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SAISON



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Saison

by Jamil Zainasheff

SAISON by the numbers

OG: . . . 1.048–1.065 (11.9–15.8 °P)
FG: 1.002–1.012 (0.5–3.1 °P)
SRM:5–14
IBU:20–35
ABV:5–7%

Sometimes I think defining saison is a lot like defining pornography: I know it when I see it (or rather, taste it). There is such a wide variation in the farmhouse ales of Wallonia (the French-speaking part of Belgium), that I think it is foolish to state that a beer brewed by one brewery is a saison and another beer is not simply because of relatively small differences in color, strength, or bitterness. The Beer Judge Certification Program (BJCP) takes the approach of placing such beers in the Belgian specialty category. That is not an unreasonable approach, but it does seem somewhat limited.

The BJCP defines saison as, “A refreshing, medium to strong fruity/spicy ale with a distinctive yellow-orange color, highly carbonated, well hopped, and dry with a quenching acidity.” Many knowledgeable people would argue with many elements of that statement, but we should not discount it completely. It does accurately describe a portion of the beers that most of us would call saison.

The best way to “define” saison might be to look at the intent of the brewers back in the day. In theory, they brewed this beer at the end of the fall for drinking over time through the warmer months. It had to be big enough to last for most of the year but not so strong that it was not quenching and refreshing in the summer. They used many local ingredients, and I have read that perhaps it was a method of storing excess grain.

Let us focus on the narrower BJCP example. This is a beer of high fruitiness (think citrus such as oranges and lemons) with little hop aroma of a spicy or floral character. Light spicy notes from yeast or spice additions are often present. The appearance ranges from golden to pale orange to amber in color. Malt character is low and leans more toward bready than

toasty. The BJCP talks about tart sourness, but that is a function of storage time and bacteria levels. I would bet that the brewers of old started to consume their beer as soon as it was fermented and carbonated. If it was a good drink later as it soured, that was fine too. One thing that I think was important to the beer is adequate attenuation. If this were a beer to be consumed during the work of spring and summer, then a dry, refreshing finish would be important.

The base malt for this style is continental Pilsner malt. Pilsner malt lends a slightly sweet, grainy malt character to the beer. If you can source it, Belgian Pilsner malt is ideal. If you cannot, do not worry, even the Belgian brewers use other continental Pilsner malts. If you are an extract brewer, try to use an extract made from Pilsner malt. While it may seem like it is not worth the trouble, a beer like this does not have a lot of specialty malts to hide behind, so it is important to use a good quality Pilsner malt extract. While you could use just Pilsner malt, I think a portion of Munich, Vienna or wheat is a good addition. It adds that bready malt character without being overly sweet. If you are going to experiment, keep the bulk of the specialty malts targeted on the grainy/bready malt flavors (such as biscuit, aromatic, Vienna, or Munich) and not the sweet ones (crystal/caramel malts). However, a small amount of crystal malt can help dial in that orange-type color of the classic examples. Just be sure that you do not overdo it and end up with a too sweet caramel character. Some table sugar, especially for extract brewers, will help the beer finish dry and light. Keep the non-Pilsner malts around 10% of the total grist and the table sugar around the same.

Since this is a beer with a crisp finish, all-grain brewers should target a mash temperature around 149 °F



Saison Ale

(5 gallons/19 L, all-grain)

OG = 1.060 (14.8 °P)

FG = 1.008 (2.0 °P)

IBU = 27 SRM = 5 ABV = 6.9%

Ingredients

9.37 lbs. (4.25 kg) Best Malz continental Pilsner malt (2 °L)
0.88 lb. (400 g) cane or beet sugar (0 °L)
0.66 lb. (300 g) Best Malz Munich malt (8 °L)
0.66 lb. (300 g) Great Western wheat malt (2 °L)
0.66 lb. (300 g) Malteries Franco-Belges Caramel Munich malt (60 °L)
5.64 AAU Hallertau pellet hops (1.41 oz./40 g at 4% alpha acids) (60 min.)
3.36 AAU Hallertau pellet hops (0.84 oz./24 g at 4% alpha acids) (0 min.)
White Labs WLP565 (Saison Ale) or Wyeast 3724 (Belgian Saison) yeast

Step by Step

Belgian Pilsner malt would be the natural choice for the base malt, but you can substitute any high quality malt of a similar flavor and color from a different supplier.

