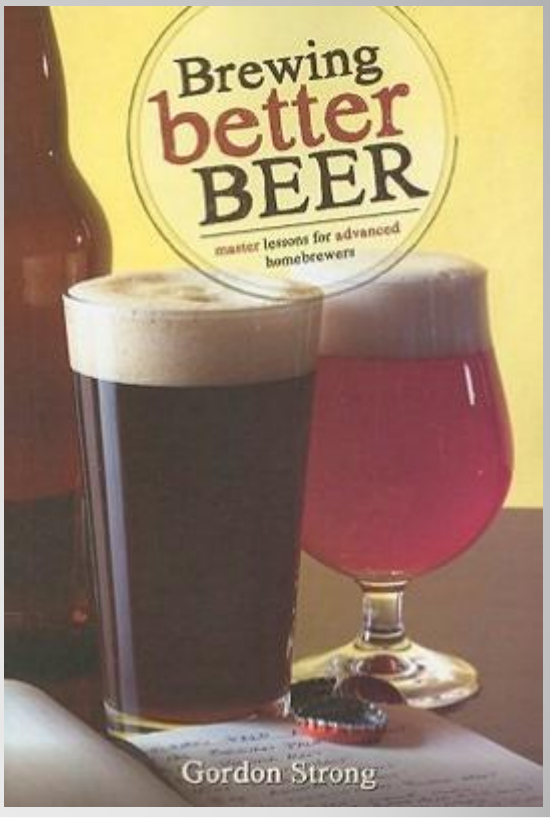
Cold Steeping Roast Grain

Presented by **James McGovern** for the *Righteous Brewers of Townsville,* February 2012

What is cold steeping and where did you get the idea from?

- I came across the idea while reading *Brewing Better Beer* by Gordon Strong.
- In it he wrote about dark grains and the process of steeping them. Dark grains were likened to coffee and the many ways in which coffee can be prepared and the differences in taste due to the brewing method i.e. percolators, drip filter, french press, espresso machine - which all handle coffee differently.
- **When coffee is exposed to higher heat over a greater period of time it tends to produce coffee that is more bitter, acrid and acidic**.



Tell me more….

- Dark, roasted grains/malts such as chocolate, roasted barley and black patent do not need to be mashed.
- The high roasting temperatures remove and alter the enzymes of the grains and also break down the proteins and starches.
- So when dark roasted grains are included in the mash they are not actually being mashed as there is nothing left to convert.
- The mash is essentially a long high temperature steep of the dark grains. The mash only releases the character of the roasted grains.

How can it be used in the mash?

There are several methods for using dark grains:

- using them in a traditional mash
- adding them late in the mash
- adding them to the mash tun during vorlauf/sparge and steeping them

Note: If using them for any method other than in the traditional mash process then the dark grains need to be milled separately from the rest of the grain bill.

What are the steeping options?

Steeping options are:

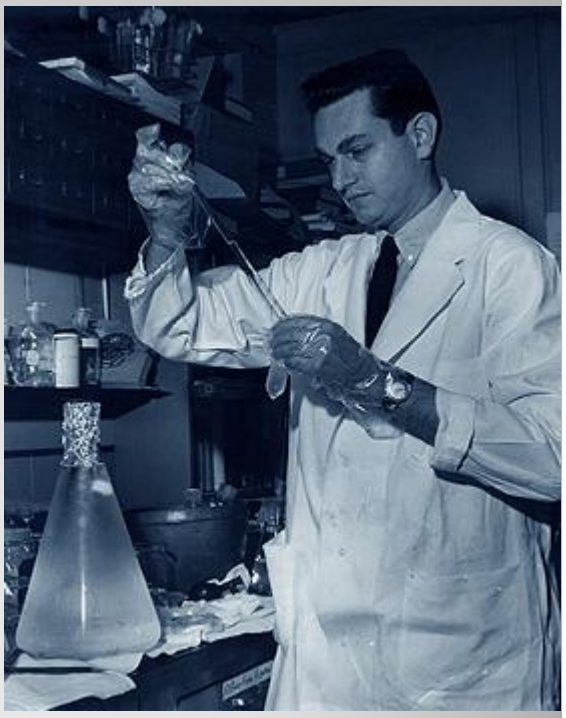
- hot steep
- cold steep with no boil
- cold steep with a short boil

What does the cold steep involve?

- Cold steeping means the grains are steeped in water and left at room temperature for a day. They are then strained and added to either the fermenter or the kettle in the last 5-10 minutes of the boil.

The Experiment

- I chose to do a cold steep with a short boil in a stout recipe.
- Gordon Strong wrote that the mix ratio for all methods is roughly 450 grams grain to 1.9 litres of filtered brewing water. At this ratio the extract yield is similar to mashing - roughly 45-50%
- I steeped my dark grains in a hop bag to make straining easier.
- The cold steeping method - both with a short boil or without, is said to result in less astringency and harshness, less acidity and a little less colour. This makes it a good option for schwarzbiers and stouts.



The Experiment Cont..

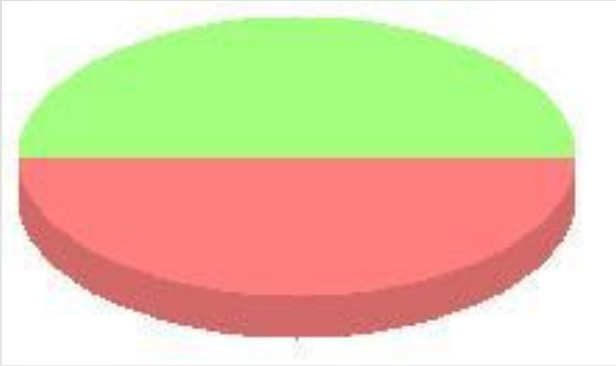
- I was interested in trying the cold steep method to see if I could get a smoother, chocolate coffee taste in a stout.
- I then decided to see if there was any noticeable difference between mashing the dark grains and cold steeping them.
- I scaled down my stout recipe from 23 litres to do two 14 litre batches.
  - One brew would be dark grains included in the mash
  - The second would be dark grains cold steeped.
- I brewed both batches on the same day, pitched the yeast into both fermenters at the same time and bottled on the same day.
- I cold steeped Chocolate malt, Special B malt and Roasted Barley in a hop bag in filtered water overnight and added the liquid to the kettle in the last 10 minutes of the boil.

Findings

- I did not notice much taste difference between each brew after 5 weeks.
- I let the bottles sit for more time and after 2 months I noticed that the cold steeped brews tended not to hold the head for as long as the mashed beers.
- After about 3 months the cold steeped beers had a beautiful deep, rich chocolate aroma when poured into a jug. The taste seemed to be smoother and less acidic although I also liked the mashed brew. After multiple taste tests (life is tough sometimes) I have decided that for future stouts I will mash the roasted barley with the grain bill and cold steep the other dark grains.

RBT Opinion

The opinion of the **Righteous Brewers of Townsville** was split with approximately 50% preferring the cold steep and 50% preferring the traditional mash.



The Future

- I have now also cold steeped some chocolate grain in a red ale. It is conditioning in the bottle at present. Can't wait to try them!

References

- Strong, G. (2011) *Brewing Better Beer: Master Lessons for Advanced Homebrewers.* Brewers Publications, USA.