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How to Make Mead
with a recipe for Apple Mead

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I am going to attempt to write a simple and easy to follow recipe for Apple Mead. The hope is to do so without sacrificing the quality of mead you make! While there are 6 pgs to these instructions and recipe, it's really not that difficult to make a tasty mead. Just experiment, you'll see!

Equipment You'll need (you can get at a wine shop or online):

Hydrometer – this is important as it shows you how much sugar is in the must and therefore what the % of alcohol will be that you're making

7 gallon or greater Stainless steel pot or crock – for the initial fermentation

Butter muslin cheesecloth – to cover the pot

Two 6.5 Gallon Glass Carboys

8 feet 9/16" OD plastic hose – for siphoning mead from one carboy to another

Long stick – that is long and thin enough to fit in carboy and touch bottom

Wooden or Rubber Bung – same size as hole of carboy

Fermentation Lock - fits into top of bung to prevent O_2 from entering

Iodine – or some other sterilizer

Corker – and a filler that goes on end of plastic tube for bottling

All of this equipment should cost around $120. The corker is an extra $30 - $120 (for floor models which I recommend). However, for the ingredients, it will only cost $2 - $3 per bottle to make, depending on the ingredients you choose.

Some Basics

Alcohol is very easy to make. All it takes is sugar in a liquid, with a yeast present. The sugar will turn into alcohol essentially, with CO_2 as a by product. Understanding the basics of how alcohol is produced will help you become a better mead maker and write your own tasty recipes.

So although alcohol is easy to make, making a mead that tastes good consistently is the trick. But honestly, it's not really that difficult. It just takes a little bit of attention to detail and care, kind of like following a recipe. And of course the quality of ingredients make all the difference.

The most important steps are:

Sterilization – it is very important to thoroughly clean all equipment before each use. This insures that unwanted bacteria are killed. Soap and water isn't always enough to kill these guys. The best eco friendly and non-toxic substance I have found is Iodine (this is a common way to purify drinking water). Ingredients used can be sterilized as well if you think there is a possibility of contamination. However, if you decide to make a mead out of wild yeast, then you may kill the yeast if you decide to say pasteurize the apple cider or grape juice. I typically only sterilize my equipment and never have a problem with my mead turning into vinegar or going bad in any other way.

Balancing the flavor – With a mead, you will get some flavor and depth from the honey alone. That varies depending on what kind of honey you use. The following recipe for Apple Mead is an easy one because apples are relatively balanced. Some antique apples will provide a much deeper flavor than bland new varieties. It is up to your creativity as to what flavor of mead you make. You can use any fruits or herbs that please you. Making mead is a great use of extra fruit from harvest in the fall or from certain wild fruit that may not taste pleasant eating raw, but that will make an excellent mead. The only way you can know what is tasty is to experiment.

The **acidity** of the fruits/herbs, etc. that you use to make the mead have much effect on the feel of the mead when you drink it. Typically, it is necessary to add some acid to mead to balance the acidity. Apples would need less acid added than the hibiscus mead I make, because apples have a fair amount of acid and hibiscus has hardly none (so it seems). You can perform titrations to check the acidity; however, that usually is not necessary. It's typically possible to go by taste. If the initial acid added isn't enough, then you can add more later after fermentation. Understanding acidity and the types of acid present and formed during fermentation can get quite complicated; however for this purpose there is no reason to worry about that too much.

Patience, Timing, and Attention to Detail - Making mead is definitely a test of one's patience! Sometimes the difference between a mediocre tasting mead and one of great quality can only be months of aging. Timing of when to rack (rack means to siphon from one glass carboy to another leaving the sediment behind) is important. For example, it is important not to leave the must in the open primary fermenter pot for more than 10 days, or else you risking O_2 getting into your mead. Fermentation needs O_2 for the first days; however, after that point you do not want to allow O_2 to come in contact with the must, or you will get a strong tasting oxidized mead. It is also necessary to get some basic details straight during the process. For example, add only enough honey to bring the specific gravity (sugar content in the must) up to the number that corresponds with the percent alcohol that you want to make. 1.09 specific gravity will make a mead with 12% alcohol. How much honey it takes to add to the must depends on the other ingredients you are using. For example, if you are using apple cider as your liquid, there is already enough sugar content in the cider to make a mead with an alcohol content of 6-8% . If you are making an herbal mead, you will have to add much more honey, as there is not much sugar in herbs.

