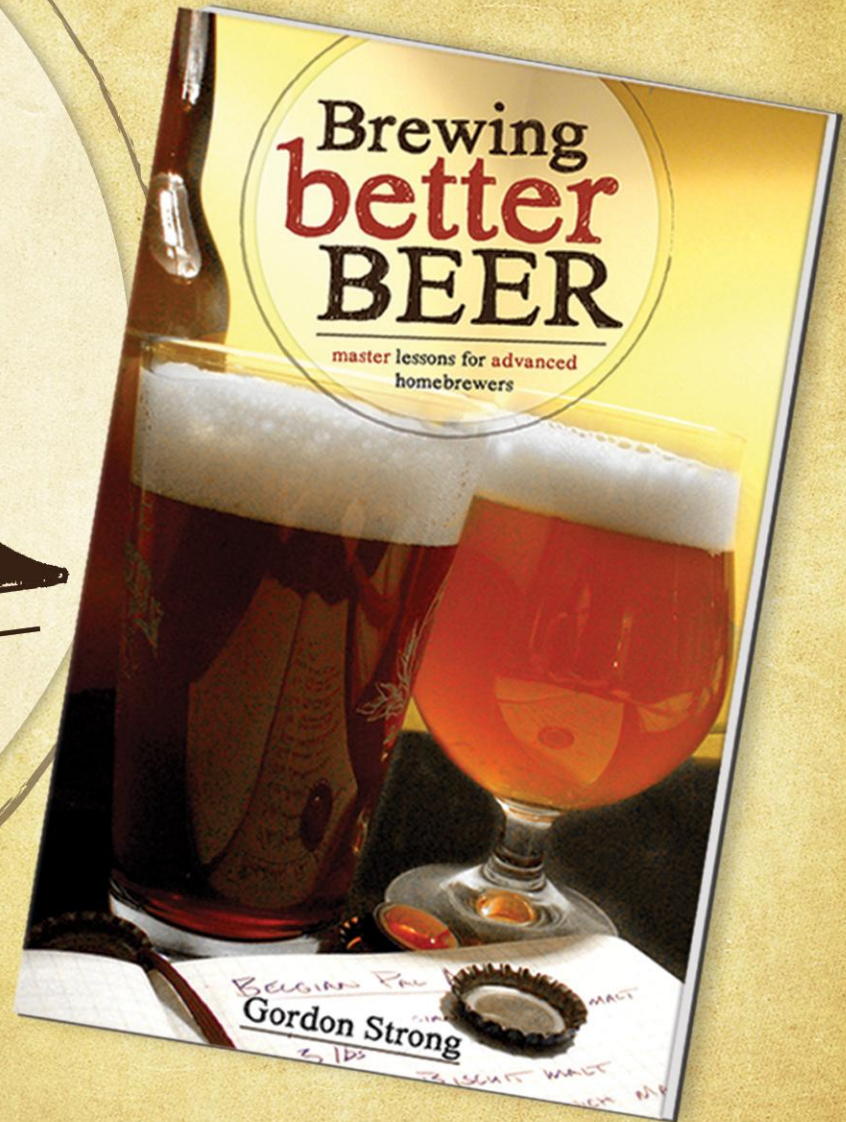


Brewing **better** BEER

master lessons for **advanced**
homebrewers

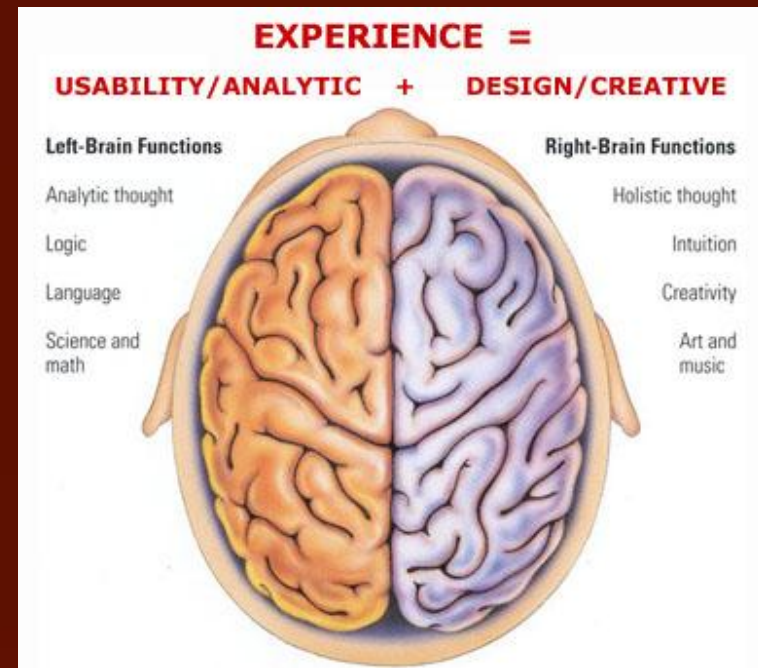
By Gordon Strong



Recipe Formulation and Competition Brewing

Recipe Formulation

- Envisioning your beer
- What's the difference between a cook and a chef?
- Left-brain vs. right-brain
 - Radical Brewing
 - Designing Great Beers
 - I learned from both
- Conceptualize target
- Plan to get there
- Sources of inspiration
- Creative concepts





