

CHAPTER 1

Kefir Beer

One of the things I have missed, since going gluten free, is beer! It is next to impossible to find any beer that is gluten free, but those that are GF are pale lager types. My favorite beers were dark, rich porters and lambic ales. I used to brew beer at home, but it was hard to find GF malts and yeasts, so I eventually gave it up.

Fortunately, I then discovered kefir beer! A good kefir beer tastes a lot like lambic ale, with a rich, complex taste. But what makes it even better is that kefir beer is just incredibly easy to make. Whereas our old homebrew took several hours and many dollars worth of ingredients to put together, I can whip up a new batch of kefir beer in a few minutes. There is always a gallon bubbling away on my counter, and the last batch is sitting in bottles waiting for consumption.

Kefir beer has the same great probiotic effects I had from kefir or good probiotic pills. It does have alcohol: how much depends on the ingredients and the microbe mix of that batch. The more yeast that grow, the higher the alcohol content.

Beer in general

Humans have been making beer in one form or another for a long time. Most of these beers were made using a variety of yeasts and bacteria in some combination, mainly anything that was floating around in the air that populated the liquid growing medium. No one sterilized the growing containers, which were often just clay pots or leather bags. So, you might ask, why didn't the stuff just go bad and give them food poisoning? The answer is the ingredients. Fruit juices and starches tend to get populated by yeasts and lactobacilli, which tend to out-populate and eradicate the kind of bacteria that make you sick. Most beers end up being acidic enough, or have enough alcohol, that pathogens just don't survive.

Alcohol vs. other stuff

When you ferment beer, you get a combination of yeasts and bacteria growing. Now yeasts produce alcohol from sugars. Bacteria produce other stuff, like lactic acid and acetic acid and all kinds of aromatic organic compounds. The original beers were like the modern "Lambic Ale," which is a combination of bacterial and yeast ferments. These beers were complex and rich, quite nice to drink. However, the alcohol content was somewhat lower, because the bacteria used up some of the sugar that the yeast would get.

To remedy that situation, beermakers learned to do stuff like adding hops, which suppress the bacterial growth. Also they learned to sterilize the containers and boil the "wort" (beer ingredients) to kill any native lactobacilli so the yeast can get a head start.

When you make kefir beer, you are essentially making a kind of Lambic Ale, which has both yeast and bacteria. The alcohol content will vary. When I use hops and sugar, it is more alcoholic: when I use apples, it is less alcoholic. Using acidic fruit seems to make it less alcoholic also.

For folks who object to alcohol in general, I don't have any advice, as most ferments do yeild some alcohol, including the fermentation that happens in your gut. Using whey as a starter may yeild less alcohol, but I haven't played with it much. I can say that kefir beer is naturally very filling, and no one seems to "overdo" it in the way that some folks do with wine or distilled spirits.

EZ-Cap bottles

These are the "wire top" bottles that were so popular a century ago. Well, they are making a comeback, esp. among home brewers. They are really easy to use, and can be re-capped without dragging out a "capping machine." You can buy them by the case for a reasonable price, online, and they seem to last forever. I use them for bottling any liquid.

However, you can also use old PETE pop bottles, if you don't mind plastic. They don't seem to change the taste of the contents, and they don't explode. If they do get too much pressure, the plastic screw-top lid deforms and releases the pressure.

Ingredients

The basic process of kefir beer is simple:

1. Make a sweet solution that tastes pretty good.
2. Add a couple of kefir grains and let it ferment.

So what do you make the "sweet solution" out of? Basically anything that is fairly sweet, unless it has preservatives. Preservatives kill bacteria, which you don't want! A few possibilities are below. Mostly I use "juice," which has no solid matter in it. However, you can certainly use mixes with fruit pulp and seeds ... they are a little more work to bottle is all, because at some point you have to strain out the solids, or let it ferment long enough that the solids settle out. You can probably use dried fruit too, as long as it doesn't have too many sulfites or bacteria-killing chemicals.

Apple Cider

Absolutely the easiest way to start out is to buy a jug of apple cider, in a glass jug if you can find it, and toss in a couple of kefir grains. Put the lid on loosely, or cover it with a cloth. Let it set a few days.