Go Natural – there is no need to add all the extra sulfites, additives, and preservatives that commercial wine makers use. If you follow the instructions given here, I doubt you will have a mead go bad. I never have.

Keeping records of your experiments will also help you know what recipes work and what needs to be changed.

More info at: http://winemaking.jackkeller.net/

The Complete Meadmaker by Ken Schramm is a fantastic book.

Recipe for Apple Mead

Ingredients:

6 gallons Apple Cider

½ gallon clover honey (approx. for 12 % alcohol)

Lalvin K1-V116 Wine Yeast (this yeast is good for meads and when no sulfites are being added)

Juice of 6 lemons

2 oz. oak chips

Yield: for 6.5 gallon carboy, which is approximately 32 wine bottles worth

Day 1

1.) Sterilize all equipment (pot, stirring spoon, other utensils, etc.) by rinsing in iodine water (water mixed with enough iodine to give it a tea like color). Rinse equipment thoroughly before adding ingredients.

2.) (Optional) If you like, you can start with more than 6 gallons of apple cider and boil off some of the water in the cider. This will give you more of a concentrate and make the final mead tastier. The downside of this is that it may take awhile to boil it down and you might kill some of the good nutrients in the cider. Or if you want to do a wild ferment, using the wild yeast already in the cider, you may kill the wild yeast if you boil down the cider. If you decide to boil down some cider, you need to end up with 6 gallons of liquid. A side result is also that you will have a higher sugar content/gallon of the cider so you wouldn't have to add as much honey to get the same percent alcohol.

3.) Sterilize all equipment (pot, stirring spoon, other utensils, etc.) by rinsing in iodine water (water mixed with enough iodine to give it a tea like color). Rinse equipment thoroughly before adding ingredients.

4.) Now is when we mix the honey and Apple Cider and at the same time, measure the specific gravity (sugar content) to see what percent alcohol we are making. If you are shooting for 12% alcohol, you will need to mix approx. ½ gallon honey with the cider.

First start, by mixing most of the cider with most of the honey. By floating a hydrometer in the must, you can see what the specific gravity is. If you want 12% alcohol, then you want a specific gravity of 1.09 (you can see on the side of the hydrometer what specific gravity corresponds to what percent alcohol). If the specific gravity is less than 1.09, then add more honey. If the specific gravity is more than 1.09, then add more cider. Keep doing this until you get a cider/honey solution of 6.5 gallons. If you want to make it easier, you can just add 6 gallons of honey and ½ gallon of honey and accept whatever specific gravity that comes out to be. And of course if you want to make a higher or lower percent alcohol, just add more or less honey depending on your desire.

5.) Add the juice of six lemons to the must to balance the acidity. At a later point you can always add more if the mead has a blah taste.

6.) Now you want to add the yeast to the must. First read the directions on the packet of yeast. You will need to rehydrate and pitch the yeast in a small amount of water before adding it to the must. (Optional) You can add the yeast the day before to a pint or so of honey and water to make a starter solution. The yeast can multiply quickly this first day in this small amount of very sweet water before you add it to the large must. This makes sure the desired yeast takes over and not some other wild bacteria.

7.) Take a large spoon and mix the must vigorously. This helps to oxygenate the must, which is important in the first days of fermentation. Cover the pot with a butter muslin cheesecloth to keep out fruit flies (they carry vinegar bacteria on their feet) and tie a small rope around to keep snug. Make sure the pot is at least 3 ft. off the ground so that you can siphon to the carboy 10 days later. A temperature range of 60-70 is good for this mead to ferment (the temperature range depends on the specific yeast you are using).

