

Fermentology • Fermentology

Make Mead Like a Viking

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Editor's note: This publication contains the video of the talk from the Fermentology webinar series, as well as a lightly edited transcript of the lecture.

Abstract

[Jereme Zimmerman](#) is an author and brewer. He joined us as part of March Meadness to walk us through some of the history and the process of making mead like the Vikings did. He will share a few processes and recipes to encourage you to get pounds of honey, and make our own mead.

Watch the Talk

Visit the web version of this article to view interactive content.

Make Mead Like a Viking with Jereme Zimmerman

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Introduction

My first book was titled [Make Mead Like a Viking](#), and that's what a lot of my presentations end up being titled. This talk should be subtitled "Make mead as close to what we think was the way the Vikings might have made mead." That didn't work quite as well for a title, though.

When I started researching Nordic Scandinavian brewing, I found little hard evidence as to exactly how the Vikings made mead. Therefore, we have to go back not only to the Viking Bronze Age times, but all the way back to ancient Neolithic times, to get some ideas of how all ancient peoples made mead and did brewing. Today I'll cover a little bit of all of that.

What is Mead?

First, a quick rundown of what mead is. Mead is just a fermented honey-water alcoholic drink. It doesn't necessarily have to be super alcoholic, depending on how much honey and how long it's fermented. But especially by modern definitions, mead is essentially just a fermented mixture of honey and water.

Any alcohol needs sugar to ferment. Wine uses grapes and other fruits — and sometimes some extra sugar. Beer uses malted grains; there is a whole process to get the sugars from those grains. Mead is the easiest, and very likely the most ancient, simply because it doesn't really take a lot to actually make it ferment. Mead will ferment on its own using wild yeast. There are ways to make it ferment longer, and make it more alcoholic, and give it all kinds of different flavors. There's a lot of stuff you can do to help it along, but really, literally, nature will do most of the work for you. And then you can mess with it how you want.

I'll talk about the process a little bit further along. Again, by modern definitions, especially if we're talking about commercial mead, honey has to be the primary sugar.

You can combine honey with other sugars. You can use regular straight up cane sugar if you're doing this at home and want to make something “mead-like.” You can also use some other things to make beer-wine hybrids or beer-mead hybrids. You can flavor fermentations with pretty much anything. If it's edible, it's something that you can make into mead or brew into beer, or even use in wine. There are some things you may not want to use, and there are some things you might want to be careful about. But again, if it's edible, you can probably put it into your mead.

Historical Mead

Mead is about as ancient as it gets, simply because anywhere there has been honey, there has been somebody who has made mead. A lot of times (very likely the first couple times) the people who made mead discovered it by accident. Honey will spontaneously ferment if it's left to open air, mixed in with some water. It's full of all kinds of microbes and yeasts and a whole bunch of stuff that's actually dormant in honey, which is why honey is such a great preservative. As soon as honey gets a little bit of water in it, either intentionally or by accident, it'll start fizzing. If you give it a little time, it'll start producing a little alcohol.

Early on in the fermentation process, it produces a lot of nice probiotic benefits. Historically, it was actually used medicinally. Often, people would enjoy it both for flavor and for intentionally incorporating herbs and various things that they knew had a medicinal effect, or even hallucinogenic effects. Early research shows that various hallucinogenic herbs and mushrooms, as well as many other ingredients, were used.

Viking Mead

Some people theorize that might have been what caused the Viking berserkers to go into their berserking rage before battle. They might have incorporated some herbs and mushrooms that had psychotropic properties, or even properties that we now consider toxic, but might not have killed them. It might have driven them a little crazy temporarily, possibly long term, as well.

We know some of this for sure. Other stuff we know from conjecture. There's a lot of stuff in the Icelandic sagas and a lot of things that had been written or passed down orally where we can make some educated guesses. Fortunately, there's also been a lot of archaeological and anthropological research where we're getting more and more of an idea as to what both Viking and Bronze Age people and much earlier incorporated into their meads and other alcoholic beverages.

Through research we're finding more and more evidence that as long as humans have been around, they have figured out ways to make alcohol, both from honey, but also from fermented grains and any type of sugar they could get a hold of. We can see this going all the way back to Neolithic Europe, and Africa, as well. And this is true in lots of other parts of the world.

The more I got into trying to figure out how the Vikings actually made mead, the more it sounded like it was really a luxury for them. In Norwegian countries and cold areas, there might not necessarily have been honeybees. Or they might not have had time to produce enough honey to make a good mead. The mead they drank might very well have been imported or made from imported honey. Mead, and wine as well, would have been reserved for the nobility.

