Aging Beer On Exotic Wood

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History Of Wood Use for Vessel Construction

- Coated in pitch or paraffin
- Some manufacturers not interested in wood character

Use of Oak Primarily for Barrel Construction

- Oak is known to hold liquid due to the nature of the wood's porosity
- Oak has vanillin compounds and tannin compounds that contribute to the aroma and flavor of different beverages
- Two types of oak primarily used are French Oak and American Oak

Why Use Other Woods Besides Oak?

Different woods contain different compounds that contribute more/different characteristics to beer

More possibilities to add different layers of flavor and aroma to beer

☠ Precautions to Take ☠

- Custom fabricated cooperage can be very expensive…if you should choose this route, make sure that the wood will hold liquid

- Don’t use treated wood

- Make sure that the wood is aged for a two month minimum in open air to release volatile chemical components and reduce tannin levels

- Do research to determine if the wood is food grade.

    - Ask if the wood is used in the food industry or bares edible products.

- Sanitize the wood by toasting it in the oven at 180 degrees.

    - Length of heat exposure will be determined by shape and size of wood product being used.

Techniques To Enhance Wood Extraction

- Toasting during the sanitizing process can have an impact on flavors imparted by the wood depending on temperature and length of heat contact.
  - Short, low temperature exposure will sanitize and retain most of the compounds in the wood.
  - Long, high temperature exposure will denature components and start to move the character towards more char-like notes.
- Increase surface area of wood by cutting slits, slots or spiral notches in the wood if you are using larger pieces and not chips.
- Condition in secondary, after terminal gravity has been achieved, so that aromatic scrubbing is minimized.
  - Condition in a secondary that offers enough surface area for all wood to rest on the surface of the beer. Especially important when using spirals instead of chips.
  - If possible, start conditioning at warmer temperatures(60-70F) to take advantage of expansion and contraction. Determine length of contact time at each temperature to maximize flavor/aroma extraction. Most likely different with each type of wood.

Humidor IPA

- Inspired by Mike Fouch of the Tampa Bay B.E.E.R.S.
- Also inspired by Hitachino Classic Ale, although, the wood is not the same that we implement.
- Cedrella or Spanish cedar is actually a form of mahogany.
- Aging on Spanish cedar imparts white grapefruit, sandalwood, white pepper and hints of clove…to name a few.
- We find that this works well in citrus forward American IPAs.

Process

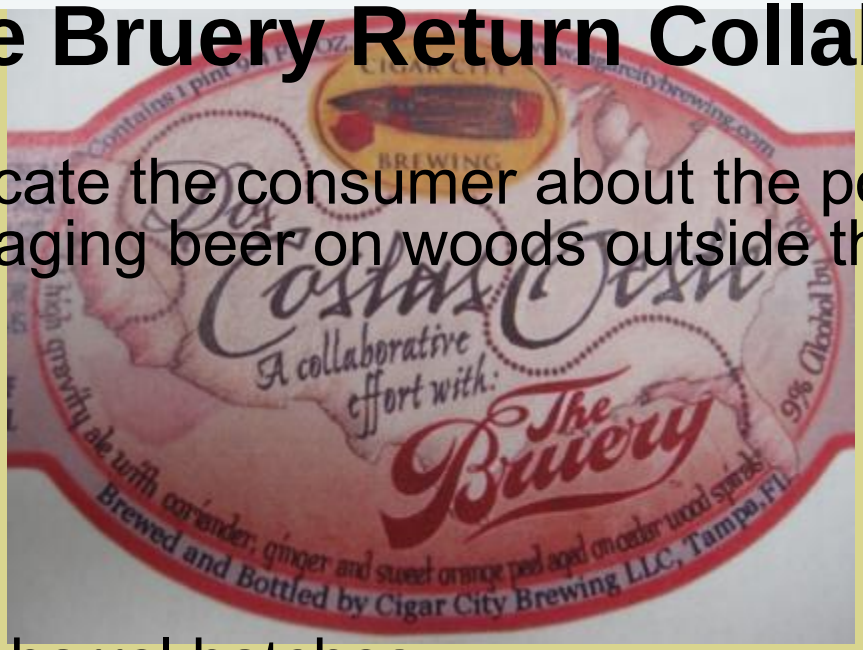
- We use three bundles of Spanish cedar spirals per 15 barrels(465 gallons) of IPA. This roughly translates to two six inch spirals per 5 gallons.
- After we reach terminal gravity, we dry hop the beer first and then we introduce the Cedrella.
- Two weeks contact time total, with introduction starting at 70F and final temperature of 36F.
- If bottle conditioning, then hold the beer at cellar temperature(55F) until packaging.
- If kegging, wood can be added to the keg and slowly carbonated over the course of two weeks and then dispensed with wood on beer. This will allow an observation of how contact time advances the character of the wood in the aroma and flavor of the beer.

Humidor IPA (continued)

- We use square, stainless tanks for wood conditioning.
  - More surface area
  - Less oxidation than barrel aging, which is important when producing a wood aged IPA

The Dos Costas Oeste (Two West Coasts) Project

The Bruery Return Collaboration



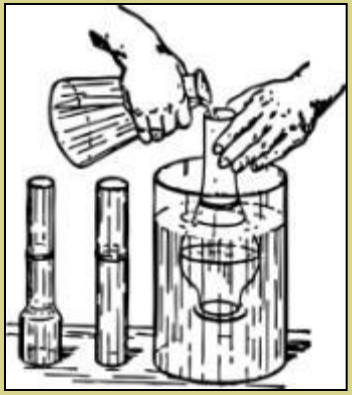
Goal: To educate the consumer about the possibilities available when aging beer on woods outside the realm of oak

- 3 separate 30 barrel batches
- All batches are the same base beer
- First batch aged on Cedrella; worked well with Belgian yeast byproducts, orange peel and coriander.
- Second batch will be aged on grapefruit wood, giving a tart to sour character to the base beer.
- Third batch will be aged on lemon wood, (also gives a tart to sour flavor to the base beer) but not as forward as grapefruit, based on previous observation

Advantage/Possibilities When Implementing Lemon or Grapefruit Wood for Aging

- It is possible to achieve tart to sour flavors in beer without the presence of wild yeast or bacteria.
- No barnyard or funk, but less time to achieve pick up.
- Less stress since chances of infection are minimized…thus reduced chance of intentional in house infection that could move outside of isolated tanks and carry over into other products that weren't intended to be "wild".

Experiments To Consider



•Try aging a sour or young sour on lemon or grapefruit wood to give a different layer of tart and/or sour for more complexity in sour/wild ales.

- Try aging citrusy American styles with all three types of woods to add unique characters to classic American made styles.
- Add a tart layer to dry stout, using lemon or grapefruit wood, to simulate lactic elements of commercial interpretations.
- Add another layer to traditional hefeweizen.
- Any of these three woods will compliment just about any Belgian/French ale.
- Lemon or grapefruit wood could make a gose or Berliner Weisse more complex.
- Experiment with other woods besides these three (that are not oak) to determine what other layers of complexity you might be able to add to beer. Not all non-oak woods are going to be as forward as these three, however.


Questions?