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 149 °F (65 °C). Hold the mash at 149 °F (65 °C) until enzymatic conversion is complete. With the low mash temperature, you may need to lengthen the rest time to 90 minutes or more to get full conversion. 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 6.5 gallons (24.4 L) and the gravity is 1.047 (11.6 °P).

The total wort boil time is 90 minutes, which helps reduce the S-Methyl Methionine (SMM) present in the lightly kilned Pilsner malt and results in less Dimethyl Sulfide (DMS) in the finished beer. Add the bittering hops with 60 minutes left in the boil. Add the sugar and Irish moss or other kettle finings with 15 minutes left in the boil. Add the last hop addition just before turning off the burner. Chill the wort rapidly to 68 °F (20 °C), let the break material settle, rack to the fermenter, pitch the yeast and aerate thoroughly.

You will need two packages of liquid yeast or for better results you can make a 2-L starter from one package. Pitch yeast at 68 °F (20 °C), aerate or oxygenate, and let the temperature rise slowly to 82 °F (28 °C) over the course of one week. Ferment until the yeast drops clear. With healthy yeast, fermentation should be complete in a week, but do not rush it. It is important for the beer to attenuate fully. When finished, carbonate the beer to approximately 3 volumes and serve at 45 to 50 °F (7 to 10 °C).

If you have trouble getting enough attenuation, you can hold off on adding the sugar to the boil. Instead, after the fermentation looks like it has started to slow, mix the sugar with just enough boiling water to make a syrup, then add that to the fermentation. This should encourage the yeast to consume the longer sugars before you add a substantial amount of simple sugar.

Saison Ale (5 gallons/19 L,

extract with grains)

OG = 1.060 (14.8 °P)

FG = 1.008 (2.0 °P)

IBU = 27 SRM = 5 ABV = 6.9%

Ingredients

6.6 lbs. (3 kg) Pilsner liquid malt extract (LME) (2 °L)

0.88 lb. (400 g) cane or beet sugar (0 °L)

0.66 lb. (300 g) Best Malz Munich malt (8 °L)

0.66 lb. (300 g) Great Western wheat malt (2 °L)

0.66 lb. (300 g) Malteries Franco-Belges Caramel Munich malt (60 °L)

5.64 AAU Hallertau pellet hops (1.41 oz./40 g at 4% alpha acids) (60 min.)

3.36 AAU Hallertau pellet hops (0.84 oz./24 g at 4% alpha acids) (0 min.)

White Labs WLP565 (Saison Ale) or Wyeast 3724 (Belgian Saison) yeast

Step by Step

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 $\frac{3}{4}$ gallon (~3 liters) of water at roughly 155 °F (68 °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 5.9 gallons (22.3 liters) and a gravity of 1.051 (12.6 °P). Stir thoroughly to help dissolve the extract and bring to a boil.

Once the wort is boiling, add the bittering hops. The total wort boil time is 60 minutes after adding the bittering hops. Add the sugar and Irish moss or other kettle finings with 15 minutes left in the boil. Add the last hop addition just before turning off the burner. Chill the wort rapidly to 68 °F (20 °C), let the break material settle, rack to the fermenter, pitch the yeast and aerate thoroughly.

Follow the remaining fermentation and packaging instructions for the all-grain version.

(65 °C), regardless if this is a bigger or lighter example of the style. For extract brewers, most light colored extracts are not fermentable enough on their own, but with a portion of simple sugar (table sugar), it should attenuate enough. You will still want to buy an extract that attenuates well or you will need to make your extract-based wort more fermentable by replacing more of the extract with table or corn sugar. About 7% to 10% of the extract weight as table sugar should yield good results. There is no need to use special sugars. The cheapest grocery store brand of sugar is perfect. Beet sugar or cane sugar, it does not matter.

