SATURDAY MORNING: Sponsored by

grain and grape

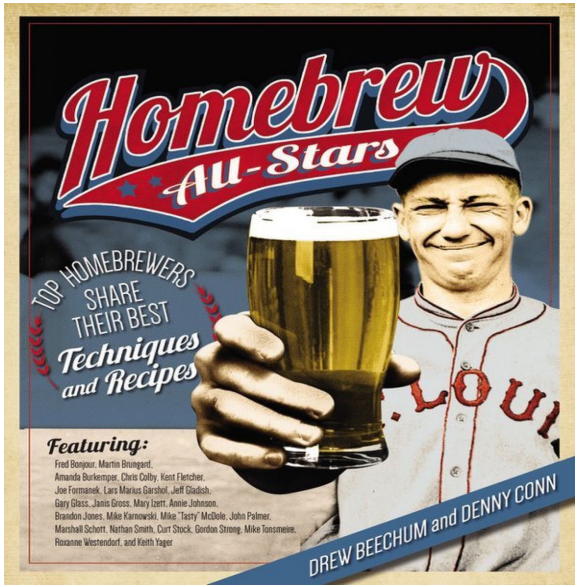
The Difficult Art of Simplicity

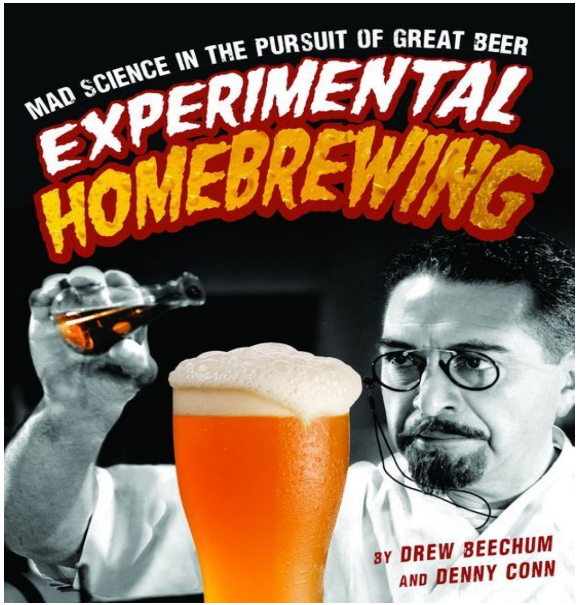
Denny Conn and Drew Beechum

anhc Australian National Homebrewing Conference '18

Session Chair: Simon Haylock

The Difficult Art of Simplicity





Time To Get the Commercial out of the Way

We Have "Issues" – It Happens After Nearly 40 Years of Steaming Hop Facials

Two Most Recent Books – Experimental Homebrewing and Homebrew All-Stars

One Weekly Podcast – Experimental Brewing / The Brew Files

Fermentation is Entropy, Captured

It's natural, it's happening, it's up to us to control it.

We have a problem…

We tend to overthink the living bejesus out of it.

This is how we started

Roughly 15,000 year old grinding gear.

Zagros Mountains in Iran

Be More Like The Goat

Seriously, he's having fun

Yes, that's a Bock he's having

What Do We Mean By Simplicity

- Denny's Brewing Mantra

  "Brew the best beer possible
  with the least amount of work possible
  while having the most fun possible."