8.) After a day or two, you should hear, see, and smell the potion brewing.

Around Day 2 or 3

1.) Stir must vigorously with a large sanitized spoon.

Around Day 10 – Rack #1

1.) Sanitize one glass carboy, bung, fermentation lock, plastic tube, long stick.

2.) Your intent is to rack (siphon) the mead from the primary fermenter (large pot) to the glass carboy. The mead is not done fermenting at this point, but you do not want it in an open container exposed to O_2 any longer. Every time we rack, we siphon all the liquid from one container to the other except for the last 2 in. or so that we leave in the old container. This last 2 in. contains all the sludge from the fruit. After we rack several times over a period of months, the solids will keep settling to the bottom and left in the old

carboy. After fermentation is complete (several weeks to months), the activity in the mead will settle down and all solids should fall to the bottom of the carboy.

3.) Before siphoning into the carboy, place 2 oz. of oak chips into the bottom of the carboy. These chips will add oak flavor (and some acid) to the mead. They will imitate (to a certain extent) aging the mead in an oak barrel.

4.) When you siphon with the tube from the pot to the carboy, you want to prevent as little as O_2 as possible of entering the mead. This means keep splashing to a minimum. This takes a little practice, but isn't too difficult. Using a rubber band, tie one end of the plastic hose to the stick about 2 in. from it's end. Put this end into the pot and make sure the end of the plastic hose is 2 in. from the bottom of the pot. Holding the other end of the hose lower than the pot and next to the carboy that you will be siphoning into, suck on this end until liquid comes nearly to your mouth. Put your finger over the end and place this end of the hose into the glass carboy so that the end of the hose is near the bottom of the carboy. As soon as you remove your finger, liquid should start flowing from the pot into the carboy. If it doesn't try to siphon again.

5.) The carboy should fill up with mead. If it is not full at the end, you can siphon some water into the carboy so that the liquid comes to the base of the neck of the carboy. You do not want extra space at the top of the carboy, because that will oxygenate the mead. After finishing the siphoning, place the bung into the top. Fill the fermentation lock with water to the line and place it into the bung. You should see the CO_2 moving through the water in the fermentation lock. This means the must is fermenting. When the plastic piece in the middle of the lock is no longer being pushed up by the CO_2, then the fermentation has stopped.

6.) Place the carboy at least 3 ft. off the ground so you can siphon from it to another carboy 2 weeks later.

Around Day 24 – Rack #2

1.) Follow the directions for Day 10. The only difference is that you will be racking from one carboy to another and that you will not put any oak chips in the new carboy. 2 weeks of oak chips should be enough.

Around Day 120 (3 months later than last step) – Rack #3

1.) If the mead has stopped fermenting, then it should have been clearing up drastically after it was done fermenting. Follow directions for Day 24. You should be racking fairly clear liquid if fermentation has in fact stopped.

Around Day 210 – 300 (3-6 months later than last step) – Bottling

1.) Definitely do not bottle if the mead is still fermenting or if it is not clear. If it is still fermenting you are taking the chance that they bottles will explode or the corks will pop off after you bottle. Sometimes it will slowly ferment for months or will take awhile to completely clear. But it will happen. Be patient.

2.) If it is time to bottle, then you will need to sterilize 32 or so wine bottles and rinse them well. Sterilize the hose, the bottling tube, and the long stick as well.

3.) Attach the long stick to one end of the hose as usual, being careful that the tube is at least 2 in. from the bottom of the carboy, so that you don't siphon any sludge into your bottle. The bottling tube fits into the other end of the hose. The bottling tube helps you to fill the bottles easier. You press it to the bottom of bottle as you are filling. When the bottle is full, you quickly pull up the bottling tube and this will stop the flow of liquid into the bottle.

4.) Siphon as usual from the carboy into the wine bottles. After siphoning, cork each bottle and age bottles on side in a cool place if possible.

5.) This mead should age at least 6 more months. It will be tasty at that point, but will get even better with more age. Enjoy!