



## BEER STYLES

### Weizen

You may not realize it, but wheat beer used to be one of the most popular styles in America a century ago. Wheat was abundant and after a hot hard day working in the fields, a light, tart wheat beer is very refreshing. The most popular style of wheat beer at the time was patterned after the tart Berliner Weiss beers of Germany. Berliner Weiss is brewed using three parts wheat malt to one part barley malt and fermented with a combination of ale yeast and lactic acid bacteria. After fermentation it is dosed with a substantial quantity of young, fermenting beer (krausened), and bottled. American weissbier used similar yeast cultures, but the common practice was to use unmalted wheat in the form of grits; only about 30% of the grist was wheat. The excess of proteins in wheat cause most wheat beers to be hazy, if not downright cloudy. Hefeweizens go a step further with the beer being cloudy with suspended yeast. The thought of drinking that much yeast is appalling in a pale ale, but it really works with hefeweizens; they are quite tasty. Hefeweizen is not tart like Berliner Weiss because it are not fermented with lactic acid cultures.

Wheat beer became extinct with Prohibition in the United States, and has only been revived in the last decade. Today's American wheat beer is loosely modeled after weizen but are made with a standard, flocculant ale yeast and not the specialized German weizenbier yeasts with their spicy, clove-like character. The Noble-type hops are most appropriate for the light body and spicy character of wheats. Wheat beers are usually light, but dunkles (darks), bocks (strong) and dunkles weizenbock are common variations. Spices are often used with wheat beers; Belgian Wit uses Coriander and dried Curacua orange peel with some lactic acid sourness to produce a truly unique beer.

### Pale Ales

There is a lot of variety in the Pale Ale family. Pale is a relative term and was originally applied as pale-as-compared-to-Stout. Pale ales can range from golden to deep amber, depending on the amount of Crystal malts used. Crystal malts are the defining ingredient to the malt character of a Pale ale, giving it a honey or caramel-like sweetness. The top fermenting ale yeast and warm fermentation temperature give pale ales a subtle fruitiness. Pale ales are best served cool, about 55 °F, to allow the fruit and caramel notes to emerge.

### English Special Bitter

There are several substyles of British pale ale, these include the mild, bitter, special bitter and India pale ale. These styles share many characteristics. All are brewed from water high in sulfates for a crisp hop finish to balance the ester and malt flavors. Many examples of the style have a hint of butterscotch from the presence of diacetyl. These beers usually have what is considered a low level of carbonation. Drinkers in the United States would probably describe them as flat. The beer is brewed to a low final gravity yielding a dry finish with only a low level of residual sweetness that does not mask the hop finish. In particular, the English Special Bitter is a marvelous beer. There is a supporting depth of malt flavor with fruity overtones that adds warmth, but the hop bitterness is the distinguishing characteristic of the flavor and lingers in the finish.

### India Pale Ale

This ale was originally just a stronger version of the common pale ale, but the style has evolved a bit to today's version, which does not use as much Crystal Malt. The IPA style arose from the months long sea journey to India, during which the beer conditioned with hops in the barrel. Extra hops were added to help prevent spoilage during the long voyage. This conditioning time mellowed the hop bitterness to a degree and imparted a wealth of hop aroma to the beer. Homebrewed IPA should also be given a long conditioning time either in the bottle or in a secondary fermentor. If a secondary fermentor is used the beer should be dry hopped with an ounce of British aroma hops like East Kent Goldings. Conditioning time should be 4 - 6 weeks depending on OG and IBU levels. Stronger = Longer.

### American Pale Ale

American pale ale is an adaptation of classic British pale ale. The American Ale yeast strain produces less esters than comparable ale yeasts, and thus American pale ale has a less fruity taste than its British counterpart. American pale ales vary in color from gold to dark amber and typically have a hint of sweet caramel from the use of crystal malt that does not mask the hop finish. With the resurgence of interest in ales in the United States, American pale ale evolved from a renewed interest in American hop varieties and a higher level of bitterness as microbreweries experimented with craft brewing. The Cascade hop has become a staple of American microbrewing and is the signature hop for American pale ales. It has a distinctive citrusy aroma compared to European hops and has enabled American pale ale to stand shoulder to shoulder with other classic beer styles.

### Brown Ales

There are several kinds of brown ale, but we will only describe three variations: sweet, nutty, and hoppy. The sweet brown ales of England are made with a lot of Crystal malt and a low hopping rate. The nutty brown ales, also of England, are made with Crystal malt plus a percentage of toasted malts (e.g. Biscuit or Victory) but still a low hopping rate. The hoppy brown ales, which can be nutty also, arose from the US homebrew scene when hop-crazy homebrewers decided that most brown ales were just too wimpy. Beauty is on the palate of the beholder, I suppose. Brown Ales as a class have grown to bridge the gap between Pale Ales and Porters. I will present a basic American brown ale and include a nutty option. Contrary to popular myth there are no nuts or nut extracts in classic brown ales; toasted malts give the beer a nut-like flavor and nut brown color.