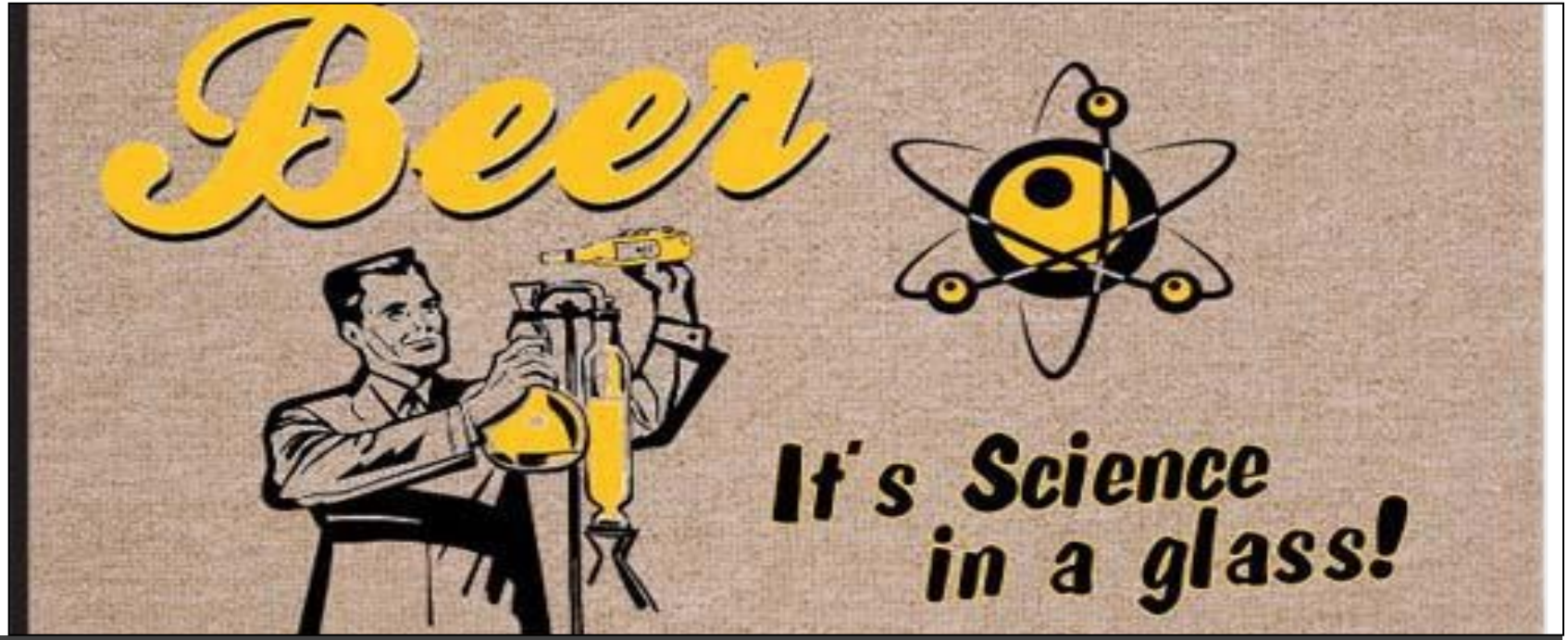
- What "Simplicity" means is definitely very, very personal.

Why Do We Care?

- Let's Talk The Market
  - Retailers – Sales are down.
    - 2015 Sales down 4% from 2014
    - Even Worse For Older Shops (5+%)
- Demographics
    - Newer brewers ≠ "Homebrew 4 Lyfe"
    - Homebrewing is one aspect of Maker Lifestyle
    - Increased involvement in kid's lives means less time for hobbies
- This means simpler processes / ingredients / etc
  - Small batch
  - Automation
  - Weeding out unnecessary steps

Here's Our 2 Reasons

- Simpler Techniques means I'm more likely to brew
  - How many of you still bottle?
- Simpler Recipes tend to taste better says Drew
  - Not saying complex recipes can't… just saying
  - Denny's not so sure about that



Science Allows For Simplicity

aka how to get away with murder in the brewery

Experimentally it seems:

- Yeast Vitality Matters the Most
- It takes quality ingredients to make quality beer – don't waste your brewing time with less than the best you can get
- Water Chemistry impacts tasters
- Fermentation temps – some what
- Mash temps – meh
- All the fiddly things we do – they're fun.

