

# Pre-Prohibition Porter – Knights of the Mashing Fork / August 2019

## History

Recognized in the latest revision of BJCP guidelines in 2015, pre-prohibition porter is a style of beer brought to the New World by English colonists during the early days of the United States and adapted to the local ingredients and by other immigrants to the burgeoning United States.

Sometimes referred to as a “Pennsylvania Porter,” a “Philadelphia Porter,” or an “East Coast” Porter, Pre-Prohibition Porter has a lengthy history, drawing on both the English and German brewing legacy that could be found in Colonial Pennsylvania right up through Prohibition.

Robert Hare of Philadelphia is credited with the first commercial porter production in America, dating back to the struggle for independence in 1776. An anti-Imperialist, Hare was forced to flee to Virginia during the British occupation of Philadelphia in 1777–1778 where the occupying Tory troops enjoyed his inventories. After returning to brewing in 1778, Hare’s porter was in great demand by none other than George Washington whose 1789 “Buy American” policy prompted the first president to state that he would drink only porter made in America. Much of this porter came from Hare’s brewery.

While early American Porters were ales like their English cousins, the style was so popular that as German immigrants brought lager yeasts to America in the mid 1800s, many German brewers brewed porters with lager yeasts. This allowed porters to be brewed as lagers, giving them a cleanliness that was a change from the fruitier ale yeast strains that had been used.

Some porters were **brewed porters** that were essentially made the way most beers are typically made. Dark malts were added to the grist which imparted the color and any roasted character.

The other porters were what is called **rack and brew porters**. Brewers would make a pale beer which was often a pale ale, cream ale, or lager, and then rack the beer onto a darkening agent. The most common agent used was **porterine**. Porterine is frequently made with corn syrup which is boiled down until it’s black in color. If you have ever tasted a dark beer made by a macro brewer with no discernible roasted or dark malt character, it may well have been darkened with a similar coloring agent. Yuengling Porter is reportedly a rack and brewed porter fermented with lager yeast.

### Porterine:

According to Bernard Black of Mangel, Scheuermann & Oeters, Inc. (Huntingdon Valley, Pennsylvania), Porterine “is a trade name of a caramel color derived strictly from corn syrup. This product was originally formulated by The U.S. Malt Company to provide colloidal compatibility with malt beverage protein.” Mangel, Scheuermann & Oeters is the current trademark holder and continues to supply Porterine to the brewing industry. Its function today is still to convert regular beer into porter. Some brewpubs and microbreweries use the product to make color adjustments to their beers as well. Porterine has a dark brown color (878 °L) and a specific gravity of 1.386.

This dark syrupy liquid was composed of extract, dextrose, and other nonfermentables. Brewers added Porterine to the pilsner wort not only for color adjustment, but also to approximate the qualities of porter that otherwise required the use of various other malts not often found at a brewery geared toward American pilsner production.

## Style

By today's standards, American porters' hopping rates were quite high until just after Prohibition. Low hop flavor, low biscuit or caramel, low chocolate and coffee roast, low adjunct notes – this beer is far from flavorless, but it is restrained, especially in comparison to the aggressively robust American Porter. Much like the Pre-Prohibition Lager, this is an “Americanized” version of an existing style in the colonial sense – brewed using what was available in early America – rather than in the “extreme” sense, as we see with many other styles. For all its restraint, though, brewers err when they make this beer too nondescript.

American porters had no tax restrictions like English brewers and therefore continued to be of a higher gravity (above 1.061 O.G.) until Prohibition, though exceptions to this rule could be found. After Prohibition, original gravities of porter were lowered considerably to 1.040–1.061.

**Assoc of Brewers:** Pennsylvania porter: Pennsylvania porter is the classic American porter of the 19th and early 20th centuries. It is a bottom-fermented, ester-free beer with fair-to-medium mouthfeel that will dry toward the end of the taste and may also include slight diacetyl and burnt malt components. Typically, malt and hops are balanced (O.G. 1.049–1.053; IBUs 20–25), and the hops are characteristically American. It is brown/black in color with red tints or a mahogany cast in the glass

**BJCP:** An American adaptation of English Porter using American ingredients, including adjuncts.

**Aroma:** Base grainy malt aroma with low levels of dark malt (slight burnt or chocolate notes). Low hop aroma. Low to moderate low levels of DMS acceptable. May show low levels of caramel and biscuit aroma. No to very low esters. Light adjunct (licorice, molasses) aroma acceptable. Diacetyl low to none. Clean lager profile acceptable.

**Appearance:** Medium to dark brown, though some examples can be nearly black in color, with ruby or mahogany highlights. Relatively clear. Light to medium tan head which will persist in the glass.

**Flavor:** Grainy base malt flavor, with low levels of chocolate or burnt black malt notes, along with low levels of caramel, biscuit, licorice, and toast notes. Corn/DMS flavor acceptable at low to moderate levels. American hop bitterness low to moderate and American hop flavor low to none. Balance is typically even between malt and hops, with a moderate dry finish.

**Mouthfeel:** Medium light to medium body, moderate carbonation, low to moderate creaminess. May have a slight astringency from the dark malts. Comments: Sometimes known as Pennsylvania Porter or East Coast Porter.

**Characteristic Ingredients:** Two and six row malt (or a combination of both) are used, along with low percentages of dark malts including black, chocolate, and brown malt (roasted barley is not typically used). Adjuncts are acceptable, including corn, brewers licorice, molasses, and porterine. More historical versions will have up to twenty percent adjuncts. Lager or ale yeast. Emphasis on historical or traditional American bittering hops (Cluster, Willamette, Cascade), though finishing and flavor hops may vary.

