Ale from Scratch: a Brewing Entry for the Æthelmearc A&S Faire Competition

Shire of Nithgaard, April 29, 2023

by Robert of Ferness, OL

Project: make ale from self-grown barley by planting seeds, harvesting plants, processing them, malting their seeds, and brewing that malt.

Step 1: obtain seeds. After some research and online shopping efforts, a single pound of a Conlon, a specialty two-row malting barley, was purchased from Johnny's Selected Seeds for $6.25. It seems that both 2-row and 6-row were used historically* although Conlon is a modern variety**. However, I had a difficult time finding any barley in small amounts, even via local feedstores, so Conlon's would have to do.

Step 2: grow plants. Our garden had a couple of extra raised beds, so I broadcast-seeded them, raked the seeds into the soil and let 'em grow. Checking in on them over the season, I noticed that there were distinct patches of the bed that lacked plants, so either my broadcasting was not even, or I buried some seeds too deep, or some too shallow (and something ate them).

Step 3: harvest. Research showed that the kernels are ready to harvest when the plants are brown and they easily detach from the heads. At that time, I cut off the plants and laid them out under cover on top of old screen doors to be sure they could dry completely.

Step 4: process plants. After trying various ways to knock the kernels from the heads, which were either ineffective or required too much effort, I decided to make a two-hand flail and threshed the plants on top of a plastic tarp. Funnily enough, the proper way of doing this task was not only enjoyable, it was fast, efficient, and effective. Result: one pound of barley. (So, not a great ROI seed-wise.)

Step 5: make malt. It had been my intent to malt the barley the winter after harvesting it, however this step didn't take place until the next winter (almost spring), but it appears to have worked. The malting took place on metal sheets over a wood stove and made the house smell wonderful. The specific steps of malting are detailed below.

Step 6: brew. Using farmhouse brewing techniques, one gallon of ale was made in an oven. No additional malts of any kind whatsoever were added: this ale's grain bill is 100% home-grown, home-processed, and home-malted. Further, I also grew the Saaz hops used in the brew (albeit frozen). The specific steps of brewing are also described below.

Step 7: drink and enjoy!

Making Malt, Feb. 26 - March 3, 2023

- Consulted a few "how to make malt" web pages and chose https://beerandbrewing.com/malt-your-own-barley/ as the one to follow.
- A goal of this project was to avoid using modern appliances and measurement devices, although time and temperatures were recorded for possible future comparison.
- First soak barley starting 1pm 2/26 situated at about 75 degrees F.
- Spread on cookie sheets to dry at 10:15pm.
- Second soak started at 8:30am 2/27; floating chaff removed.
- Removed from water 4:45pm and drained until 9pm then spread on cookie sheets in cool room.
- Spritzed with water and turned and mixed on 2/28 at 2:30pm, 7:30pm, 11:30pm; on 3/1 at 7:30am 1pm, 8pm, midnight; on 3/2 at 8:45am and 9pm.
- Moved cookie sheets to wood stove trivets on 3/3 at 9:40pm and left for about 25 hours, with occasional stirring, mixing, and turning; the heat from the stove varied quite a bit through this time period and at its hottest times frequent popping was heard.
- Agitate and rub to remove the dried chits (little white rootlets).

Brewing, March 12, 2023

Farmhouse brewing, an approach used by Scandinavians and Northern Europeans — and generally thought to have a long history — was taken in this project. The general idea is that a relatively long warm soak of the malt, no boiling of the wort, and holding at less-than-boiling temperatures produces a fine drink with less effort. See *Historical Brewing Techniques* by L. M. Garshol (2020, Brewers Publications, Boulder, CO) for details.

A modern thermometer, oven, stove, stainless steel kettle pan, mesh bag, and carboy were used.

1. Put 1.5 gallons of water into the brewing pot and heat it to 180° F.
2. Fill the mesh bag with one pound of roughly ground malt and place it into water, stirring to ensure good mixing and wetting and to avoid clumping.
3. Bake for 90 minutes, stirring occasionally.
4. Remove the kettle from the oven and heat the oven to 210° F.
5. Lift the mesh bag with wort from the water and let it drain in a colander. When cool enough, twist the bag and squeeze out more liquid.
6. Bring the wort nearly to boil on the stove.
7. Put the hops cones (0.4 oz. frozen Saaz) into a mesh bag and add them to the wort.
8. Bake the wort for an hour.
9. Remove the wort from the oven, remove the bag of hops, then put the kettle's lid on.
10. Cool the wort to pitching temperature (by placing it outside for 2 hours at 34° F. [should have been only 90 mins.]).
11. Add yeast (1 tsp. S-04 SafAle primed).
12. Wait 48 hours.
13. Ferment in carboy for 8 days.
14. Bottle (7 ½ resealable pint bottles with 1 tsp. sugar each).

Note 1: upon tasting the spent grain immediately after brewing, it seemed much less sweet than my many previous batches of brew, no matter how they were made.

Note 2: the spent grain was dried over the wood stove and then ground into flour (with a modern machine), and was then baked into delicious bread.

Note 3: late morning the next day, the kettle showed no signs of yeast activity - not a good sign! A hydrometer indicated only 2% alcohol, so upon consultation with Maedhbh, 1.25 cups of our own honey were added to bring it up to 6%. It seems likely that the malting process failed to a large extent.

Note 4: by adding the honey, the resulting beverage might best be classified as a braggot rather than an ale, but we'll let drinkers decide.

[*]See p. 215 etc. of *A History of Beer and Brewing* by I. Hornsey (RSC Publications, Cambridge) for discussion and evidence of various sorts of barley usage.

[**]http://www.ndsuresearchfoundation.org/conlon (accessed April 23, 2023).