Inertially Speaking

- Inertia kills brewing days – so many of ours at least
- The easier things are, the more likely you are to brew
- Do everything to smooth the path to brew day
- Preset Your Brew Day
  - Water Set
  - Yeast Started
  - Grains milled
  - Everything Cleaned
- Checklist
  - Incredibly valuable!
- Lastly, hold off on the drinking

But I Like My Complicated Method!

Simplicity in Technique

Alternatives to Traditional Processes

- Fly Sparging? Fuhgeddaboudit!
- Batch Sparging is faster and easier
- Actually, why sparge at all?

Small Batch Brewing

- Could have knocked us over with a feather
- Less Space Intensive
- Less Expensive (Different gear too)
- More friendly – physically (aka less weight)
- More friendly – psychically (aka less stress)
  - Easier to Experiment
- Brew in a Bag perfect for this

Extract

- Extract Beer Sucks… or do extract brewers?
- We know the answer.
- Extract makes excellent beer, as long as you respect what it does
- This was a "Drew Pissing Off the World" Special
  - Kettle Soured Rye and Pils Extract Beer with ECY Bug Country
  - Made with the leftover water from my HLT and about 10 minutes of work.
  - Was it the best beer ever - no

Extract Berliner Roggen

5.0G at 1.044, 5.2%ABV, 2 IBUS

Malt

3.3 lbs Briess Pilsen Light LME

3.3 lbs Briess Rye LME

Hops

0.125 oz Magnum 12.0% 15 minutes

Yeast/Bugs

ECY Bug County / US-05

Mix extract with 4.5G of 130-140F water. Top to 5G and cool to 110F

Pitch ECY and flood kettle with CO2* and wrap top with plastic. Keep warm for 3 days.

Bring to boil for 15 minutes with hops, chill and pitch yeast.

Brew in a Bag

Seriously – does it get any easier?

How many BIAB?

How many every did anything else?

Remember at one point Batch Sparging was heresy

Photo stolen from the AHA

Fast'n'Easy Brewing

- Look around your kitchen for things you can use for brewing
- Make use of your existing pots, pans, spoons, measuring tools
- A great excuse to splurge in a Thermapen for both brewing and cooking!

20 Minute Brewday

- Believe it or not, a 20 minute mash and a 20 minute boil work!
- Increase your bittering hops by 50%
  - This is a great place to use your brewing software!
- Using BIAB and doing a small sparge, expect about 75% efficiency
  - That's what we got in our trials
  - With BIAB, you can crush very fine
- No sparge gets you almost exactly the same efficiency

Simple High Tech

Trading $$ for Simplicity

- All in one systems make your life easy
- Minimal set up and cleaning time
- Can be used indoors
- Varying levels of automation – chose what works for you
- The brewer makes the beer-the equipment just helps

Case in Point

- Neither of us have time to brew
  - Drew has a full time job, Denny's retired and therefore has no time
- Using these systems gives us the freedom to brew and do other things
  - Like a podcast
  - Or a book
  - Or something that actually pays the mortgage

Simple Yeast

Aka the key to every great beer

Liquid or Dry

- Dry yeast is easier to work with
  - No starters or aeration (most of the time)
  - It's ready when you are
  - Now, apparently, you don't need to rehydrate
- Lack of variety, but that's changing
  - Saison!
  - W-34/70 nearly makes everything
- Liquid = more variety and more effort
- Starters and aeration usually necessary – Simplify!
- Canned wort – the ultimate conveniece

Simple Yeast Starters

- The "Shaken Not Stirred" Method – no yeast calculators or stir plates needed!
- Same thing we did in the past, but with a twist
- Put 1 qt. of 1.035ish wort in a gallon container
- SHAKE it til the container is full of foam (don't use foam control!)
- Pitch your liquid yeast into it
- Pitch the entire thing at high krausen into your batch

Simple Water

The Method

- Know your starting point – get a water analysis or use distilled (NOT RO) water
- Use a good water calculator – we both like Bru'n water
- Pick a profile based on beer color and flavor, not location
- Adjust minerals to get the flavor profile you want
- After you see what that does to pH, adjust pH
- Sulfate:Chloride ratio is a good indicator, but absolute numbers matter more

