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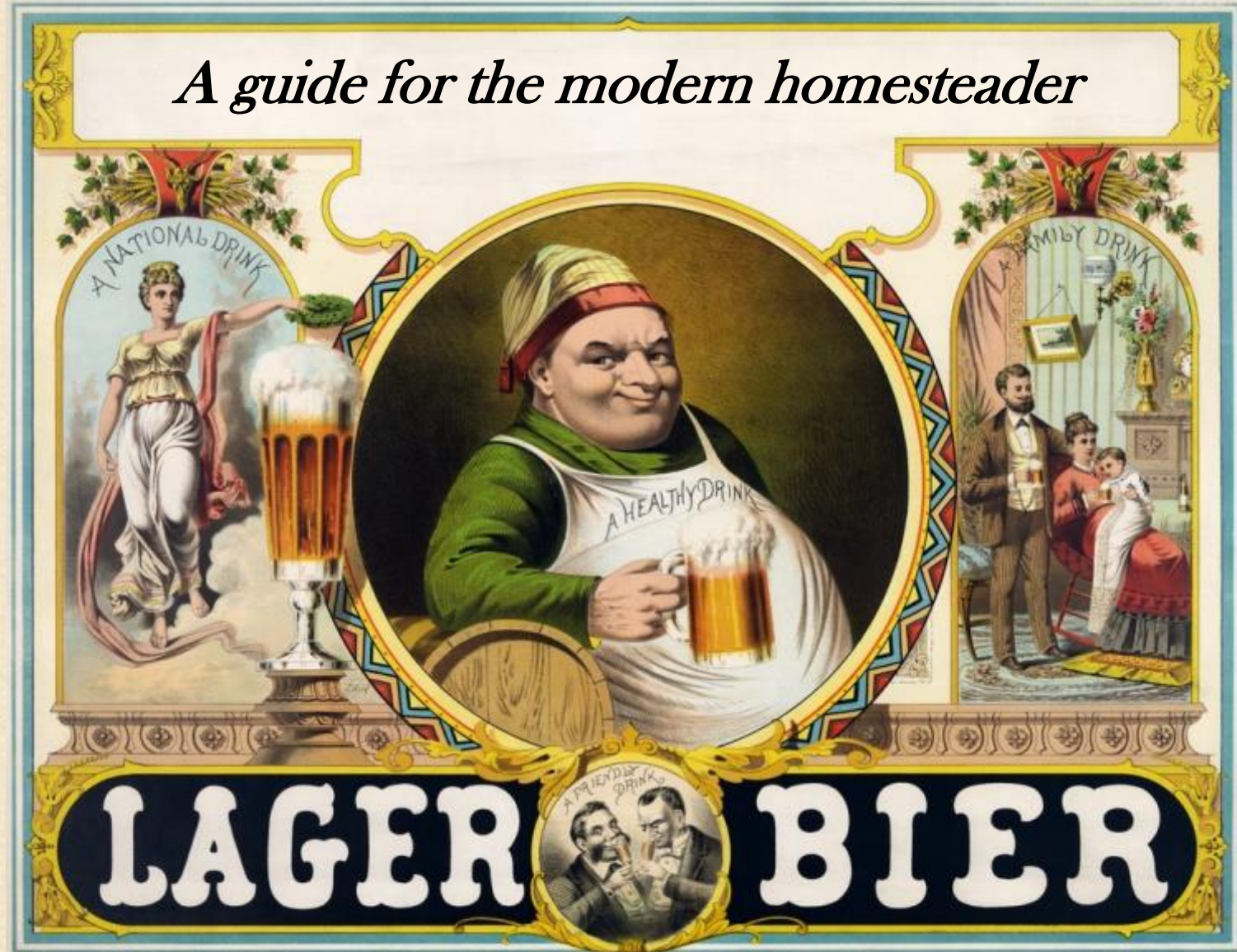
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Traditional Beer Brewing

A guide for the modern homesteader



What is beer?



...and what *was* beer?

