

Experiments in Ginger, or "The Root of All Evil"

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Though I do not possess a fancy hat like Willy Wonka, please, board my touring gondola. Or maybe it's more of a pirate ship? More likely, it's a smaller semi-seaworthy vessel that got lost at sea.

This is to take you on a tour of ginger, a root that had medicinal and flavor properties. Each of these were done to determine the fermentation patterns in pursuit of a quality beverage. Ginger has had its share of uses. Digestive, nausea cure, pain relief, flu / cold treatment, and metabolism are but a few.

I present to you today a total of (8) beverages of progression through experimentation, five to bring you along the journey that brought us to the primary entry of the day, Mead. The first five used ginger and water in all batches. #5 utilized Molasses as the sugar, bringing a different flavor to the ginger ferment in a beverage commonly known, after some additional ingredients, Switchel.

Batch #1 - Ginger "Small Beer" #1 - This beverage uses lemon (citron) as the citrus.

Batch #3 - Ginger "Small Beer" #2 - This beverage uses lime as the citrus

Batch #3 - Ginger "Small Beer" #3 - This beverage uses mandarin as the citrus.

Batch #4 - Ginger "Small Beer" #4 - This beverage eliminates all citrus, and uses the acidity of cranberries.

Batch #5 - Ginger Molasses beverage - This beverage was crafted using the same principles as the base for batches #1, #2, and #3. The same methods were used with molasses replacing all sugars.

Mead Batch #1 - This was the first batch, which has mellowed over time. The batch was started on April 21st for primary fermentation. Potential alcohol rated at approximately 11%, though at the younger age is floating around 6% currently.

Mead Batch #2 - This was the second batch which I started with a larger and more concise method. I increased the ginger, bringing the flavor a bit more forward than Batch #1 after primary. This batch was started May 2nd, and was just bottled this week.

Mead Batch #3 - This is the same as batch #2, but at 14 days, I added long pepper to the batch, breaking it by hand instead of grinding. This brought a nice complimentary warming note on the back. This also was just bottled this week.

Ingredients and their processing.:

Water - Purified water was used to eliminate chlorine or other chemicals that could corrupt or even eliminate the process. (All batches)

Sugar - Raw minimally processed sugar was used to eliminate excess chemicals that could alter the process. (No used in Batch #4 or Batch #5)

Molasses - Unsulfered Molasses was used within batch #5

Ginger - Fresh ginger root was used, purchased at farmers and independent market. This was washed, left to dry, then ground. (All Batches)

Citrus - Though used for flavor in some beverages, this was used mainly as a natural preservative to stabilize the process and inhibit mold and harmful bacteria. Only the juice was used for the beverage, using a modern stainless steel juicer. Juice was strained to eliminate any pieces of citrus present. (Batches #1, #2, #3)

Lemons - Though not period, these were used as the modern descendant of Citrons. Being readily available and descended, these were used due to availability and the low amount of juice off of a citron. **Limes** - Limes originated in the Far East, but trade routes and human migration brought these further west. The Spice Road and Arab traders were known to transport these around 1000 CE. **Mandarins** - Largely similar to their ancestors, the mandarin has history dating back thousands of years, predating the Common Era, named due to their similarity of the coloring of the bright orange robes worn by the Mandarins.

Cranberry - "Pure" cranberry from Ocean Spray was used featuring minimal processing to avoid preservatives that can cause chemical notes. Cranberries are very late period, with documented use in the 16th century. **(6)**

Honey - Clover honey was used in all Mead batches. This was a mid grade honey, as I was looking to keep costs at minimum during the experimental phases. Future batches will be done with various honeys, including knotwood and orange blossom.

Method of Production:

Batch #1 - 5 Initially, I started with 2 fermentation starters combining grated ginger, and sugar or molasses based on batch in equal parts with enough water to cover the mix. daily, for seven days, the same mixture was added. (2-4ounces of ginger, 2-4 ounces of sugar or honey, and water to cover the mix.) The top was loosely sealed with a cheesecloth over the top to encourage fermentation. The mixture, much like a SCOBY or tincture, would be the basis for the final drink. *(Variable ounce was based on the size of ginger roots during grating process.)*

All uses of the ginger starter were passed through a general strainer followed by a tight screen strainer to minimize particulates. Some sediment remains due to settling.