Too Much? The Simplest Thing

- Learn what your water does well.
- Stick to it (It's the traditional way)
- Do At Least ONE Thing

REMOVE THE CHLORINE/CHLORAMINE

- We use Campden/Potassium Metabisulfite

Simplicity in Recipe Design

We Start

- Kits
  - How many started with a kit? When did you stop?
- Pre-made Recipes
  - From “trusted sources” (careful!)
- Eventually we all want to make our own, where do we start

SMaSH / BotO

- Single Malt / Single Hop
- Brewing on the Ones
  - Restrict ingredients to control our bad impulses
- Constraint Methods of Design
- Lots of classic styles
  - Pilsner
  - Kolsch
  - Old school IPA/Barleywine

Why Constrain Yourself?

- Exploration
- Forces You to Think
- Forces You to Choose
- Forces You to Be Mindful*
- These are a classical frameworks

Practical – Fat Man Barleywine

5.5G at 1.111 OG, 16.9 SRM, 68 IBUs,

Malt

15 lbs Domestic 2-Row

2 lbs Maris Otter

2 lbs Crystal 55L

1 lbs Caravienne

1 lbs Biscuit Malt

1 lbs Brown Sugar

Hops

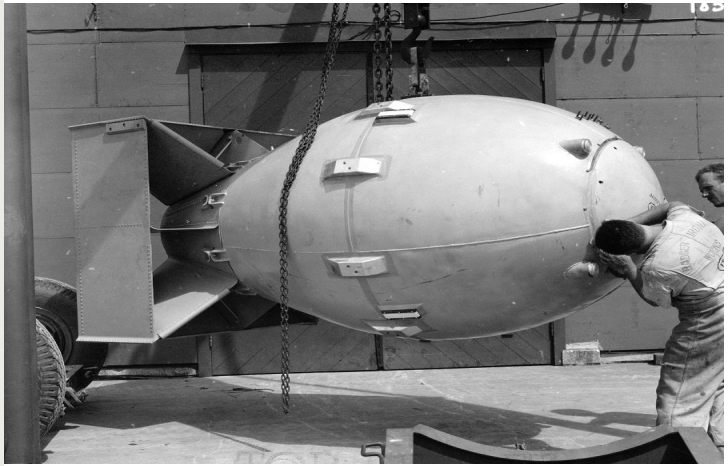
1.5 oz Target 8.8%AA 90 minutes

2.0 oz Fuggles (whole) 5.00%AA 30 minutes

1.0 oz Goldings (whole) 4.75%AA 5 minutes

Yeast

Wyeast 1056



Practical – Little Boy Barleywine

5.5G at 1.113 OG, 18.7 SRM, 68 IBUs,

Malt

20 lbs Maris Otter

1 lbs Simpsons Double Roasted Crystal

1 lbs Brown Sugar

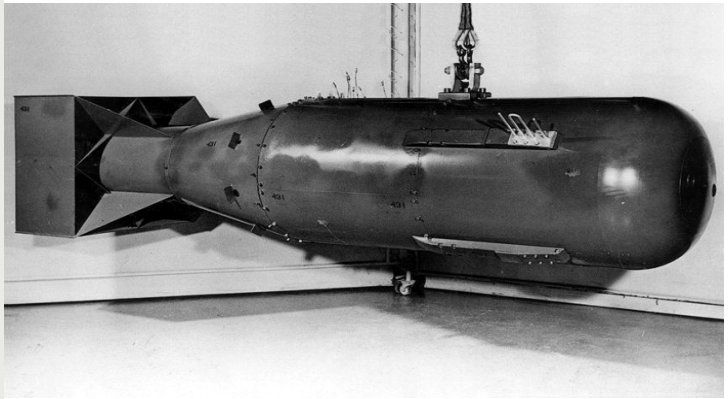
Hops

2.0 oz Target 8.8%AA 60 minutes

1.0 oz Progress 6.3%AA 0 minutes

Yeast

WLP099 Super High Gravity



Splits

- Sometimes you just need more beer out of your day
- Parti-gyle – the classic
  - Randy's Rule – first 1/3 of runnings contains ½ the sugar
  - Side Mash – Run a second smaller mash to change the second runnings character
- Split the boil – multiple pots with different ingredients
- Dilute
- Post Chill Additions

