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ENGLISH BARLEYWINE

English Barleywine

by Jamil Zainasheff

One of the classic examples of English barleywine is Thomas Hardy's Ale. Some years ago a friend invited me to a vertical tasting of Thomas Hardy's Ale. He had been purchasing and cellaring each vintage since 1988. More than a dozen years later, he was ready to see how each had matured over time.

The barleywine was a 12% ABV, bottle-conditioned beer, and many people claimed that it should be laid down for five to ten years or more before drinking. I was thrilled at the opportunity to taste it, since the beers were, at that time, already quite rare. Some of the later vintages were very good, showing the complexity that develops as the alcohols and malts oxidize and chemically change over the years. The older samples had already become Madeira-like with heavy oxidation and some of the oldest had some sour notes. I found the experience very educational, learning that some beers age better than others and it has almost as much to do with the brewer and the ingredients as it does the storage conditions. It also made me appreciate English barleywine and how complex it can become with a little age.

English barleywine is rich and strong, with a focus on malty richness and complex fermentation and aging flavors. Young examples start out with more bready or biscuit characteristics, with moderate hop character and young fruity esters. As they age, the malt character takes on more sweet caramel notes and the ester profile takes on some dried and dark fruit notes. While alcohol is present and warming, it is never hot or harsh. The same could be said about the hop bittering and hop character. While the bittering is firm enough to balance any malt sweetness, it is never sharp or biting. Hop character can be moderate in younger examples, but as the beer ages, much of the character fades to a background note. The color of the beer should range from rich gold to very dark amber and the mouthfeel should be full and rich, with a smooth texture.

To brew a great example of this style, start with British pale ale malt as the base. It provides that background biscuit-like malt character that is a key component in fine British beers. British pale ale malt is kilned a bit darker (2.5 to 3.5 °L) than the average American two-row or pale malt (1.5 to 2.5 °L) and this higher level of kilning brings out the malt's biscuity flavors. Some brewers use North American pale ale malt or North American two-row with the addition of 5 to 10% Munich malt if they can't source British pale ale malt. This will not produce the same beer as a British pale ale malt, but it can produce a pleasant malt background.

Extract brewers should make the effort to source an extract made from British pale ale malt. If you use North American two-row malt extract, you must compensate by partial mashing some additional specialty malts such as Munich, biscuit or Victory®. For a 5-gallon (19-L) batch, use about 5 to 10% of the total base malt.

All-grain brewers should use an infusion mash. A temperature in the range of 149 to 154 °F (65 to 68 °C) works well. Use a lower temperature when using lower attenuating yeasts or higher starting gravities. Use a higher mash temperature when using the higher attenuating yeasts or lower starting gravity beers. A great starting point is 152 °F (67 °C).

While English barleywine is a rich, malty beer, much of that comes from the base malt and extended boiling times. Do not overload your beer with lots of crystal malts: 5% is

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ENGLISH BARLEYWINE
by the numbers

OG:	1.080–1.120 (19.3–28.1 °P)
FG:	1.018–1.030 (4.6–7.6 °P)
SRM:	8–22
IBU:	35–70
ABV:	8.0–12.0%

English Barleywine

(5 gallons/19 L, all-grain)

OG = 1.100 (23.8 °P)
FG = 1.024 (6.0 °P)
IBU = 63 SRM = 16
ABV = 10.2%

Ingredients

19.3 lbs. (8.75 kg) Crisp English pale ale malt (or similar)
8.8 oz. (250 g) Franco-Belges caramel Munich malt (60 °L) (or similar)
8.8 oz. (250 g) Great Western crystal malt (120 °L) (or similar)
13.75 AAU Target pellet hops (1.25 oz./36 g at 11% alpha acids) (60 min.)
2.5 AAU Kent Goldings pellet hops (0.5 oz./14 g at 5% alpha acids) (15 min.)
2.5 AAU Kent Goldings pellet hops (0.5 oz./14 g at 5% alpha acids) (0 min.)
White Labs WLP013 (London Ale), Wyeast 1028 (London Ale) or Danstar Nottingham yeast