The word "mead" is used a lot in Icelandic sagas and a lot of other Nordic storytelling. But if you go back to the etymology of it, a lot of times they actually might have been referring to ale. Their mead, ale, and anything they drink as a boozy substance, could very well have been a combination of all those things. It could have been a grain based beer with a certain amount of honey in it, and just whatever else they could put in there to flavor it and to provide sugars to boost the alcohol level.

In a previous Fermentology talk, Neil Rusch [discussed evidence that people were combining honey and water in rock cavities as far back as the Middle Stone Age.](#)

Basically, they were finding a bowl in a rock, mixing in some honey and water, and then giving it a little bit of time to ferment. They possibly also made it in gourds or other objects. It was very likely mixed in with a lot of other ingredients. At that time they

didn't necessarily have a way to do long term fermentation to boost alcohol levels. So they would have just drank it while it was fermenting, while the flavoring things were still floating in it. Many cultures used straws to poke into the surface where all this stuff would float to the top during fermentation and would drink it communally that way.

Making Mead

There is a lot of fun stuff I could dig into, but I'm going to get into the actual making of a mead, mostly focusing on how you can make it at home using simple home-based techniques.

Let's start with the types of mead you can make. It really varies quite a bit. A lot of people who don't know a lot about mead assume it's sweet because it's made out of honey, or maybe they just don't really know what it's supposed to taste like.

Asking what mead tastes like is a lot like asking what beer tastes like or what wine tastes like. It can vary quite a bit — from a really bone dry, almost champagne-like sparkling mead, to a very sweet, almost dessert-like mead, to somewhere in between. You've got a little dry, you've got a little sweet, and anywhere along that spectrum. A lot of that depends on how much honey you put into it and what types of other fermentables you put in.

If you put in a bunch of honey and you get enough yeast (the right kind of yeast where it ferments all the way out) then you'll have a really dry, high alcohol champagne-like mead. You can use less honey to make a lower alcohol mead. Using less honey might make it a little bit more dry, though not necessarily. Sometimes yeast plays an effect in that. You have a lot of different options.

Types of Mead

In modern terms, we have a couple different ways we refer to the types of mead. There's a very long list, especially once you get into making it for competition. It gets really technical as far as the names, but really it's just a couple of basic categories.

Show Mead (AKA: Traditional Mead)

The first one is show mead, or traditional mead. It's your basic honey, water, and yeast. There might be some other minor, smaller amounts of ingredients to boost fermentation, to help nutrients, and move things along — very small amounts of

things, acids and tannins for balancing flavor. But the main flavoring component is really just the honey.

Melomel

Any kind of a fruit mead is called a melomel, although there's a whole list of additional terms. If you use apples, for example, it becomes a cyser.

Metheglin

You can also add other ingredients: herbs, spices, and flowers (if you're an herbalist and know some flavoring and medicinal benefits of herbs, definitely take advantage of that). By spices, I do mean you can use actual spicy peppers to make a mead, but also cinnamon, cloves, etc. A mead with these ingredients is called a metheglin, which actually comes from a Welsh word, “metheglyn” — which is where we get the word “medicine.”

As I mentioned earlier, mead was made historically for medicinal purposes. You can really make some nicely flavored meads using herbs. Some can actually be particularly strong in flavor, such as really bitter. An example of this would be mugwort. You can intentionally add lots of herbs if you want a strong medicinal benefit.

Bragot

Another one of my favorite types of mead (because I'm also a beer brewer) is bragot. It's basically a beer with a bunch of honey in it. It's somewhere between a beer, a wine, and a mead. It doesn't necessarily have to have hops. Historically, it had a lot of different herbs in it — sometimes hops, sometimes not. We didn't really start to use a lot of hops in beer until the 15th century onward. Before that, sometimes they were used, sometimes they weren't.

Mead + Ingredients

Most people, if they're making mead, are doing it for the flavor. Many people add fruits, since you can really overdo it without having to worry about it too much. You should use spices and herbs in pretty small amounts. But there is just a huge list of other things that you can add to your mead: vegetables, mushrooms, peppers. Again if it's something you can eat, you can probably brew with it.

I have an example in my book of a Shiitake-mushroom-garlic-mead, which sounds awful to drink. It can be, if I make it intentionally with a bunch of those ingredients. I usually use a very small amount and will use that mead for cooking: to baste meats in

and stuff. You hardly actually taste those extra ingredients. You just get a subtle effect. Ginger is another possible ingredient. If you really like ginger you can use a lot of it and make a really ginger flavored mead — or beer. Or you can use just a little bit, to get a subtle touch of flavor.

