



Back to the Roots: Homemade Basic Foods

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Homemade Flour and Bread

Grinding Grains at Home

There are many reasons why you may want to grind your own grains at home. Making your own flour is a rewarding experience, and your product will still have all of the nutrients and flavor that commercial milling takes away.

In a survival situation, you may only have access to grains, nuts and seeds and will need to know how to make your own flour from what you have.

Milling at home is also a great way to blend unique flours so that you can make baked goods with distinctive flavor, nutritional, and texture profiles. It's also amazingly simple and requires very little time.

What Kinds of Grains Work Best?



Traditional flours are made predominantly from wheat, barley, and rye. Corn is also up there on the list, especially for people who enjoy cornbread or corn tortillas.

You don't have to limit yourself to making flour from just grains. You can make it from nuts, seeds, beans, rice, and roots as well. These lend beautiful flavors and distinctive textures to your finished flour and may also be a viable alternative to those who don't want the gluten that's in wheat, rye, and barley.

You do need to know that if you're not using wheat, barley, or rye in your flours, they will behave differently because they lack gluten, the protein that gives those types of flours elasticity and also helps them bind and rise. You can always add xanthan gum or guar gum to other flours to mimic that if you need to but the textures won't be quite the same.

Here is a list of just a few of the products that you can use to make flour at home:

- Wheat
- Barley (though it's bitter – you don't want to use it alone)
- Rye
- Spelt
- Corn
- Oats
- Buckwheat
- Millet
- Quinoa
- Nuts such as almonds, hazelnuts, cashews, pecans, macadamias, and walnuts

- Seeds such as sunflowers, hemp, pumpkin, amaranth and flax
- Potatoes (yes, potatoes)
- Arrowroot
- Tapioca
- Coconut
- Soybean

This is by no means an inclusive list but it's a starting point. How you grind them depends upon how hard they are. With the exception of some beans, the products above all grind well in a coffee grinder or food processor.

Grinding Your Grains

Many grains are easily ground just by using a food processor or even a good blender. Others require heavier equipment such as a flour mill.

Other tools that can be used include the old school mortar and pestle, spice mills, manual or electric coffee grinders and small electric grinders made specifically for home milling.



Using a mortar and pestle may very well be your only option if SHTF (Shit Hits The Fan) but we recommend being well-prepared for making your own flour if that's what you plan to do.

You can pick up a manual coffee grinder at yard sales, flea markets and even the store for very little money. Make sure to grab an heir and a spare, too. If one breaks, you're going to need a backup.

Depending upon where you live, you may have access to some sort of nut, seed, or grain even if you don't stockpile any.

If you live near soybean fields or have a walnut or pecan tree, you're golden. You can, of course, always grow corn, sunflowers, and pumpkins, too.

Until then, you may wish to use your food processor or mill since you have electric because it's much easier.

If you've purchased grains, corn or seeds for grinding, you can mill them just as they are. If you'd like, you can always toast the seeds and nuts to add a bit more flavor. Now, let's get started.

Homesteader Cornbread

1. Preheat oven to 400 degrees F (200 degrees C).
2. In a small bowl, combine 1 1/2 cups cornmeal and 2 1/2 cups milk; let stand for 5 minutes.
3. Grease a 9x13 inch baking pan.
4. In a large bowl, whisk together 2 cups flour, 1 Tbs. baking powder, 1 Tsp. salt and 2/3 cups white sugar.
5. Mix in the cornmeal mixture, 2 eggs and 1/2 cup vegetable oil until smooth.
6. Pour batter into prepared pan.
7. Bake in preheated oven for 30 to 35 minutes, or until a knife inserted into the center of the cornbread comes out clean.

Enjoy!