Step by Step

Mill the grains and dough-in targeting a mash of around 1.5 quarts of water to 1 pound of grain (a liquor-to-grist ratio of about 3:1 by weight) and a temperature of 150 °F (66 °C). Hold the mash at 150 °F (66 °C) until enzymatic conversion is complete. Infuse the mash with near boiling water while stirring or with a recirculating mash system raise the temperature to mash out at 168 °F (76 °C). Sparge slowly with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 7.1 gallons (27 L) and the gravity is 1.070 (17.1 °P). If you should come up short on the pre-boil gravity, top it off with some pale malt extract.

The total wort boil time is 120 minutes. This helps concentrate the wort and aids in the development of flavor compounds. The first hop addition comes with 60 minutes remaining in the boil. Add the Irish moss or other kettle finings and the second hop addition with 15 minutes left in the boil. Add the last hop addition at flame out.

Chill the wort to 68 °F (20 °C) and aerate thoroughly. The proper pitch rate is 17 grams of properly rehydrated dry yeast, three packages of liquid yeast, or one package of liquid yeast in a 6-liter starter. Ferment at 68 °F (20 °C) to start, raising the temperature gradually to 70 °F (21 °C) for the last ⅓ of fermentation. When finished, carbonate the beer to approximately 1.5 to 2 volumes.

English Barleywine

(5 gallons/19 L, extract with grains)

OG = 1.100 (23.8 °P)
FG = 1.024 (6.0 °P)
IBU = 63 SRM = 16
ABV = 10.2%

Ingredients

12.8 lbs. (5.82 kg) Muntons English pale liquid malt extract
8.8 oz. (250 g) Franco-Belges caramel Munich malt (60 °L) (or similar)
8.8 oz. (250 g) Great Western crystal malt (120 °L) (or similar)
13.75 AAU Target pellet hops (1.25 oz./36 g at 11% alpha acids) (60 min.)
2.5 AAU Kent Goldings pellet hops (0.5 oz./14 g at 5% alpha acids) (15 min.)
2.5 AAU Kent Goldings pellet hops (0.5 oz./14 g at 5% alpha acids) (0 min.)
White Labs WLP013 (London Ale), Wyeast 1028 (London Ale) or Danstar Nottingham yeast

Step by Step

I use an English pale liquid malt extract, so feel free to substitute any high quality malt extract of a similar flavor and color from a different supplier. Always be sure to choose the freshest malt extract that fits the beer style. If you cannot get fresh liquid malt extract, it is better to use an appropriate amount of dried malt extract (DME) instead, since it does not oxidize nearly as fast and tends to be fresher.

Mill or coarsely crack the specialty malt and place loosely in a grain bag. Avoid packing the grains too tightly in the bag, using more bags if needed. Steep the bag in about 1 gallon (~4 liters) of water at roughly 170 °F (77 °C) for about 30 minutes. Lift the grain bag out of the steeping liquid and rinse with warm water. Allow the bags to drip into the kettle for a few minutes while you add the malt extract. Do not squeeze the bags. Add enough water to the steeping liquor and malt extract to make a pre-boil volume of 7.1 gallons (27 liters) and a gravity of 1.070 (17.1 °P). Stir thoroughly to help dissolve the extract and bring to a boil.

The total wort boil time is 120 minutes. This helps concentrate the wort and aids in the development of flavor compounds. The first hop addition comes with 60 minutes remaining in the boil. Add the Irish moss or other kettle finings and the second hop addition with 15 minutes left in the boil. Add the last hop addition at flame out. Chill the wort to 68 °F (20 °C) and aerate thoroughly.

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a good amount and 10% is about the maximum. I prefer to use darker color crystal malts (60 to 150° L), which add rich color, as well as some dark caramel, toasty, roasted, and raisin flavors. Lighter color crystal malts (10 to 40 °L) add sweeter caramel notes, which can make a big beer seem more candy-like.