Traditional meads or show meads, as I mentioned earlier, have very small amounts of additional ingredients. If you go to a homebrew store, you'll find (in the winemaking section) acids, tannins, and nutrients. You can buy these in a powdered form. These will work just fine, but they all also occur and can be found in nature.

When we talk about acids, we're usually talking about citric acid. Lemon juice is a source of citric acid and is pretty common, but any citrus will work. You just need a very small amount to balance the acid and the overall flavor.

The same can be said for tannins. An example of a tannins red wine, which is made with grapes that still have skins on. The skins provide the tannin, and that's where you get that little bit of extra kind of chewy mouthfeel, one of those things that can be overdone. It's not really all that pleasant to have a mead or a wine with too much tannin. But the right amount of tannins and acids, usually very small amounts, will balance things out nicely.

You can buy extra nutrients in different forms at homebrew stores. These give the yeast a little something extra to feed on. Especially if you are making traditional mead, if you simply dump a bunch of honey and water together and throw in some yeast, the yeast may get stressed and not fully ferment. Or they may produce some unpleasant flavors. Adding extra nutrients can give the yeast something extra to feed on to have a healthy fermentation.

For any of the other meads (bragot, any of the metheglins, or melomel) — the extra stuff you're throwing in usually provides enough additional nutrient that you don't need to supplement with any additional nutrients. You can add fairly small amounts of these ingredients, including even bits of the hive. Historically, beekeepers would just drop the beehive, dead bees and all, into the fermentation. This would give the yeast something extra to feed on. Another example is bee pollen. If you're not a beekeeper you can buy bee pollen, and there are various things you can do with that.

Making the Mead

I'll share a one gallon recipe here. If you are just starting out making mead, making a gallon at a time is the best to start.

A lot of mead makers mostly make one-gallon batches. When you go to a homebrew store, you'll usually find one gallon or five gallon kits. You can make more than that, depending on the size of your vessel. But one gallon is an especially good way to experiment with funky wild ancient type meads.

I have other recipes available on my [website](#) and on my social media accounts. You can find me on every social medium, except for TikTok (I'm not on there doing Viking dances — yet).

1. Blend 2.5-3 lbs wildflower honey with 1 gallon spring water

I mentioned earlier that the amount of honey and water can vary quite a bit. But for your blueprint, I usually buy a quart jar of honey. A quart jar of honey is about 2 1/2 - 3 pounds. This will produce somewhere between a semi-sweet and a sweet mead. I use one gallon of spring water. I mentioned spring water but you just want good quality water. Tap water will work. Just make sure you dechlorinate it first: run it through a filter or set it out overnight for the chlorine to evaporate. Or, boil it and cool it down.

2. Drop in 10-12 organic raisins or 1/2 teaspoon yeast nutrient

Make sure to specifically use organic so they don't have sulfites or anything in it that might inhibit fermentation. Pretty much any other dried fruit will work too (elderberries, for example). You can use a fairly small amount. I just take about a finger full, which is about 10 to 12 raisins.

Some mead makers really prefer to use store-bought nutrient. There are a lot of different options. You don't need a whole lot of it. When you get into modern homebrewing and mead making recipes, there's a lot of complexity when it comes to adding nutrients. That's great if you want to get really technical about it, but historically people were just mixing a bunch of stuff together, figured out how things worked for them and went with it. A lot of modern mead makers have certain parameters they go by, but if we're going by the ancient method, we don't go overboard with the technical aspects of it.

3. Squeeze in a pinch of lemon juice

I'll put in just a pinch of lemon juice (about half a teaspoon per gallon). Again, you don't really need a whole lot of it to balance things out.

4. Add small amounts of herbs, spices, or a handful of fresh berries, and/or wild-foraged edibles

This step is optional. If you don't want to do a straight honey-water-yeast traditional mead, then just add very small amounts to experiment with herbs, spices, anything you know is edible and tasty. Again, don't dump a whole bunch in without knowing what you're doing, because some things, especially certain herbs, can really make a powerful flavor. Or just go by a recipe that is specific. This isn't really meant to be a specific recipe, more of a starter to give you an idea of all the different things you can play around with.

5. Wild ferment or add yeast

There are a lot of different types of yeast you can buy on homebrew websites, at stores, or just at your grocery store. You can make mead with bread yeast. Bread yeast has some extra bacteria in that might give it a little bit of a funky flavor. I don't mind that funkiness. I don't find it all that funky. Some people say it makes it taste a little bready or a little yeasty. I'm fine with that and don't notice it all that much.