Citra Saison / Belgian Cream Soda

10G split: 1.058/1.067 OG, 4/12 SRM, 51 IBUs

Malt

12.5 lbs Pilsner

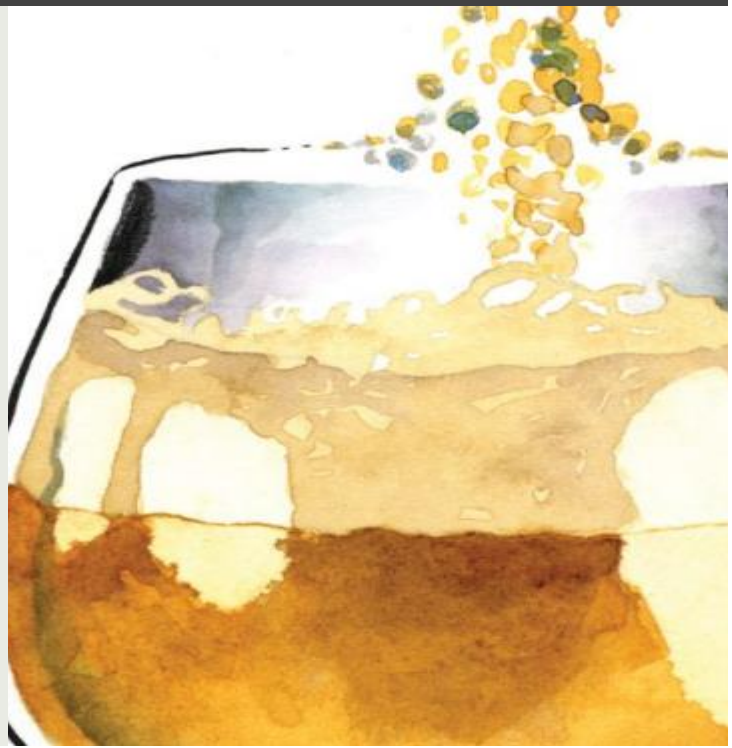
8.5 lbs Wheat Malt

1 lbs Munich

1.5 lbs White Sugar

Hops

2.0 oz Magnum 12%AA 90 minutes



The Split

Citra Saison Extras:

2.0 oz Citra – whirlpooled for 10 minutes

Yeast

WLP565 Belgian Saison I

Cream Soda Extras:

1.5 lbs Amber Candi Syrup (diluted to ferm)

0.5 oz Cinnamon extract (added to the keg)

0.5 oz Vanilla extract (added to the keg)