If you are looking for more complexity or increased head retention, you can add other malts as well. Wheat malt, Victory®, biscuit and others are common additions in many recipes, but restraint is important so that the beer does not become saturated with non-fermentable dextrins and cloying flavors. In general, keep the total of all specialty grain additions to less than 15% of an all-grain grist. Avoid more than small additions of highly kilned malts, as roasted flavors are not appropriate. Color in this style comes mainly from crystal malts and longer boil times. If you want to develop more color and more melanoidin-based flavors and aromas, start with a larger pre-boil volume so you can boil the wort for two hours or more. This develops a certain character that is not possible by using grain additions alone.

English-style beer is best brewed with English hops, such as East Kent Goldings, Fuggles, Target, Northdown or Challenger. The bittering level for English barleywine is in the range of 35 to 70 IBU. You want enough hop bitterness to balance any residual sweetness, without overwhelming the malt background. There are many factors at play in the final impression of bitterness for the drinker. The starting and final gravities, the character malts selected, the type of base malt, the yeast strain, the pitching rate, and even the yeast cell size all have an impact on the perceived bittering. One additional factor is the amount of time before drinking. You may want to shoot a tiny bit higher on bittering if your expected drinking date is a year or more out. A bitterness-to-starting gravity ratio (IBU divided by OG) between 0.4 and 0.8, should be close. I tend to target around 0.6 to 0.7, because I expect to drink the beer after a period of aging. As a general rule of thumb in determining late hop amounts, include an amount equal to the amount of bittering hops. This is just a generalization, since using very low or high alpha acid hops makes the equation faulty. One or two late hop additions, totaling around 1 to 2 oz (28 to 57 g) for a 5-gallon (19-L) batch at 20 minutes or later, should be about right. Keep in mind hop flavor and aroma should not overwhelm the malt character even when the beer is young.

Fermentation creates most of the flavor and aroma in many British beers. "English" yeast strains provide a variety of interesting esters and leave some residual sweetness to balance a bitter beer. Many English yeasts tend to attenuate on the lower side (< 70%), but for an English barleywine you want to choose one of the more attenuative English yeasts (> 70%). While you should expect some malt sweetness in the finish, using a low-attenuating yeast in a big beer will result in a beer that is too heavy and sweet. My favorites for this style are White Labs WLP013 (London Ale) and Wyeast 1028 (London Ale) yeast. They both provide a wonderful ester profile without being excessively fruity, and they attenuate a little more than most English yeasts. If you like to experiment with different yeasts, try to select English yeasts that attenuate in the mid 70s percent or higher. If you prefer dry yeast, Danstar Nottingham should produce acceptable results.

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At lower temperatures (<65 °F/18 °C), these yeasts produce a relatively low level of esters and at high temperatures (>70 °F/21°C) they produce abundant fruity esters and fusel alcohol notes. I start fermentation in the middle of this range (68 °F/20 °C), letting the temperature rise a few degrees, slowly over a couple days. This creates the expected level of esters, helps the yeast attenuate fully, and keeps the amount of diacetyl in the finished beer to a minimum. If your situation restricts you to using less attenuative yeast, you will need to take steps to ensure enough attenuation. For barleywine you can lower the mash temperature or replace a portion of the base malt with simple sugar to help dry out the final beer.

Serving English barleywine at cellar temperature, around 52 to 55 °F (11 to 13 °C), allows the character of the beer to come out and can improve drinkability. Colder temperatures prevent the drinker from picking up the interesting fermentation and malt flavors and aromas of this style, so do not go below 50 °F (10 °C). Target a carbonation level around 1.5 to 2 volumes of CO_2. Once this beer is finished fermenting, a long aging period does wonderful things for the beer. Yes, you might be tempted to drink it after just a couple weeks, but try to set aside some bottles in a cool place and enjoy them over the years. BYO