



Club Barrel Aging Program

Northeast Brewers Alliance

Minneapolis, MN



Barrel Project 1.0 – 59-gallon American Oak

From Town Hall Brewery, Minneapolis, MN. Belgian Pale Ale Thunderstorm

- Belgian Blonde w/ brett, lacto and pedio *ala* Russian River Temptation
 - 85% Franco-Belges Pils, 15% White Wheat Malt
 - 2oz Sterling-60", 1oz Styrian Golding-30", 0.5oz Styrian Golding-15"



Barrel Project 2.0 – Four 59-gallon Red Wine

-Vintners utilized *native fermentation* in barrels, possible remnants remain.

Barrel 1-Cabernet (Fields). Light oak, light fruit.

- RIS, American Barley/Rye Wine

Barrel 2: Merlot (Fields). Light oak, red fruit, cherries.

- Rye Saison (two fills)

Barrel 3: Zinfandel (McCay). Medium oak, blackberries, currants.

- Flanders Red

Barrel 4: Zinfandel (McCay). Medium oak, vanilla, fruity cocoa

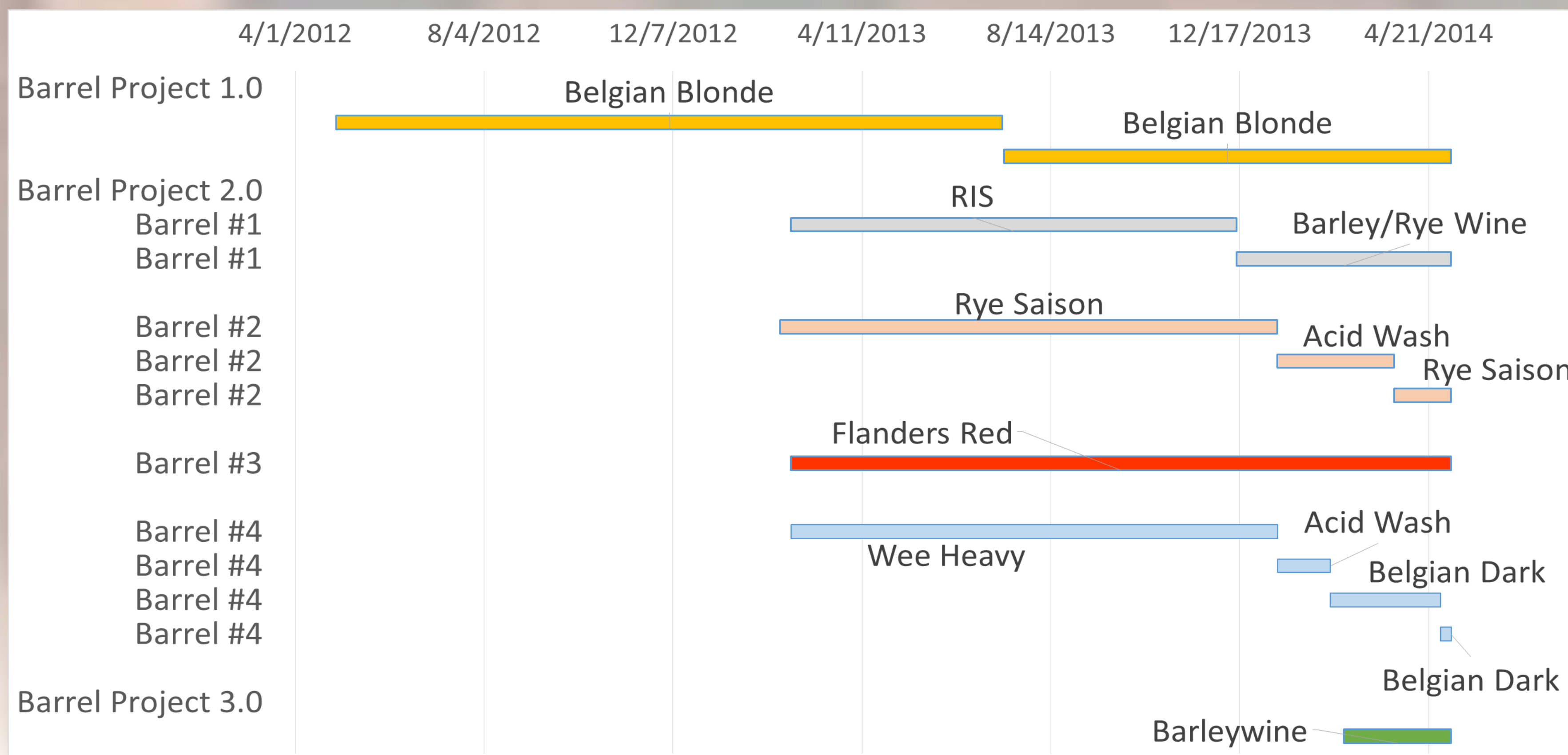
- Wee Heavy, Belgian Dark Strong (twice)