A big part of the dryness and bittering of a good saison comes from alcohols, carbonation, acidity and hops. I prefer to stick with noble hops such as Saaz, Hallertau or Tettnang. Styrian Goldings, Kent Goldings and in a pinch other varieties such as Mount Hood or Liberty are fine as well. I prefer a single large charge of low alpha hops near the beginning of the boil. With the light malt character, the flavor of that early addition will carry through and will provide a subtle hop character. Nowadays more brewers are experimenting with increased hop character in these beers, but it takes a deft hand to avoid overdoing it. A single, small addition near the end of the boil is about all you should add if you still want to consider the beer a “traditional” example. If you go with much more than that, you risk ending up with excessive hop character. The bitterness-to-starting gravity ratio (IBU divided by OG) ranges between 0.3 and 0.7, but I like to target approximately 0.4, because the very dry finish accentuates the bittering addition. If you are targeting a sweeter finish, then maybe you up the bittering ratio to 0.5, but rarely will you want to exceed that target.

The characteristic fruity/spicy flavors and aromas of this style come from fermentation, although some brewers do add spices. While some brewers may add spices, I prefer the more subtle and complex spiciness that fermentation develops.

There are several great yeast strains for brewing this style, but two of my favorites are White Labs WLP565 (Saison Ale) or Wyeast 3724 (Belgian Saison). Other excellent choices are WLP566 (Belgian Saison II), WLP568 (Belgian Saison Blend), Wyeast 3711 (French Saison) and Wyeast 3726 (Farmhouse Ale). You cannot go wrong with any of these yeast strains. Whatever strain you use, remember that your fermentation conditions affect what flavors and aromas the yeast produce. Pitching rate, oxygen level, nutrients, and temperature are like dials on your control panel of fermentation flavor. Getting the right settings is your job as a brewer.

One question that many brewers have about these beers is fermentation temperature. Often homebrewers will say, “Brewery X ferments their beer at xx °F, so that is the fermentation temperature I use.” That most likely will not be the right temperature for you if you are trying to make a beer like theirs. There are many other factors that go into brewing than temperatures. For example, fermenter height plays a role in flavor development, with very tall fermenters (like big commercial cylindrical types) suppressing ester and fusel alcohol production. The shape of the brewery’s fermenters, their pitching rates, their oxygen levels, their yeast collection and repitching methods may all be different than yours, changing the production of esters, fusel alcohols and other aspects of fermentation. Figure out what works in your own homebrewery and work within those parameters.

With most of these yeasts I recommend pitching at a rate of 0.75 million cells per milliliter per degree Plato (see the pitching rate calculator at www.mrmalty.com for help in calculating this for your beer). Pitch the yeast and allow 12 to 36 hours for the majority of yeast growth, then ramp up the temperature for the rest of fermentation to ensure good attenuation. For example, pitch the yeast at 68 °F (20 °C) and at the end of the next day slowly begin raising the tem-

perature each day. Try to end up at 82 °F (28 °C) by the end of one week. You may find a higher or lower temperature or a faster or slower rise in temperature gives you the ideal result, so do not be afraid to tweak the parameters until you get it right.

One concern when brewing this style is getting enough attenuation. Many brewers go with lower and lower mash temperatures in an attempt to achieve this, but that is not always the problem. It is not that you need to get rid of all of the long chain dextrans to make a dry beer. Those dextrans are not very sweet and they can be present in a nice, dry beer. The important thing is to make sure you ferment out all of the simpler sugars completely. If you leave a lot of unfermented maltose, then the beer is going to taste sweet, even though it might attenuate well. A healthy pitch of yeast, aerating or oxygenating, and controlling fermentation temperatures are the keys to getting a dry finish.

If you are having trouble getting a dry beer, one trick that seems to help is waiting near the end of fermentation before adding the simple sugars. Wait until fermentation has started to slow and then add the sugar. When I do this, I dissolve the sugar in just enough boiling water to make a thick syrup and add it to the beer when it has cooled.

If all else fails and you still are not getting full attenuation, you can pitch actively fermenting lager yeast into the stuck beer, which will consume some complex sugars that the ale yeast will not. Do not add this extra dose of yeast if they are not in an active fermentation state, because they will just settle out in a high alcohol, low sugar environment. Make a small starter and wait until the yeast is at high kräusen before you add it to the beer.

If your beer is attenuating properly but still tastes sweeter than it should, it might be fermentation related compounds making it seem sweet. If that is the case, then you need to revisit your fermentation parameters and /or try a different yeast strain. 

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