Yeast

Wyeast 3787 Trappist High Gravity

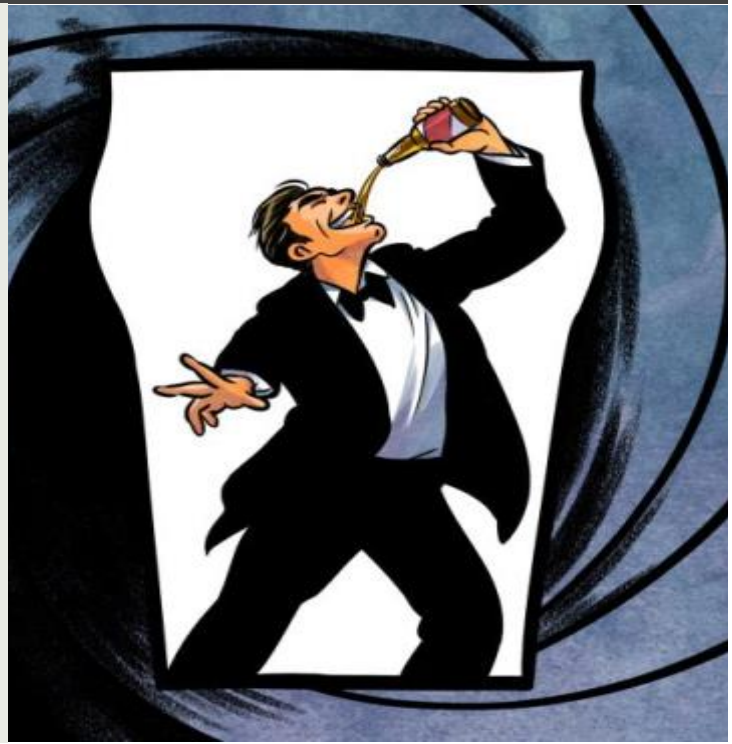
Template Brews

This is something I suspect we all do, but we don't talk about it

I have a number of "base" recipes.

The Dirty Secret of the Recipe Industry

One of the best keys to success



Template – Basic Pale

5.5G split: 1.054 OG, 7SRM, 32 IBUs

Malt

10 lbs Pale Malt

1 lbs Munich

0.5 lbs Crystal 60L

Hops

0.6 oz CTZ 12%AA 60 minutes

0.6 oz Centennial 7.8%AA 10 minutes

0.6 oz Cascade 4.4%AA Steep 20 minutes

1.0 oz Cascade Dry Hop 7 Days

Template - Saison

5.5G split: 1.048 OG, 4.4SRM, 20 IBUs

Malt

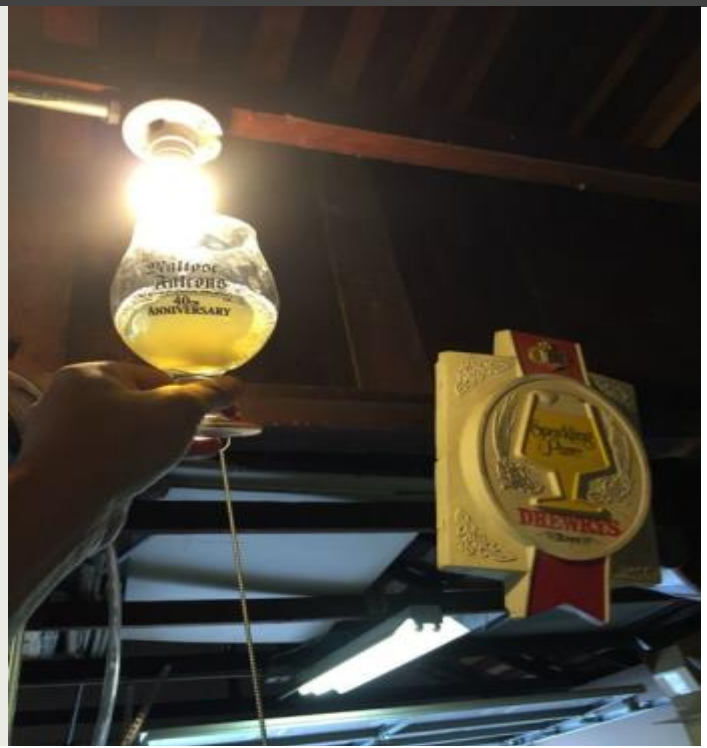
8.75 lbs Pilsner

0.5 lbs Flaked Wheat

1.0 lbs White Sugar

Hops

0.5 oz Magnum 12.9%AA 60 minutes



Template Stout

5.5G split: 1.042 OG, 45 SRM, 26 IBUs

Malt

6.5 lbs Maris Otter

1.0 lbs Crystal 120L

0.75 lbs Roasted Barley

0.25 lbs Black Patent

0.25 lbs Chocolate Malt

Hops

0.5 oz Target 11%AA 60 minutes

1.0 oz Fuggles 4.5% AA 15 minutes

Yeast

Irish Ale Yeast

Last Thoughts

- Focus on the Clearest Path to Beer that Satisfies You
  - Recognize the Infinite Possibilities, Infinite Rabbit Holes
- Clear the Mental Roadblocks to Brewing
- Revisit Your Process to Find Simplicity
- Key on:
  - Sanitation
  - Yeast Health
  - Water Quality
  - Fermentation Temperature
- Questions?

