

SMALL BARREL STRATEGIES

TECHNIQUES, METHODS AND MANAGEMENT

JAMES & CJ SHAMAS



TOPICS

1. Why Small Barrels?
2. Examples of Barrel-Aged Beers
3. Barrel Handling
4. Challenges & Solutions
5. Blending & Evaluation
6. Q & A

WHO ARE THESE GUYS?

- ✓ Homebrewing brothers with a couple decades of experience
- ✓ 500+ batches, separate and together
- ✓ Specialties: Hoppy American Ales, Saisons, Sours
- ✓ Barrels ranging from 3-15 gallons, Whiskey, Rye, Rum, Rye, Wine
- ✓ Featured on The Sour Hour, Basic Brewing Radio, Beersmith Podcasts
- ✓ 2015-16 Awards
 - 2016 NHC 2nd Round - Fruit Lambic (Raspberry)
 - 2015 Southern New England Homebrew Comp.; First Place - Fruit Lambic (Kriek), Second Place: Wild Specialty



THE BASICS: WHY PUT YOUR BEER IN A BARREL?



- ✓ Wood Flavor
- ✓ Contributions from Previous Contents
- ✓ Oxidation (both positive & negative)
- ✓ A cozy home for your bugs
- ✓ Makes awesome beer



WHY SMALL BARRELS?

- Unique Advantages:
- Homebrew Scale
- Allows for Variety
- Faster aging process
 - Months, not years
- Easy to fill, empty & clean
 - Push in w/ CO2, Siphon out
 - Can lift!
- Less space required for storing based on small dimensions
- Greater availability (homebrew channels)



BARREL PROGRAM MENTALITY

Barrel Program- A series of beers to be brewed to take advantage of the progressing character of the wood from the barrel and the microorganisms you inoculate into it.





Barrel Aged
Saison
SAISON
4.0 IBU

Wagtail
4.0 IBU

BARREL-AGED IMPERIAL STOUT: “MOTHER RUSSIA”

- Excellent for first beer in a Bourbon or Rye Barrel



SOUR SAISON :“NEAR THE BARN”

- ✓ Primary Fermentation with Saison Yeast
- ✓ Secondary Fermentation in Rum Barrel with Mixed Culture
- ✓ Blend at Packaging time:
 - Barrel Beer
 - Clean Saison
 - Brett Beer

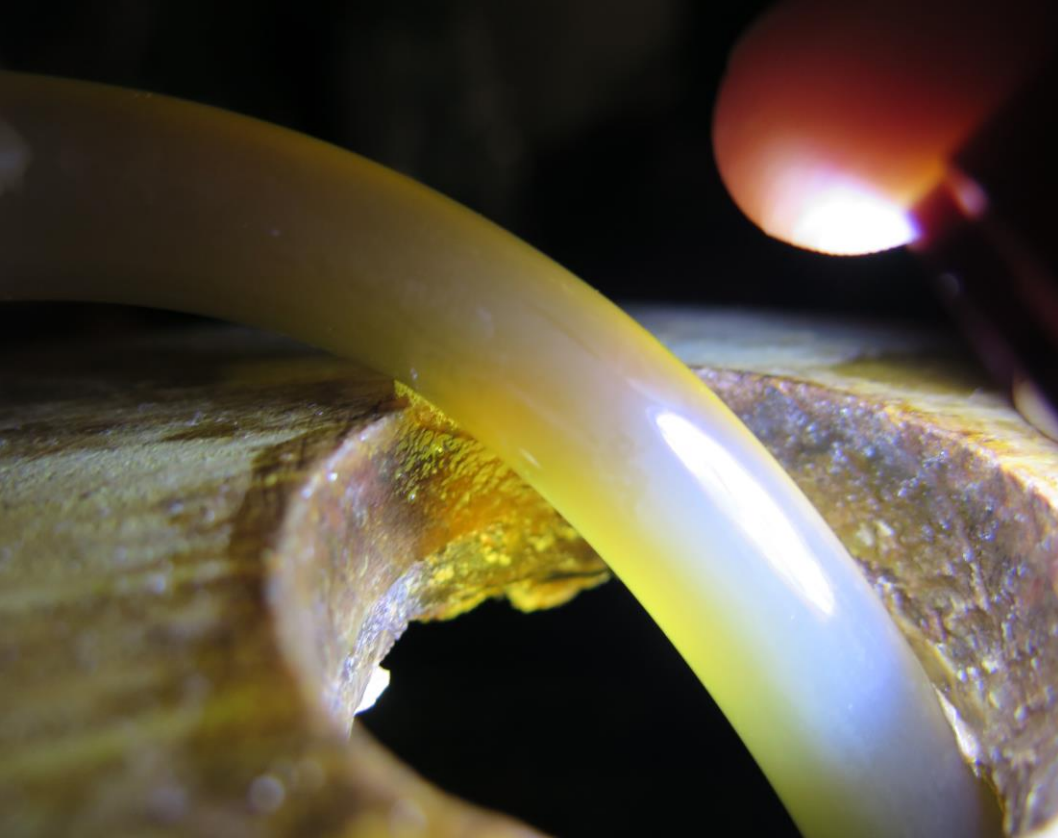


FLANDERS RED

- 5 gallon Balcones Whiskey Barrel (medium char)
- Primary with 1st generation Wyeast Roselare Blend
- Blend in a keg with Clean Beer
- Variation: Flanders Kriek – 32 oz Tart Cherry Concentrate and Brett