- Modern definition: a fermented alcoholic beverage made from malted grains, hops, water & yeast.
- Sugar + water + yeast + time = alcohol.
- Most modern beer gets its sugar from cereal grains (barley, wheat & rye).
- 1516 - Reinheitsgebot or "German Beer Purity Law."
 - Stated that beer must be made from *only* water, hops and barley (yeast was added later).
 - Spread through Europe and eventually the world.
- 20th Century craft beer movement loosened laws up somewhat.
- Historical beers:
 - Weren't always made from grain.
 - Could have honey, molasses, sorghum, or other fermentables along with or instead of sugars from malted grains such as barley, wheat or rye.
 - Made with various herbs and rarely with hops.
 - Commercial brewing tightened up style definitions.
 - Ancient peoples weren't as concerned with style definitions.
 - Anglo-Saxon *beor* and Old Norse / Danish *Bjorr* likely referenced a drink that was somewhere between a mead, a beer and a cider.



From Grain to Glass

How beer is made



- Grain needs to be malted to draw out sugar.
 - Germinated by soaking in water.
 - Sprouting is halted by drying with hot air.
 - Malting develops enzymes that modify starch into various sugars.
 - A near-invisible process today; previously was common part of every agricultural community.
- Brewing beer requires heating malted grains in water at various high temps.
 - Mashing (soaking ground-up malted grains in hot water) draws out sugars
 - The sugary malt liquid is drained through a process called “lautering”
 - Wort (unfermented beer) is the sugary liquid that is the result of mashing
 - The wort is then boiled and flavoring / preservative ingredients such as hops, herbs and spices are added during various periods of the boil
- Finally, the wort is cooled, yeast is added, and the wort is left to ferment into beer.
- Fermentation-to-bottling-to-drinking time varies based on amount of sugar.

Brewing Beer From Sugar

- Ginger Coriander Ale
 - 8 oz fresh ginger root chopped
 - 1 oz dried coriander seed lightly crushed
 - 2 tablespoon dried orange peel granules
 - 1 pound cane sugar or brown sugar
 - Ale yeast or wild-fermented starter
 - 1 gallon spring water
 - Recipe available at <http://nittygritty.com>



Brewing Beer From Extract

- Start with an extract kit.
- Or build your own kit.
 - Fermentation vessel(s) & airlock(s)
 - Brewing pot (stainless steel / 2-5 gals.)
 - Grain extract (or molasses, brown sugar, etc.)
 - Hops, herbs / spices, yeast, flavoring grains, etc.
 - Siphoning tube and/or funnel; thermometer & hydrometer
 - Yeast / good drinking water



Brew Day, Part 1



- Relax. Have a beer. Don't stress.
- Inventory and clean all equipment the night before.
 - Don't go into brew day without a plan and all equipment ready to go.
 - Things will never go quite as planned. Accept that.
 - Clean all equipment with hot soapy water and air dry.
 - Sanitize / sterilize and rinse well.
- Bring 1 ¼ gallon water to a boil (for 1-gallon batch).
- Add extract or sugar substitute (molasses, brown sugar, etc.).
- Stir mightily to avoid boil-over; keep at a steady, rolling boil.
- Add hops, herbs, spices, etc., following recipe schedule.
- Cut off boil and cool rapidly in an ice-water bath to 60-70 F.
- Proceed to Brew Day, Part 2.

Brew Day, Part 1, Cont.



Brew Day, Part 2

- Add yeast once wort is 60-70 F.
- Pour through strainer into fermentation vessel.
- Check potential alcohol by volume (ABV) with hydrometer.
- Insert airlock half-full of water or cover brewing bucket with cloth.
- Set fermentation vessel in warm, (60-70 F) dark room (no direct sunlight).
- Active fermentation should commence within 2-10 hours.
- Troubleshoot if no visible fermentation within 24 hours.
- Prepare to bottle within 7-10 days of brew day.



Bottling, Aging & Drinking Beer



Don't
forget to
prime!



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