### Porter

A porter is an ale with a dark color and very malty flavor with a bit of a roasted finish. A porter differs from a brown ale by being stronger, more full bodied and darker with more of a roasted malt finish, but less so than a stout. Porters should be fairly well attenuated (dry), though sweet porters are not uncommon. Compared to stout, a porter should be lighter in both body and color. When held up to the light, a porter should have a deep ruby red glow.

Historically, porters preceded stouts and had a much different character than today. This difference can be described as a tartness or sourness imparted by both the yeast and the malt. Porter used to be brewed and stored in wooden barrels that harbored a yeast called *Brettanomyces* which imparts a secondary fermentation characteristic commonly described as "horse sweat". Another one of those acquired tastes. The other dominant note was from the use of Brown Malt, which was used as the base malt. The beer was then aged for about 6 months before serving. The aging time was necessary for the rough flavors of the brown malt to mellow. My Santa Nevada Porter, an all-grain recipe listed at the end of the Porter section, uses brown malt and does indeed benefit from 4 months of conditioning time. What starts out as harshly bitter-malt beer turns into a sweeter, smooth elixir. It is a very good beer if you are careful to not to oxidize it during the brewing and let it age for several months before drinking.

## Stout

Arguably one of the most popular styles among homebrewers, stouts vary a lot in flavor, degree of roastiness, and body. There are dry stouts, sweet stouts, export stouts, oatmeal stouts, coffee stouts and more besides. The one defining characteristic of a stout is the use of highly roasted malts and/or unmalted roast barley. The most popular, Guinness Extra Stout, is the defining example of Irish dry stout and uses only pale malt, unmalted roast barley and flaked barley; no crystal malt is used. English stouts tend to be of the sweet stout style and will include chocolate and crystal malts. Some English stouts do not use any black malt or roast barley at all. Export stouts are brewed to a very high gravity, 1.075 - 1.100 with a huge complexity of flavors, sweet and tarry, fruity and quite bitter. Oatmeal stouts are my favorite, being a sweet / Irish stout with the smooth silkiness of oatmeal added in. Coffee stouts are another homebrew favorite, the taste of coffee perfectly complements the roast character of a stout.

## Pilsner

Beer as the world knew it changed dramatically in 1842 when the brewery in the town of Pilsen (today part of the Czech Republic) produced the first light golden lager. Until that time, beers had been rather dark, varying from amber ("pale"), to deep brown or black. Today Pilsner Urquell is that same beer, "the Original of Pilsen." The original Pilsner beer is a hoppy, dry beer of 1.045 OG. The Pilsner style is imitated more than any other and interpretations run from the light flowery lagers of Germany to the maltier, more herbal versions of the Netherlands, to the increasingly tasteless varieties of Light and Dry from the United States and Japan. Most of these are broadly in the Pilsner style but lack the assertive noble hop bitterness and flavor of the original.

Brewing a true pilsner can be fairly difficult, especially from an all-grain point of view. Pilsen has very soft water, the next closest thing to distilled water and the malt flavors are very clean and fresh. There is no place for an off-flavor to hide. The use of only base malt makes maintaining a proper mash pH difficult, especially during lautering, for brewers using moderately hard water. Water that is high in carbonates has too much buffering capacity for the meager amount of acidity provided by the malt. When brewing an all-grain pilsner, it is often best to use a large proportion of distilled or de-ionized water to provide the right mash conditions and prevent tannin astringency.

## Bock

Bock beer is an old style, most likely introduced in Munich about 1638. The style grew out of the then world-famous beer of Einbeck. It was a strong beer brewed from 1/3 wheat and 2/3 barley with a pale color, and crisp taste with a hint of acidity. (The acidity was a carryover from the sour wheat beers of the day.) It was brewed as an ale, but was stored cold for extended periods. Einbecker beer was widely exported and was the envy of the region.

For years, the nobles of Munich tried to imitate the strong northern beer in their breweries with limited success. Finally in 1612, the brewmaster of Einbeck was persuaded to go south and work on producing a strong beer for Munich. The beer was released in 1638, a strong beer interpretation of the Munich Braunbier, a rich malty brown ale. The classic Munich Bock beer is a lager with an assertive malt character, a warmth from the higher alcohol level and only enough hop bitterness to just balance the sweetness of the malt. Bock and its big monastic brother, Doppelbock, should not have any fusel alcohol character nor any of the fruitiness of ales.

Doppelbock is a descendent of the heavy rich beers of the Paulener Monks, who brewed this beer as liquid bread for their fasts at Lent and Advent. They named their beer, "Salvator" and many breweries brewing in this style have appended -ator to their beer's names. Today, Doppelbock has a higher contribution of roasted malt, yielding hints of chocolate or vanilla. These beers are fermented cold to force the yeast to take their time in consuming the high gravity worts. The beer is lagered for a long period to encourage the yeast to reduce any off flavors that would detract from the malt taste.