But the main thing I'm going to address here is how to get a wild fermentation going, which is how people initially did it before they figured out how to save their own yeast. Most mead makers today use wine yeasts. There aren't a whole lot of actual mead yeasts out there, but wine is pretty similar to mead in the process. So you can use wine yeast if you want to use a commercial yeast.

You can make what's called a session mead, which has a lower alcohol content, using either bread yeast or a beer yeast. If you want to ferment your mead using wild yeasts, the process will be kind of similar to the process that Neil discussed in his Fermentology talk in which people fermented mead in the hollowed-out rocks. You can emulate this process at home, using a food grade container. For example, I've used one of my dad's old winemaking crocks.

You can use ceramic crocks. If you buy a ceramic crock from an antique store, make sure you do a lead test. Some of the older ones had lead glazes on them. You can also use glass, and a lot of the stuff you can buy in modern homebrew stores are glass. And you can use plastic, as well. Plastic works just fine. You can buy a plastic brewing bucket, or just something you already have, as long as you know it's something that was designed to be food grade, food safe, and that it hasn't been used for anything else. So don't just grab a random bucket.

If you want to simulate how the ancients did it, a ceramic crock is a good way to start without trying to build your own ancient equipment.

Start a Wild Fermentation — Like a Viking

Know Your Honey

To start a wild fermentation, you want to know where your honey comes from. Get it from a local beekeeper, or get your own. If you buy random honey from the grocery store, it may or may not be fully natural raw honey. It may very well have additional things in it that you might not want in your mead. So just get good, raw, natural honey that you know you can trust.

2 Key Steps

Two things will help with a wild fermentation:

1. Adding water to hydrate the honey and aeration. Adding water hydrates the honey and brings out the yeasts and microbes that exist naturally in the honey.
2. When you mix it up together, by giving it a good stir, you aerate the mixture.

Covering Your Mix

Once you've mixed it you will cover the container with a cloth. You can use cheesecloth or a dish towel, anything porous, to cover it. A good wide-mouth, open vessel is good. The cheesecloth keeps things from falling in that you don't want to fall into it, for one thing, but it also allows air flow to get in there. And wild yeast. Yeast are pretty much anywhere you go, especially during the spring and summer time near a garden or orchard. Yeast is all around us. Wild yeast is microscopic — it'll drop through that cheesecloth into your mixture. At least a couple of times a day, you want to take the lid off, stir the mixture really well, and then, cover it up again.

An Example: Tej

One example of a wild fermented mead that I've made is Tej. Tej is an Ethiopian mead. It's basically Ethiopia's national drink. You have to hunt to find it outside of Ethiopia. In the fermenting Tej, you'll also have floating little sticks and leaves called gesho. Gesho is a tree that they use in their mead. It's also called woody hops. It's not at all like beer hops, other than that it provides a bittering effect. Making Tej was one of my early attempts at making an ancient style of mead that is still made today in Ethiopia.

Storing Your Mix

Keep it somewhere fairly warm. This works a lot better in the spring and summer. About 70 degrees Fahrenheit or so is a good temperature to keep it at. And usually in three to five days it'll be fizzy and foamy, and you'll know that you have a fermentation.

Amounts

You can do the full amount of honey and water you're going to have in the final recipe, or you can do a small amount. Sometimes I'll go out, especially in the springtime, and gather bits of wild violets and dandelion, mix them in some honey and water, in just a quart or pint jar, with a bit of lemon juice. I'll stir it up really good and do the exact same thing with it as I'd do with a 5 gallon batch, except once it starts fermenting I now have a starter that I can use for a future ferment.

You only need about half a cup of this starter per gallon of honey-water (though a cup is safer). If you don't plan on using it for anything else, just dump the full amount in and then add your other ingredients. That will be fine, too. If you want to save it for a future batch, just put a lid on it and put it in your refrigerator. Refrigeration really slows down fermentation, pretty much to a standstill. When you're ready to use it again, bring it out, and set it somewhere warm. You have many different options.

Knowing When Your Mead is Ready

Once a mead gets started and once I stir it, it starts getting fizzy and foamy. Some fermentations will show a lot more activity. But with the Tej, it is releasing a lot of CO₂. You'll know you have an active fermentation when it fizzes, and you'll hear it just kind of fizzing up like you just opened a pop bottle or something like that. You might see bits of foam rise up. Some wild ferments get really excited!

That's all it takes to get a ferment going!