# **Beer Education Series: Divine Barrel Brewing**

#### **About Divine Barrel Brewing:**

Here at Divine Barrel we love brewing all sorts of different and unique beers, so you'll always find a little bit of everything when visiting with us. Ultimately, our name came from the combination of our passion for quality beer, much finger crossing, and the unique role wood plays in fermenting and aging in hopes we've created something that will be memorable and amazing.

#### The Beers We Are Sampling:

- 1. The DROP Vol. 3! [Fruited Sour, 4.6%]: This artsy series of beers is brewed in collaboration with Charlotte Is Creative, and each label features a mural designed by several Charlotte artists. Dyair Art & LaTroy Hampton of Charlotte Pride created the art for this label. The third beer in this series is a playful sour brewed with loads of vibrant peach, guava & vanilla!
- 2. When Will Then Be Now? [Schwarzbier, 4.8%]: Classic German black lager through & through. This beautifully dark yet crushable lager delivers balanced notes of lightly roasted coffee, freshly baked bread and a hint of toffee. When will then be now? Soon!

  BJCP Analysis of Schwarzbier:

<u>Aroma</u>: Low to moderate malt, with low aromatic malty sweetness and hints of roast malt often apparent. The malt can be clean and neutral or moderately rich and bready, and may have a hint of dark caramel. The roast character can be somewhat dark chocolate- or coffee-like but should never be burnt. A moderately low spicy, floral, or herbal hop aroma is optional. Clean lager yeast character.

<u>Appearance</u>: Medium to very dark brown in color, often with deep ruby to garnet highlights, yet almost never truly black. Very clear. Large, persistent, tan-colored head.

<u>Mouthfeel</u>: Medium-light to medium body. Moderate to moderately-high carbonation. Smooth. No harshness or astringency, despite the use of dark, roasted malts.

<u>Taste</u>: Light to moderate malt flavor, which can have a clean, neutral character to a moderately rich, bread-malty quality. Light to moderate roasted malt flavors can give a bitter-chocolate palate that is never burnt. Medium-low to medium bitterness. Light to moderate spicy, floral, or herbal hop flavor. Clean lager character. Dry finish. Some residual sweetness is acceptable but not traditional. Aftertaste of hop bitterness with a complementary but subtle roastiness in the background.

**3. Rye So Serious?** [Rye IPA, 7.0%]: This is what happens when an unstoppable IPA meets an immovable ingredient... rye! This stunning Rye IPA was hopped with Centennial, Chinook & Citra. It gives this complex IPA notes of vibrant citrus and resinous pine, coupled with a subtle underlying spice courtesy of the rye. This beer is so serious you'll be planning bank heists in no time!

### BJCP Analysis of Rye IPA:

<u>Aroma</u>: Prominent to intense hop aroma, often with a stone fruit, tropical fruit, citrus, resin, pine, berry, or melon character. Low peppery rye malt aroma, along with a clean, background grainy maltiness. Clean fermentation profile. Light esters optional. Light alcohol aroma optional.

<u>Appearance</u>: Color ranging from medium gold to light reddish-amber. Clear. Light haze optional. Medium-sized, white to off-white head with good persistence.

<u>Mouthfeel</u>: Medium-light to medium body. Smooth texture, may be lightly creamy. Medium to medium-high carbonation. No harshness. Low warmth optional.

<u>Taste</u>: Medium to very high hop flavor, same descriptors as aroma. Low to medium-low clean, supportive malt possibly with light caramel or toast flavors. Low to moderate grainy, peppery, spicy rye flavor that adds to the dry finish. Medium-high to very high bitterness, no harshness. Dry, bitter, hoppy aftertaste. Low esters optional. Background alcohol flavor optional.

**4. The Big Lubelski** [Grodsiziske, 3.9%]: Brewed with 100% oak-smoked wheat malt and Polish Lubelski hops. This traditional Polish Gratzer is mildly sweet & bready with a restrained bitterness and a clean oak smoke finish.

#### **BJCP Analysis of Grodziske:**

Aroma: Low to moderate oak wood smoke is the most prominent aroma component, but can be subtle and hard to detect. A low spicy, herbal, or floral hop aroma is typically present, and should be lower than or equal to the smoke in intensity. Hints of grainy wheat are also detected in the best examples. The aroma is otherwise clean, although light pome fruit esters (especially ripe red apple or pear) are welcome. No acidity. Light sulfur optional.

<u>Appearance</u>: Pale yellow to gold in color with excellent clarity. A tall, billowy, white, tightly-knit head with excellent retention is distinctive. Murkiness is a fault.

<u>Mouthfeel</u>: Light in body, with a crisp and dry finish. Carbonation is quite high and can add a slight carbonic bite or prickly sensation. No alcohol warmth.

Taste: Moderately-low to medium oak smoke flavor up front which carries into the finish; the smoke can be stronger in flavor than in aroma. The smoke character is gentle, should not be acrid, and can lend an impression of sweetness. A moderate to strong bitterness is readily evident which lingers through the finish. The overall balance is toward bitterness. Low but perceptible spicy, herbal, or floral hop flavor. Low grainy wheat character in the background. Light pome fruit esters (red apple or pear) may be present. Dry, crisp finish. No sourness.