1. Make sure that your product is clean and dry. Often there are bugs, rocks, or other debris in there and you don't want to grind those up into your flour. As a matter of fact, though the bugs may add more protein (kidding!), the rocks will be pretty hard on your grinder, so pick through carefully.
2. Fill your grinder or food processor up no more than 2/3 of the way. Half is better so that the product can reach the blades and be ground equally.
3. Grind until you have smooth, fluffy flour.
4. Open your grinder and pick out the larger chunks. You can grind a bit more or just pick them out and grind them alone, which is probably the better option. Toss them in with the next turn, if you're doing more, or just do them alone. No need to waste them.
5. Repeat the process until you've made all of the flour that you need.
6. Sift the flour (you don't have to but we like to for some recipes and for some products because it gets out the rest of any little chunks. A chunk of nut is ok, but we're not big fans of having half of a garbanzo bean in our brownies!

7. Store your flour in an airtight container in a cool, dry place, preferably the freezer or fridge. Because it's fresh and isn't packed full of bleach and preservatives, your "live" flour won't last as long as the "dead" store-bought ones.

Helpful Tips:

- If your grinder sounds like it's bogging down, check for nuts, seeds, or grains that are stuck under the blades. If it's clear and still sounds like that, you may have too much in there. Pour some out and grind two batches.
- Always be sure that your equipment is clean because these flours will go rancid quickly. If there is still flour stuck in there from the last time, you're adding gross flour and other nasties into your fresh batch.
- Don't over-grind your nuts. Otherwise, you'll have nut butter instead of flour. Pulse them until they're flour but be careful. Though almond butter is delicious, it's not nearly as good for dredging pork chops in as almond flour is!

Difference between Meal and Flour

You have undoubtedly heard of cornmeal and possibly even almond meal, but what's the difference between a meal and flour?

Meals are ground more coarsely. They're great for several different uses because they add a heartier flavor and more texture to your goods.

They're bad, though, if you're shooting for something nice and light to make a cake with.

To make meal, just don't grind your product as long. When it starts to get a crumbly texture, you're done. Compare it mentally to cornmeal. You want to keep that grainy feel.

Homemade Almond Meal

1. Place 1/2 cup blanched almonds in a clean electric coffee bean grinder, food processor or blender.

2. Put the lid on and pulse several times until a medium-fine textured meal forms. Don't over-grind or you will make almond butter!

3. Put ground almond meal in a clean flour sifter. Sift almond meal.

4. Place any large particles of almonds back in coffee bean grinder and pulse again.

5. Sift remaining almond meal.

That's it! Use any nut to make fresh, delicious nut meals using this simple technique.

This is really good when you're making a hearty loaf of country bread but if you're shooting for hot rolls, grind longer.

Grinding your own grains is a wonderful idea for surviving a SHTF scenario because you're getting a ton of nutrition from your flour. Commercial white flour has practically no nutrients other than carbohydrates, and there's not really any fiber in there to help slow down the digestion.

Though white bread is better than starving to death, freshly ground flours offer nutrition and fiber that will help you be hearty and full regardless of your circumstances. And they taste great, too!

6 Bread Recipes for a Healthy Life

Bread is a staple in most diets and can be a real lifesaver, literally, when it comes to surviving.

Unfortunately modern store-bought bread has very little nutrition. However, you can make many different kinds of bread at home that are nutritious and good for you even if you have such conditions as diabetes, gluten intolerance, allergies or other issues that may otherwise be affected by bread consumption.

If you have diabetes, you obviously need to watch your carbohydrate consumption in order to keep your blood sugar under control. Fortunately, there are many bread recipes that use nut flours or whole grains that contain the fiber you need to counteract the carbohydrates. These recipes will help you enjoy bread without spiking your blood sugar.

If you have a gluten intolerance or celiac disease, you can't have wheat, rye, barley or triticale because of the protein, gluten, found in the bread.

Up til recently, the only gluten-free bread options were either gross or prohibitively expensive. Most of these recipes are gluten-free and guaranteed to taste better than store-bought bread.

Nut allergies are also a concern for many people. Unlike some other allergies, a nut allergy is often extremely dangerous; people die from exposure. We included nut-free recipes in here, too!

1. Basic White Bread

This recipe is good for diabetics and is nut-free.