Your Goal: Own Your Recipes

- Why do you want to do this?
 - Create new recipes
 - Brew to style
 - Clone beers
 - Create a new style
 - Fuse styles
 - Adapt recipes
- Understand how the changes you make affects the profile of the finished beer



Basic Recipe Method

1. Decide on a target concept
2. Determine general style parameters
3. Set total fermentables based on OG
4. Set total hops based on IBUs
5. Let flavor profile drive remaining choices
6. Adjust grain bill based on attenuation (FG)
7. Select mash and hop methods
8. Adjust water if necessary
9. Account for special ingredients, processes, techniques



Target Concept

- What's your goal?
- Simply describe **target profile** of finished beer
- Research clone beers
 - Public info
 - Reverse engineering
- Brewing to style
 - Understand the guidelines
 - Key attributes
- Ask for recipes from others, adapt to your system



Sketching in the Outline

- Pick OG, FG, ABV, IBU, color
- OG, FG, ABV, AA related
 - Can use two to find others
 - Important for balance
- Total fermentables
 - Based on system efficiency
 - Adjust for methods later
- Total hops
 - Use AAUs to get IBUs
 - Estimate all as bittering hops



Ingredients, the Hardest Part

- Match ingredients (inputs) with desired flavors (outputs)
- Pick yeast based on style
- Pick fermentation temp
 - Defines yeast flavors present
- Grain bill – think percentages
 - Designing Great Beers can help
 - Country of origin
 - Classes of malt: base, character, crystal, roasted
 - Use intensity of flavors to set percentages
 - Pick maltsters



More Ingredients

- Hops
 - Pick number of additions
 - Quantities
 - Select varieties
 - Flavor/aroma intensity affects hop amounts
 - Pick additions based on layering or simplicity
 - Varieties: think profile but also complements and clashes
- Water
 - Note any special water flavors present
 - Think minimal



Adjust and Tweak

- Adjust for attenuation, set mash method
 - Add sugars? Dextrins?
 - Determine wort composition
 - Decoction adds flavors/colors
 - Step/decoct for higher attenuation
 - Use mash controls or ingredients?
- Adjust hops
 - Calculate IBUs from flavor/aroma, adjust bittering
 - Use brewing software to calculate impact
 - FWH needs special handling
 - Dry hopping, hop bursting, etc. – what flavors/intensity? Raw vs. cooked flavors

Final adjustments

- Water
 - Try low mineral water and see if you like it
 - Hit a reasonable mash pH
 - Don't have to do it all with salts, consider side-effects on flavor
- Boil method – anything unusual?
- Sanity check, validate with software
- Take notes on what you did, not what you wanted to do
- Keep tasting notes over time
 - Best age, competition results, better with blending or adjustment, crank into next batch



Balance

- BU:GU – compare balance of two similar styles
- BU:FG – preserve perceived bitterness as recipe scales
- Start low to finish low – know what FG tastes like
- Hop impression based on attenuation
- Flavors: malty vs. sweet
- Measured IBUs vs. perceived bitterness – malt, attenuation
- Drinkability, digestability
- Character over time – how does it age?
- Understand side effects of the changes you make




Competition Brewing

- A kind of Special Occasion brewing
- Brew for quality
- Obvious points
 - Make clean beer
 - Use proper technique
 - Pay closer attention to detail
 - Don't cut corners or skimp
- Know your intended audience
 - Wedding party (brew to taste)
 - BJCP competition (brew to style)
- Having great beers ready at the right time



Brewing to Style

- Understand current style guidelines
- Superficial parameters
- Pay attention to individual section descriptions
- Key style defining points
- Overall balance and impression



Choose Your Weapons

- Pick maltsters, brands, or types of ingredients that taste best and are most appropriate to style (US Munich ≠ German Munich)
- Select at freshness peak. Store well.
- Check before using. Don't use if off.
- Select techniques that optimize flavor
- Pick techniques you can execute cleanly and that you think gives the best results
- Try something unusual if it will emphasize the character you want



Keeping it in Peak Condition

- Store properly so it peaks at serving time
- Store cold, keep oxygen out
- Think 'archival' when packaging
- Taste in advance
- Fix or redo?
- Take notes, beers change over time



Brewing Your Best

- Lots of people make great beer
- Can you have great beer ready when you want?
- Commitment: desire, focus, resources
- Understand and hit key process control points on your system
- Make beer with a specific goal in mind
- Plan and schedule your brewing
 - Lead times
 - Availability of ingredients, equipment
 - Best age for your beer



BJCP Competition Tips

- What can go wrong in competitions?
 - Judges use provided information
 - Category issues
 - Handling issues
- What can go wrong in judging?
 - Judging is subjective
 - Judges: fault-finders, off days, weak, not understand styles, bullying
 - Judges can be lazy and look for reasons to not judge your beer

What Can You Do?

- “Drive Defensively”
- Produce beers recognizable as being in style
 - By more judges
 - Over a wider temperature range
- Clear – avoids mishandling
- Avoid easy to find flaws
- Avoid ingredients/processes mistaken for flaws





What More Can You Do?

- Hit center of style
- For styles with big flavors, go aggressive
- Clean fermentation character always rewarded
- Taste beers before you send them
 - Judge against guidelines
 - Adjust if necessary (carbonation, clarity, balance)
- Send well-packaged beer
- Ship carefully – don't fumble on the 5 yard line
- Increase your odds with every choice you make



**So Why Go to
All this Trouble?**

Because Winning Never Sucks



Thank You