Once the starter was ready, I combined in a sealable bottle with a flip top so that pressure could be released throughout the process to avoid volatile explosion. The mixture combined was 2 parts fermentation starter, the citrus juice (two lemons or three lime/mandarin or 6-8 oz based on bottle for cranberry), and the bottle topped off with approximately 1 part each of simple syrup (sugar/water) and purified water.. This was then left at room temperature for 5 days checking to insure pressure buildup did not cause a hazard. At the end of this period, the bottle was refrigerated until the time of entry for preservation. **NOTE:** The Molasses based ginger brew

(#5) did not have any citrus added, allowing for the flavors to carry from the base ingredients. The addition of a hint of lime was found to be enjoyable in final consumption.

Length of Fermentation / Steep:

The mix used in the batches was prepared in methods similar to a modern ginger bug. This is currently approximately (21) days of age at date of bottling. Final beverage was blended and allowed to secondary ferment for (5) days at which point placed under refrigeration.

The mix used in Batch #5 (Molasses) was prepared the same as the other, but with molasses replacing all sugars. This was allowed (25) days to ferment at which point it was combined 50% of the batch with filtered water, and allowed (5) days to secondary ferment at which point placed under refrigeration.

Date Started / Bottled:

All beverages were started between April 17, 2026 and April 20, 2026. Beverages were bottled between May 8, 2026 and May 10, 2026. Meads were bottled between 6/1/26 and 6/4/26.

Documentation - How we got to these wild beverages:

GINGER SMALL BEERS:

Though "ginger beer" as we know today was not formally found until the 17th-18th century, ginger has been in use for thousands of years as ingested and topical medicine and as a general tonic. **(1. 475-221BCE)** This was used to treat colds, rheumatism, indigestion and stomach aches. It was later used on many seafaring vessels to combat seasickness. **(2. - 405AD)** Later, it was used to combat the plague in Middle Age Europe.

Recipe is based off of early records of ginger tonics created using ginger, honey/sugar, and lemon. In lieu of the boiling process of the ginger and water, I utilized the wild yeast present within ginger to create a derivative of "small beer" common as early as the 12th century. **(3)** This was done without the grains present, utilizing the ginger in its place. This "small" or "table" beer was a lower alcohol (1-2%). This would be present at many tables. documentation formally appeared in references within Shakespeare, (Prince Hal complains, "Doth it not show vilely in me to desire small beer?"). **(4)** This suggests that for a noble, drinking such low-quality ale was beneath them, though necessary for commoners.)

Batch #5 is experimental, using Molasses as the respective sugar source. Molasses dates back to 500BCE (appr). Used in a ferment was not popular until the 15th century when introduced to the West Indies, where it became the basis for rumbullion and Kill-devil, the early predecessors to the rums of today, often in the dark or golden style, and popular in early dishes of the Madeira Islands. **(5)**

MEADS:

In regards to meads, ginger has been used to ferment since the neolithic period (5,000 BCE and before) in Chinese culture, used in fermentation starters and low alcohol fermented beverages. **(7)** Though there is minimal documentation of its use for a mead officially, it would stand to reason that this could have occurred due to the prevalence of both honey and ginger in the region. Long pepper was found prevalent during the 15th and 16th centuries as a pickling agent. I selected this pepper for the experimental batch due to a lack of available grains of paradise, the preferred compliment to honey in my opinion.

All of these ingredients would have existed in the period, so it is reasonable that they would have been combined at some point.

NOTES IN REGARDS TO DIETARY RESTRICTIONS AND MODERN METHODS:

Alcohol content is minimal due to the nature of the beverage. As the beverage will still contain a smaller amount (1-4%), beverage is considered for consumption by individuals over the age of 21. Not recommended for those abstaining from alcohol.

Ingredients and their combination are generally considered gluten free and Kosher, and all but the honey are considered vegan ingredients. However, the preparation environment is considered "friendly," but cannot be considered truly free and in compliance with these diets.

All items were cleaned and sanitized during the processing. Bottles were cleaned via modern dishwasher on the sanitize cycle, followed by being filled with boiling water to clear any potential contaminants or chemicals.

REFERENCES:

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4. William Shakespeare (1598) Henry IV, Part 2 (Act II, Scene ii)
5. Alfred W. Crosby (2015). Ecological Imperialism, The Biological Expansion of Europe, 900–1900 (2 ed.). Cambridge University Press. p. 77. Archived from the original on 6 January 2020. Retrieved 25 September 2017
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7. Delores Piperno (ed - Case Study) "The origins of specialized pottery and diverse alcohol fermentation techniques in Early Neolithic China," National Library of Medicine. June 3, 2019.

POST NOTE: The beverages were intended for consumption as a mixer with a favorite dark spirit

(Rum/whiskey/etc.) The beverage itself can aid as a digestive and have probiotic effects.