MODIFIED SOLERA BEER



- 15 gallon Barrel
- Golden Sour base
- Primary Fermentation with Ale Yeast
- Secondary with Mixed Culture
- 10 gallons out, 10 gallons in



VICARD
TONNELLERIES

EUROPE

Medium toast / Toasted heads
2005



Martha Clara
VINEYARDS

WINE

WINE

WILEY DISTILLERS
1847-1978
SOLID MASH
RYE WHISKEY

WILEY DISTILLERS
USA

VARIATIONS - SIZE

- 5 to 15 gallons
- Avoid tiny barrels
- Beer to wood surface area decreases with an increase in barrel size.
 - *Not as much as you might fear!*



VARIATIONS - TYPES

- Used Spirit barrel - American Whiskey/Bourbon,
 - Rye, Rum, Brandy.
 - New (Virgin)- Be wary of intense wood. Make friends with home winemakers.
 - Reconditioned- Starting to show up on the homebrew market
-
- Trends:
 - More available
 - More variations
 - More expensive



ONCE UPON A TIME...





STORAGE CONSIDERATIONS

- ✓ Atmosphere
 - Temperature & humidity
- ✓ Weight
 - Barrels larger than 5 gallons can be difficult to lift/lower during transfers
- ✓ Vibrations
 - Vibrations can destroy a pellicle
- ✓ Semi-permanent placement
 - Ideally you would not need to move the barrel during aging
- ✓ Have a stand





PREPARATION – FIRST USE

What we do....

- ✓ Inspect - Visual inspection of staves and hoops
- ✓ Check for leaks
 - Most leaks will occur on the heads
 - Fill each head with water - vertical
- ✓ Rinse - Flush out loose particles
- ✓ Fill with cold water and let wood swell
 - Can submerge in plastic tub
 - Check for leaks prior to draining



PREPARATION

Optional preparation procedures....

- ✓ Nothing – Maximize Previous Contents
- ✓ Cold Rinse
- ✓ Strip/Recharge with Liquor or Wine
- ✓ Sanitize - Fill with 180 degree water
- ✓ Storage Solution
 - Potassium metabisulfite/citric acid

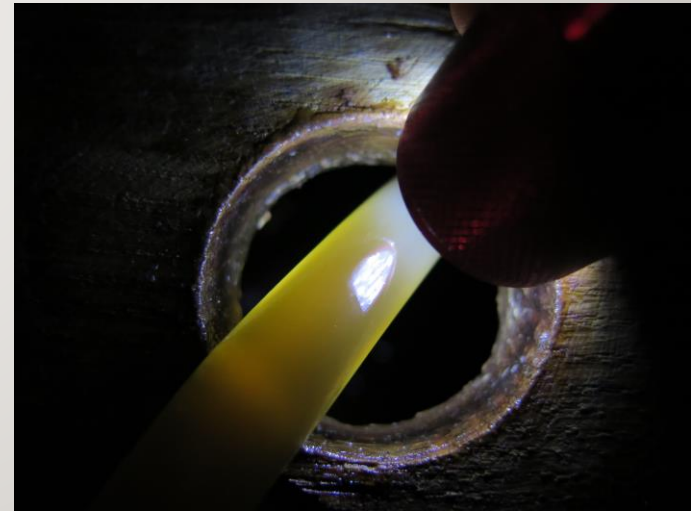


Image courtesy of <http://waterandwine.bloomcentre.com>

PREPARATION

What not to do....

- ✓ Wait on adding beer - begin preparation and filing as soon as possible
- ✓ Allowing water filled barrel to sit for more than 48 hours. Encourages the growth of mold
- ✓ Add beer to a dried out barrel
- ✓ Expect to make clean bear in a barrel that has been soured



CHALLENGES

A close-up photograph of a wooden barrel, likely made of oak, with a metal band. The barrel is positioned horizontally. A dark, possibly leaking or stained area is visible along the joint between the staves, running vertically through the center of the barrel. The wood shows natural grain patterns and some darker staining. The metal band is visible on the right side, with a small rivet or fastener. The background is dark and out of focus, suggesting an industrial or workshop setting. The word "CHALLENGES" is overlaid in large, bold, white, sans-serif capital letters across the top portion of the image.

CHALLENGE: BOOZINESS

- First batches are most important; absolute presence of leftover spirit will decrease with each beer. Consider this as part of your program.
- Consider a non-sour (imperial stout, barleywine, etc) as your first beer.
- Brew stronger, darker sours at first, progressing to lower abv and color
- Sourness is key - Brettanomyces forward, non-sours tend not to be balanced when aged in a spirits barrel.

