more of the flavor from their ingredients than do lagers. Ales usually display fruity aromas. Ale is the most ancient style of brewing and comes from *alt* which is German for "old". Pale Ale was so named because it was pale by comparison to porter, another style of beer.

> **Stouts** and **porters** are types of ales. Their dark color and intense flavor comes from using unmalted barley and highly-kilned crystal and black patent malts. Porter gets its name from the fact that train porters served it to travelers who simply shouted "Porter!" when they were ready for another! Stout is short for "stout porter" since porter was a stout and flavorful beer.

Lagers are bottom-fermented at lower temperatures (40-50°) than ales and are usually aged for a longer period of time. Smooth and crisp tastes and aromas are displayed by lager beers. Budweiser, Coors and Heineken are common examples of lagers.

> **Bock** beer is a type of lager, brewed at the bottom of the tank. It is named after Einbeck, Germany, its original home. It has a very high alcohol content- at least 14%. Bock beer is traditionally served at the first sign of spring and is used as a warming drink.

MicroBeers

Finally, what is a microbeer? Microbeers are hand-crafted beers from small breweries made with only traditional ingredients without adjuncts and chemicals. These beers are brewed and aged slowly to allow the flavors to come through. Microbeers are fresh, traditional, and come in all the styles we have discussed. These characteristics are what make microbeers different from the large domestic brewery beers as well as the imports.