Berries

If you are fortunate enough to live where you can pick berries, pick a bunch of them and juice them. You can use a juicer if you have one, or a food mill. You can also put them in a "jelly bag" and mash them with your hands, letting the juice drain out. They also sell "Foodmaster" mills that will do large quantities, which are worth it if you have a lot of berries.

Most berries don't seem to have enough sugar to make a good beer, so I add enough that the juice is sweet enough to taste good. Also, the juice can be just too concentrated, so you may need to water it down. If it tastes like a good juice drink, it will make good kefir beer.

Frozen juices

Just mix up the juice according to the instructions. Watch out for preservatives. I have had problems with "grape" based juices killing the kefir grains, but I'm not sure why.

Jelly or Jam

If I have some jelly that didn't quite "jell" I use it in kefir beer.

Bread Kvass

Mix some old bread with some water and ferment it, then strain. OK, bread isn't "sweet," but starches are basically a couple of sugars linked together, and they feed the bacteria and yeast just fine.

Porter

To make a kefir beer that tastes like *beer* you need to get some hops. Hops are a really funny-looking green flower that grow on a hops vine. Hops are very easy to grow, so if you like beer I'd recommend getting a vine: I've grown them in planters even. But you can buy frozen hops at any homebrew store or online. Hops must be kept frozen if you are going to keep them for any length of time.

Anyway, it is hops that give beer that distinctive bitter flavor. There are different breeds of hops and each one is slightly different, so you may want to experiment.

For my porter I boil a gallon of water with 1 cup of molasses and 3 cups of sugar, and 2-3 handfuls of hops. Let it boil for about 20 minutes, then turn off the heat and add another 2 handfuls of hops. Let it set until it is cool. Then strain it and proceed as for any other kefir beer.

The boiling is to extract the flavor from the hops. However, boiling kills some of the more "aromatic" flavors, so the hops added at the end, the "finishing" hops, are there for aroma. You can also add parched ground grains to the boiling step for more flavor: I recommend reading homebrew books for ideas on grains and types of hops. Most homebrew recipes use barley, which isn't gluten free, but you can use parched corn or rice for flavor, or even coffee.

Adding more sugar makes the beer more alcoholic. Adding more molasses makes it richer tasting, but molasses is very strong tasting so you need to judge what you like. You can also use honey. Honey will make the fermentation proceed very slowly, which is good if you like your brew sweet.

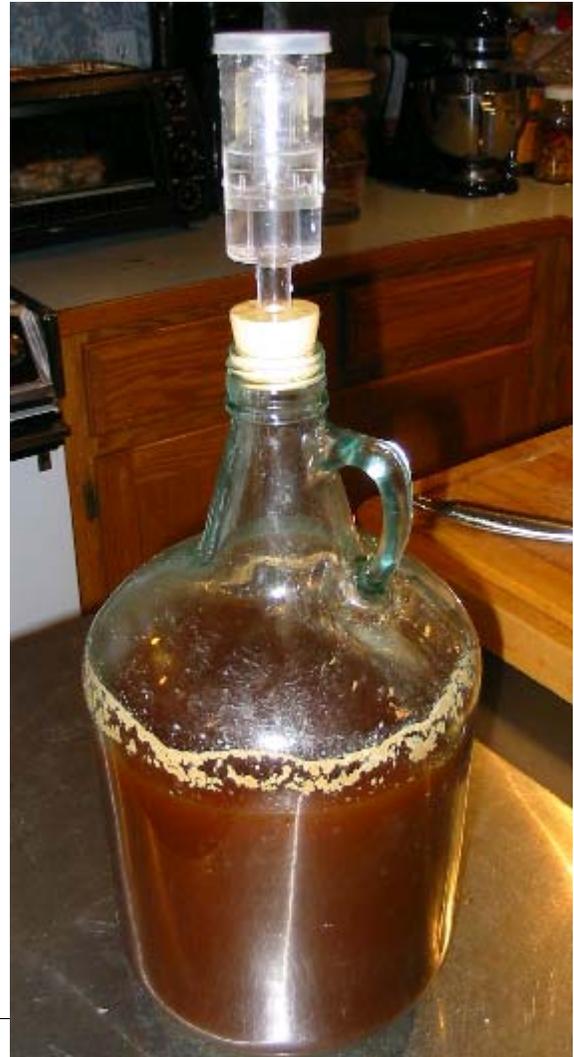
Fermenting

You can ferment kefir beer in any container that will release the excess gas, but will also keep the flies out. The simplest container is to use a gallon jug, and just leave the lid a little loose. Glass jugs are best, and also the easiest to clean. You can buy them at homebrew stores, or get a gallon of that cheap “jug wine.” However, you can use the plastic jug apple juice comes in also, or a PETE bottle from soda pop.