CHALLENGE: BOOZINESS

- Some fruit sours hold up well to the oak
Tart Cherry Flanders Red
- Fruit Post-Barrel in glass or plastic
- Whole, Frozen, Puree, Concentrate, Juice



CHALLENGE: OXYGEN INGRESS

- Try your best to limit exposure to O₂
- Short term aging (1-6 months not 6-18 months)
 - General rule: The smaller the barrel, the shorter the time in the barrel
- Watch for acetic acid
- CO₂ purge
- Topping Off

CHALLENGE: OXYGEN INGRESS

- Start with airlock, switch to solid bung
- Try not to disturb the pellicle
 - Sampling
 - Placement
- Some homebrewers wax their barrels
 - Full or Part



CHALLENGE: HITTING RIGHT LEVEL OF ACIDITY

- Blending is the key!!!
 - There are numerous methods and considerations to blending.
- Homebrewers typically don't want to blend. "One batch, one beer" mentality.
 - Blending is a technique to improve your product.
 - Limit your need for diluting off flavors.

BLENDING INVENTORY

- Have a variety of beers on hand, even 1 gallon jugs.
 - Barrel beer
 - Clean beer
 - Brett beer
 - Highly acidic beer
 - Refined, high quality aged beer (excellent for gueuze and aged flanders reds)



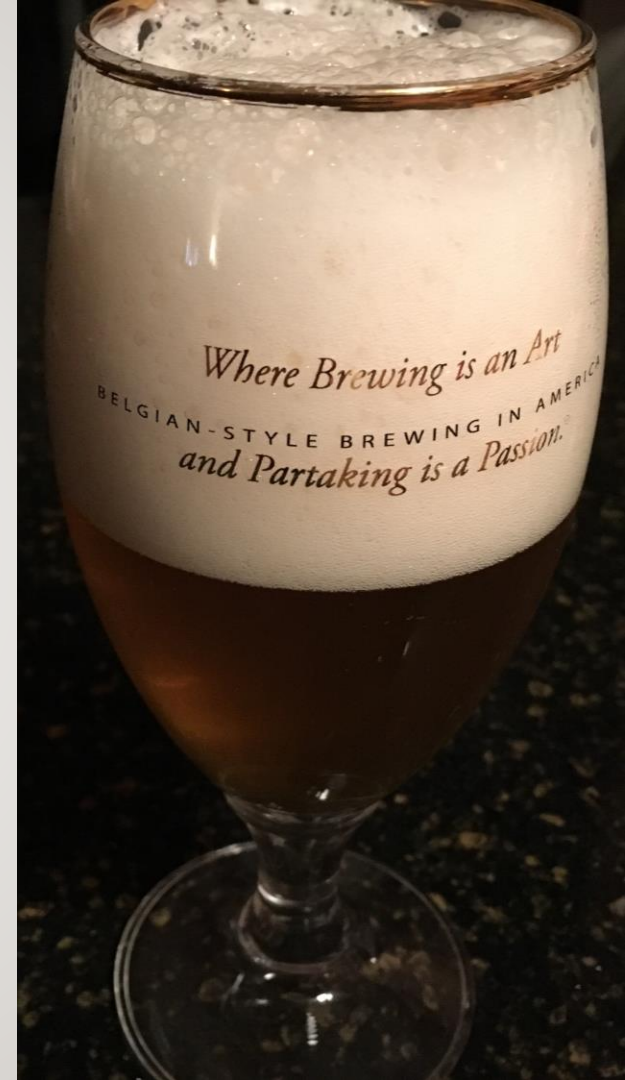
SMALL BATCH BLENDING OPTIONS

- Blend wort and/or finished beer in barrel
 - Modified Solera
 - May be necessary if barrel size is larger than fermentation vessel.
- Blend in a carboy - post fermentation and barrel aging
 - Blend up/down acidity, oak and flavors
 - Optional: fruit additions
 - Safe way to ensure complete fermentation prior to packaging
- Blend in Keg
 - Safer than at bottling
- Blend at Bottling



CHALLENGES: CARBONATION

- Not easy to hit target carbonation level if blending at bottling time
 - Different Vintages of same beer
 - Potential of microbes and sugar in young beer
 - Blending with Clean Beer
 - Attenuation Level
 - Volume



SOUR CULTURES



EVALUATING

- Work on your tasting skills
- Know your barrel(s)
 - Every one will be different
- Be critical!!!
 - Have a group of tasters that are honest and diverse
- Sample before packaging



EVALUATING

- Keep Detailed Notes
 - Brewing Notes- Just like any other beer
 - Barrel Log
 - What goes in
 - What comes out
 - Conditions
 - Sampling Notes



“There’s a difference between being interested and committed.”

-Coach Herman Edwards



Questions

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Thank you!