- 4 t bread machine yeast
- 1/2 t sugar
- 1 1/4 cups water (90-100 F)
- 3 T olive oil
- 3/4 t baking powder
- 1 t salt
- 1 T sugar substitute
- 1 cup vital wheat gluten flour
- 1/4 cup oat flour
- 3/4 cup almond flour
- 1/4 cup flax seed
- 1/4 cup wheat bran



Directions:

1. Put the water, oil and sugar in your bread maker.
2. In a separate bowl, mix all the dry ingredients with the exception of the yeast and baking powder.
3. Mix well.
4. Take out approximately 1/4 cup.
5. Pour the rest of dry ingredients into the pan.

6. Mix the reserved 1/4 cup of dry ingredients with the yeast and baking powder.
7. Pour into the bread machine pan.
8. Use the three hour bake cycle.
9. After 55 minutes, gently lift the dough out and remove the paddle and place the dough back into the machine so that you don't have a huge hole in your finished loaf.

2. Low Glycemic Index Banana Bread

This recipe is courtesy of the Weight Watcher website and is good for diabetics and people with nut allergies.

- 3 very ripe bananas
- 1 cup sugar substitute
- 1/2 cup natural applesauce
- 3/4 cup all-purpose flour
- 1/2 cup whole wheat flour
- 1/2 t salt
- 1 1/2 t baking soda

Directions:

1. Preheat oven to 350 degrees.
2. In a mixer, mash bananas, add sugar substitute and mix.
3. Mix in rest of ingredients.
4. Pour ingredients into a greased bread pan.
5. Bake for 50 to 60 minutes or until a toothpick comes out clean.
6. Remove from pan and cool on a wire rack.

*If using a dark coated pan, bake at 325 degrees and bake a little longer.



3. Light Fluffy Cheddar Bacon Biscuits

These biscuits are easy to make and are diabetic-friendly, gluten-free and nut-free. Oh yeah, and delicious!

- 1/4 cup butter, melted and slightly cooled.
- 1/3 cup sifted coconut flour
- 4 eggs
- 1/4 teaspoon salt
- 1/4 teaspoon garlic powder
- 1/4 teaspoon baking powder
- 1 cup sharp cheddar cheese, shredded
- 1/2 cup diced bacon, optional

Directions:

1. Preheat oven to 400 degrees.
2. Grease a cookie sheet.
3. Mix eggs, butter, salt, and garlic powder.
4. Add flour and baking powder and mix until there are no lumps.
5. Fold in cheese and bacon.
6. Drop batter by the heaping tablespoon onto greased cookie sheet.
7. Bake for 15 minutes, or until lightly browned.
8. Let cool for 5-10 minutes before removing and serving. Cool completely before storing.



4. Cinnamon Flax Muffin

This recipe is a bit unique and well-suited to survival because it's only for a single muffin. You can make it in the microwave or in the oven, or even in a cup over a fire if you use a lid.

It's diabetic-friendly, gluten-free and nut-free.

- 1 large egg
- 1 T honey
- 1 1/2 t cinnamon
- 2 t plain fat-free yogurt
- 1/2 t baking powder
- 3 T ground flax seeds

Directions:

1. Spray a microwave safe coffee cup or bowl with cooking spray.
2. Mix the egg and honey until well combined, add the yogurt and blend well.
3. Mix in the ground flaxseed, cinnamon and baking powder until well combined.
4. Pour in coffee cup so that it's no more than half full and microwave on high for 1 1/2 minutes.
5. Serve hot.



5. Rosemary Herb French Bread

This recipe is good for diabetics and is gluten-free, nut-free, soy-free and dairy-free.