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#### **Dropping Some Beer Knowledge:**

#### Malts: Base vs Specialty:

- Base Malt: The larger percentage of a grain bill used to make a beer. These malts provide enzymes to convert malt starches into sugars. Provides extra enzymes to convert specialty malts/adjuncts without enough enzymes of their own to convert into sugars. Includes: Pale Malt, Pilsner Malt, Vienna Malt, Munich Malt, Rye Malt, & Wheat Malt. 2-Row vs 6-Row: Differentiates based on the formation of corns on the barley stalk rows.
  - o Pilsner Malt: type of pale lager malt made from two-row spring barley that is always highly modified (i.e., good protein degradation) during malting and is kilned to an exceptionally blonde color value of no more than 2.5 to 4 European Brewery Convention (EBC; approx. 1.5° to 2.1° Lovibond).
  - o Carolina Gold Malt: local malt bringing beautiful golden color and a delicately balanced, sweet and clean flavor. Kilned to a 2.5°-3.0° Lovibond color.
  - o Wheat Malt: a specialty malt with sweet, malty, mild bread dough characteristics, that contribute a light straw color and can be used as a specialty or base malt for wheat beers. Kilned to a 2.5°-3.5° Lovibond color.
- Specialty Malt: Smaller percentage of a grain bill used to make a beer. These malts are cracked & steeped to release the sugars and flavor compounds. The color of a beer typically comes more from the Specialty Malts. Includes: Roasted Malts, Chocolate Malt, Crystal/Caramel Malts, Smoked/Peated Malts, Acidulated Hops Oils, Acids, and Regions:
- Hop Oils: Main source of flavor and aroma from hops; provide non-bitter tastes/aromas for hops. o Myrcene: natural organic compound that is classified as a hydrocarbon. In thyme, bay, parsley, lemongrass, cannabis. Used in the perfume industry.
  - o Humulene: named after the scientific name for hops, Humulus lupulus, it's an isomer of Caryophyllene. Key part of hops that gives the "hoppy" aroma. It's been found to possess anti-inflammatory properties, and is being studied.
  - Caryophyllene: one of the oils that help to give black pepper its spiciness. Gives a strong dry wood, pepper, earthy flavor, and an herbal character. This compound has been seen to reduce inflammation & been in anti-cancer studies. Used in the perfume industry.
- Bittering: During longer boil times hop oils evaporate, so they're added at beginning of boil to impart bitterness.
- Aroma: During shorter boil times and dry hopping, hop oils don't evaporate as much, so get the non-bitter aspects of the hops during shorter boil times and/or flameout/dry-hopping additions.
- Alpha Acid: Basis of bittering; quick breakdown: Humolone, Cohumulaone, Adhumulone, Posthumulone, Prehumulone.
- Beta Acid: Slow breakdown: Lupulone, Colupulone, Adlupulone.
- Noble Hops [original Hops, Central Europe]: Terrnanger, Spalt, Hallertauer, Saaz; Spalt, Styrian Goldings, Perle, Hersbrucker

#### **Examples of Hops:**

- **Mosaic Hops:** Released in 2012 by the Hop Breeding Company, LLC, Mosaic hops feature complex but clean flavor characteristics and are known for their triple-use profile encompassing bittering, flavor and aroma. They have high alpha acids but low cohumulone which makes them pleasantly hoppy, carrying flavors of mango, pine, citrus and herbs and aromas of tropical and stone fruit. Mosaic is the first daughter of Simcoe and Nugget as has been humorously referred to by some as "Citra on steroids".
  - Alpha Acid Composition: 11.5%-13.5%
     Beta Acid Composition: 3.2%-3.9%
  - O Co-Humulone Composition: 24%-26%
  - o Retains 75% alpha acid after 6 months storage at 20°C (68°F)
  - Myrcene Oil Composition: 47%-53%Humulene Oil Composition: 13%-16%
  - Caryophyllene Oil: 5%-8%Farnesene Oil: NoneSubstitute Hops: Citra
  - **Azacca Hops**: named after the Haitian god of agriculture. It is big in Alpha Acids (14-16%) and has a bright and refreshing aroma with juicy mango, tropical fruits, and citrus. Azacca® is a dual-purpose hop that produces sensational single-hopped beers. Whirlpool after flameout to maximize the juicy flavors and sweet aroma. Aroma: Fresh citrus, lemon, piney, tropical fruit.
  - **Idaho 7 Hops**: first hop release from Jackson Farms just outside of Boise. This hop is ripe with zesty tangerine flavor that is reminiscent of marmalade. Its uniqueness shows up as a pleasant herbal character that melds with the citrus to come across like fine earl grey tea. A dual purpose hop capable of carrying a recipe, but it works best in conjunction with Citra or a bittering hop like Warrior. Mainly used as a late addition hop with a distinct tangerine flavor.
  - **HBC 586 Hops**: HBC 586 is an experimental hop variety from the <u>Hop Breeding Company</u>, which is a joint venture between John I. Haas and Yakima Chief Ranches. It is the result of a hybrid pollination of the mother YCR 21 and male #01239-2. The aroma of HBC 586 has been described as "a large medley of fruit flavors... Mango, guava, lychee, citrus, with slight sulfur and herbal notes."