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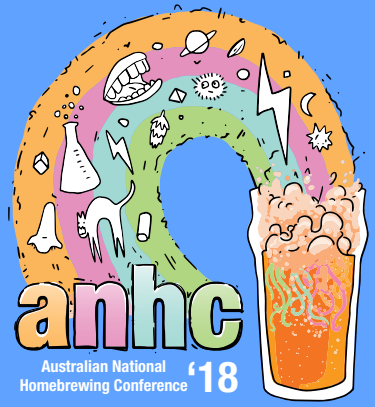
Kettle Souring

Soren Eriksen



Session Chair: Simon Haylock
Tasting Sponsor: 8wired

Kettle Sours

Søren Eriksen

8 Wired Brewing

New Zealand

Kettle Sours at 8 Wired

- Hippy Berliner
- Cucumber Hippy
- Palate Trip
- Cosmic Chaos
- Sour Poppy
- Stone Free

A case study on Hippy Berliner

Process overview:

- Mash and run off to the kettle as normal
- Cool wort in kettle to 48C
- Pre-sour with lactic acid
- Pitch Lactobacillus
- Leave for 40 hours
- Boil, brew, ferment and dry hop as normal
- For a double brew, the second batch is NOT soured.
- Any flavourings usually go into finished product, right before packaging

Grist, mash and run off

- Nothing unusual here. (Not much, anyway….)
- Simple grist of Pilsner, Wheat, Vienna, Oats and Acidulated
- Acidulated malt is only for mash pH, not connected to souring
- Run off and fill the kettle as normal
- Now it starts getting interesting….

Pre-souring

- Wort is cooled to 48C
- Lactic acid is added to bring the pH down to 4.5
  - 0.3 ml per litre – 7.5 ml per 25 litres
  - This helps protect the wort from unwanted bacteria
  - Also helps with head retention
- Time for lactobacillus

Lactobacillus

- Genus covering hundreds of species
- Converts sugar to lactic acid
- Other bacteria can make other acids and/or alcohols
- Lactic acid is a soft, pleasant acid (compared to, say, Acetic and Malic Acid)

Sources of Lactobacillus

- Can be bought pure from a lab (like yeast)
- Can be cultured from countless natural sources, most often used would be brewer's grain.
- This will produce a complex mix of unwanted bacteria and wild yeast. Good for lambics perhaps but not kettle sours.
- We use the easiest, most readily available source of clean bacteria:

Yoghurt

- 0.3 g/l of each:

L. casei Shirota

L. acidophilus
B. bifidus
L. casei

L. Unkownus

Souring

- Yoghurt is added to the cooled and pre-soured wort.
- Make sure it's thoroughly mixed, otherwise it will clump
- Leave until desired pH is reached
- We target pH 3.1, this takes about 40 hours.
- Temperature needs to be maintained in the 40s
- No need for CO2 blanket, but keep kettle closed as much as possible

- Homebrew hint: Add more yoghurt and sour over night.

Brewing

- After souring, the beer is brewed as normal
- We usually double brew – second batch is not soured - pH of blend is around 3.4
- IBUs are kept to a minimum, most hops go in dry
- pH increases after dry hop – around 3.6.
- Generally these beers tend to attenuate very well

Fruit and Vege

- Vegetables are generally added to finished beer right before packaging.
- Fruit, which contains a lot more sugar, is generally added during fermentation.
- Timing depends on the adjunct

Questions?

- Don’t be shy!