Getting a “water lock” is a nice touch, however. These are neat because you can see the bubbling happening, and so get an idea how fast it is going. These are very inexpensive and last forever. They also NEVER let flies in to your beer (the tiny gnat flies get caught in the water in the water lock, which is gross, but better than in your beer!).

Note in this picture the brownish stuff growing on the sides. That is yeast. As you ferment, you will get lots of yeast growing in your beer, and it will build up around the sides and also fall to the bottom in a thick layer. This is good! It is not mold. It’s also full of Vitamin B, if you want some extra.

I’ve never had mold grow in any of my kefir beer. If you have that problem, you might try adding some acid, like a little lemon juice or tart fruit juice, or maybe a little alcohol (a shot of wine or other beer?).



Bottling

At some point, the yeast and bacteria will use up most of the sugar in your brew. If you have a water lock, you can tell because it stops bubbling. If you don’t have a water lock, you will see that the brew starts to “separate” and clarify. At this point, you can either a) drink it¹ or b) bottle it. The only point to bottling it is to make it easier to drink, and also to make it “fizzy”.

“Fizz” is produced when the yeast and bacteria produce gas that can’t get out of the bottle. Fizz is nice, but it’s also tricky. If TOO MUCH gas is produced, it can a) turn the bottle into a mini pipe bomb (rare, if it’s a

1. Actually, you can drink it at any point along the way. You will find some optimum point for enjoyment, however, for you personally.

good bottle) or b) spray your kitchen ceiling with kefir beer when you open the bottle (common, you should see my ceiling!). When you first start bottling, it's a good idea to open a bottle every night, to make sure it isn't too fizzy. Heck, it's a good idea to open a bottle every night in any case ...



When you get ready to bottle, you pour out your kefir beer from your gallon jug, through a sieve, into a bowl. Try to keep the dregs (stuff at the bottom) in the gallon jug: don't pour ALL the kefir beer out. Your kefir grains will either remain in the jug or get into the sieve, depending on their size.

If the grains do pour out, return them to the jug, with the dregs, for the next batch. Other stuff that might pour out, like bits of skin, hops, seeds, or whatever, just feed to the chickens or the compost pile.

Now add 2 Tablespoons of sugar to a bit of your beer, and dissolve it. Then add it to the rest of the gallon. Now bottle the beer in EZ-Cap bottles, and let it set on the counter until it is fizzy enough for you. The nice thing about EZ-Cap bottles is that you can try the beer as you go ... take a sample, then just recap the bottle.

After it is fizzy, put it in the fridge so you have a “cold one” handy! Also, in the fridge it won’t go sour so fast. As you keep it, it will get more and more sour, until it finally turns to vinegar. It does not go “bad” however, in the sense that “it makes you sick” bad. It just turns to vinegar.

The Next Batch

If you keep the dregs and your kefir grains in your gallon container, you can just pour more juice in for the next batch. Using the dregs, which have a lot of yeast, the next batch will go much faster. The kefir grains last about 6 months, then should be refreshed if you want the probiotic effects. The yeast lasts forever, as near as I can tell. The kefir grains will die unless you feed them, so it’s best to start a new batch when you decant the old batch. If you don’t have anything to make beer with, just add some water and a half cup of sugar to keep them happy.

Once in awhile I wash the gallon jug, out of habit I guess, but I just use baking soda or vinegar, and I save “the dregs.”

One note of warning: if you bottle the dregs, they produce a lot of gas, fast! Like I said, you should see my kitchen ceiling... ALWAYS OPEN HOMEBREW BEER OVER A SINK! If you are unsure of the pressure, cover the cap with a bucket or overturned bowl, and keep your face turned away. Don’t ask how I know this. Think of those movies where the winning team opens champagne and it squirts all over ...

Kefir Vinegar

If you keep kefir beer too long, it turns into vinegar. Exactly how long this takes depends on the batch, but it seems to be over a month or so, and the process happens faster if it is exposed to the air. The vinegar thus produced can be extremely delicious.