**Style Comparison:** Smoother and less hoppy-bitter than a (modern) American Porter, less caramelly than an English Porter with more of an adjunct/lager character.

<b><u>Vital Statistics:</u></b>	OG: 1.046 – 1.060	FG: 1.010 – 1.016
IBUs: 20 – 30	SRM: 18 – 30	ABV: 4.5 – 6.0%

## Traditional Ingredients:

**Ideal base malt:** 6-row from Sugar Creek Malting Co. This 6-row is kilned to a darker color (6 – 8 SRM) than most standard base malts and has a good bready flavor and a deep nuttiness that is wonderful in dark beers.

**Specialty Malts:** To replicate brown malt, try Victory or, if available, mild ale malt for up to 35% of the grain bill. Munich malt can also be used.

An American brewing book from 1852 shows the grain bill for porter to include one-third “porter-malt”. We can assume the malting technology of the day to have been equal to that in Britain, so Americans likely produced porter malt by choice rather than for reasons of economy of scale. British porters, on the other hand, used black malt precisely because of its economy. Further evidence to support this opinion comes from Wahl-Henius, who even by 1908 still recommended “a mixture of high and low kiln-dried malts”.

**Adjuncts:** Most of the barley grown in the US was 6-row barley which is higher in protein and enzymes than 2-row barley. To compensate for the type of malt and its relative scarcity, early American brewers used adjuncts like corn, sugar, molasses, or anything fermentable that could be found

Burnt sugar can be used to replicate porterine: <https://www.amazon.com/dp/B07PF7J65P/>

**Yeast:** For PA/Philly style, I recommend using S05 or WY1007 German Ale Yeast at cool fermentation temperatures, or a lager strain: WY2035, WY2035, WLP840, WLP830. For ale-style PPPorters, use WLP008 East Coast Ale. Fairly clean English strains can also be used like WLP005, WY1098, SafAle S33.

## Today's Commercial Techniques

Ray Norbert, Yuengling's veteran brewmaster of 50 years, continues to produce porter not unlike the recipes of the 1940s. The company's Pottsville Porter is a 1.048 OG bottom-fermented beer using six-row base malt with corn grits and 50L caramel and black malt. “There is a balance between black and caramel malt,” Norbert said. “Otherwise, too much black malt will leave a coarse, burnt flavor.” Hops include Cluster and Cascade, with IBUs ranging between 22 and 24.

Stegmaier's porter is still produced, albeit at the Lion Brewery. Former Stegmaier brewmaster Leo Orlandini produces a top-fermented porter in the tradition of pre-prohibition porters. At 1.060 OG, it is based on a grain bill of two-row base malt and 60L crystal and chocolate malt. The hopping rate produces a beer with IBUs between 28 and 30 using Cascade, Tettnang, and Kent Goldings. The company also makes a caramel porter as a seasonal; it uses 60L crystal as 15% of the grist.

## Sample Five Gallon Recipes:

### Ben Franklin Porter (Courtesy of Lou Farrell, Thunder Bay Brewing Co.)

*Similar to Justin's Test Batch:*

- 9 lb Two-row malt
- ½ lb Chocolate malt
- ½ lb Crystal 80L
- 6 oz Dark blackstrap (no sulfur) molasses
- 2 oz Black malt
- ¾ oz Bullion at beginning of boil
- ¾ oz B.C. Kent Goldings at beginning of boil
- Wyeast Irish (#1084) or European (#1338) ale yeasts
- O.G. 1.057 / F.G. 1.014

Mash malt at 154 °F for 70 minutes, sparge, and add one charge of hops at the beginning of the boil. Add molasses to the kettle 30 minutes before the end of the boil.

*The next two combined are similar to Bryan's Test Batch:*

### Pennsylvania Porter

- 9 lb Six-row malt
- 1 lb Flaked maize
- ¾ lb Crystal 60L
- 4 oz Black malt
- 2/3 oz Cluster hops (boil 60 minutes)
- ¾ oz Styrian Golding or Willamette hops (boil for 45 minutes)
- ¼ oz Brewers' licorice (optional)
- Wyeast New Ulm or St. Louis American lager yeasts
- O.G. 1.050 / F.G. 1.012

Dough in malt and maize at 100 °F, then protein rest at 122 °F for 20 minutes, then to 156 °F for 40 minutes and sparge. Boil for 60 minutes with hop additions at the beginning. Fifteen minutes into the boil, add licorice (optional) and allow it to boil for the remaining 45 minutes.

### Happy Valley

- 7 lb Two- or six-row malt
- 5 lb Mild ale, Munich, or Victory malt
- 1 lb Crystal 60L
- ½ lb Cara-Munich malt
- 4 oz Chocolate malt
- 4 oz Black malt
- 1 oz Perle hops (boil 60 minutes)
- 1 oz Liberty or Mt. Hood hops (boil 45 minutes)
- Wyeast California Common (#2112) lager yeast
- O.G. 1.064 / F.G. 1.016

Dough in malt at 100 °F, then protein rest at 122 °F for 20 minutes, followed by step infusions at 144 and 156 °F for 30 minutes each, and then sparge. Caramelize a small portion of the wort (1 L) in the kettle for 10 minutes, then boil the remainder of wort for 60 minutes with hop additions at the beginning and 15 minutes into the boil.