Barrel Project 3.0 – 30 gal Whiskey

30 gal American Oak (Koval). Millet Whiskey – Strong whiskey, oak.

- Barley Wine (twice)



Barrel Basics

- Coopers from various types of wood and held together with steel rings called hoops.
- May have various levels of charred interior wood. Imparts different levels of flavors and color.
- Each barrel imparts its unique characteristics into the beer. This must be taken into consideration during recipe formulation.
 - Ex: oak, wood, smoke, caramel, vanilla, tannins, must, previous contents
- Barrels can be an experiment. May contain wild yeast, bacteria

Barrel Science

Barrels breathe as temperature and humidity changes.

- Expels gas and draws the beer and air into the wood.

Wood is porous

- Oxygen and gas transfer
- Evaporation
- Micro-fauna remains in the interior 1/4" of staves.
 - Will affect subsequent batches.
 - Once funky, always funky.

Wood contains sugars

- Fermentable for some yeast/bugs.

Char

- Can purify; increases with level of char.

Cellar Master Duties

- Quality control, maintain barrel condition
- Sampling and monitoring
- Ensure headspace at a minimum for recipe

When not full (in between fills)-

Acid Wash - a mixture of citric acid and potassium metabisulfate ensures the barrel does not become a breeding ground for bacteria and wild yeast.

Sulfur Stick - burning a S stick and sealing the barrel creates a toxic environment for microorganisms.

Do not use a sulfur stick in a whiskey barrel!

Prior to filling with beer, the barrel requires a rinse with warm water or sanitizer

Art of Barrel Aging & Blending

- The barrel is the star
- End product should exhibit barrel characteristics
- May yield unexpected qualities
- Patience is key, many factors determine the proper time
- It's possible to overage beer, imparting too much barrel
- Further aging in a carboy can mellow, or you can blend with barrel-aged batch
- Brew the same or similar batch, ferment, and blend with barrel-aged batch
- Use small-scale blends to determine proportions
- A fresher blend can bring life to an over-aged beer

Recipe formulation

- Beers must be able to stand up to the flavors imparted by barrel. ie) don't want a pilsner in a fresh red wine barrel.
- Several possible styles were voted on by the club.
- Once style determined, several individuals take responsibility for research and recipe formulation.
- Must consider barrel's previous contents, and how those characteristics will affect the final product (yeast, bacteria)
- Barrel characteristics will be lessened with each empty/fill.
- Impossible to determine ultimate result.

Barrel Progression

Clean → Brett (*funky*) → Lacto/Pedio (*sour*)

There is *no* going back.

Quality Control

- Two Thumbs Rule: Each brewer's beer is tasted by the other brewers. If it receives more than two thumbs down, it does not go in.
- Some flaws of an individual batch will even out, but aging in a barrel will not repair a bad beer.
- *Quality in, quality out.*



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Brew. Drink. Repeat.



As seen on Episode 7 of