- 3/4 cup sorghum flour
- 1/4 cup millet flour
- 1/2 cup tapioca flour
- 1/2 T xanthan gum
- 3/4 t salt
- 1 t egg replacer, dry. Skip this if you're using real eggs.
- 1 T sugar
- 3/4 cup lukewarm water
- 1 T rapid-rise yeast



- 1 T olive oil
- 2 t egg replacer whisked with 6 tbsp. warm water or 3 eggs, if eggs aren't an issue
- 1/2 t vinegar
- 1 T olive oil
- 1/2 T crushed rosemary
- 1/2 T kosher salt

Directions:

1. Preheat oven to 375F.
2. Grease sides of French bread pan or regular loaf pan and sprinkle with cornmeal.
3. Combine dry ingredients in a medium mixing bowl of a standing mixer and combine.
4. Put sugar and lukewarm water in a small bowl and add yeast and allow it to activate.
5. Add the yeast water to the medium mixing bowl.
6. Add first amount of olive oil, egg replacer "Eggs" or regular eggs and vinegar and mix on medium for 3 minutes.
7. Carefully scoop out your dough and make a bread-shaped loaf. Baste with remaining oil or melted butter and make a few decorative slices in the top if you want. Sprinkle with rosemary and salt.
8. Let rise for 20-30 minutes or until about doubled in size.
9. Bake for 25-30 minutes or until bread is browned and sounds slightly hollow when you tap it.
10. Allow to cool for several minutes then remove from pan.

6. Wonderful Wheat-Free Wheat Bread

This bread has a pleasant, nutty flavor and works well as a sandwich bread. It's also great with just butter. It's diabetic friendly, gluten-free, dairy-free and nut-free.

- 2 cups almond flour
- 2 T coconut flour
- 1/4 cup flax meal
- 1/4 t sea salt
- 1/2 t baking soda
- 5 eggs
- 1 T coconut oil
- 1 T honey
- 1 T apple cider vinegar



Directions:

1. Place almond flour, coconut flour, flax, salt and baking soda in a food processor and pulse to combine.
2. Pulse in eggs, oil, honey and vinegar until well-combined.
3. Transfer batter to a greased 7 1/2" x 3 1/2" loaf pan. Don't worry if the texture is looser than "regular" dough. That's the way that it's supposed to be.
4. Bake at 350° for 30 minutes.
5. Allow to cool in the pan for 2 hours.
6. Serve and enjoy!

We hope that these breads make you happy as well as healthy!



Making and Canning Homemade Butter

Butter: you use it to make baked potatoes delicious. You smear it on your biscuits and you make finger-licking sauces with it. But what on Earth is going to happen when SHTF and you no longer have access to a grocery store that provides you with it?

Nothing, if you're a good prepper, because you're going to know how to make your own. Today we're going to teach you how to make butter at home.

We'll also touch on something that most people don't know about: canning butter. Keep reading!

The Science of Butter

It's always good to know how things work. Butter is formed from the milk fats in the milk. You use cream to make butter, and cream is made up of fat particles suspended in water. When you agitate it by shaking it, it turns to an emulsion of water particles suspended in fat.

Before you make butter, you have to let the cream ripen. You do that by letting it set at room temperature for several hours until it begins to sour. At that point, the fat crystallizes and a membrane forms around the fat molecules and further separates it from the water.

When you agitate it by shaking it or beating it with a churn (called shearing), the fat globules merge and form balls of butter.

As you continue to shake it, the fat continues to separate from the water and proteins left in the liquid and forms bigger blobs of butter, and eventually all the butter is one big clump and the liquid left is buttermilk, which is great to cook with or even drink, though it's definitely an acquired taste!

Start with Good Cream

The best milk to use for making butter comes from cows that yield milk with a high cream content. These are commonly referred to as milk cows (versus beef cattle). Milk breeds include the Guernsey, Jersey, Holstein and Brown Swiss. Of course, all cows make milk but beef cattle breeds offer a lower yield with much less cream.

A good milk cow will yield several gallons per day and the cream separates easily and naturally without any special equipment. Though goats are popular animals for prepping, their milk isn't ideal for making butter because the cream doesn't separate easily without the use of an expensive separator.

It also has a different flavor than butter made from cow's milk. After you milk the cow, make sure to strain your milk to remove any impurities that may have fallen into the milk bucket, then put it in a large jar in the fridge. The cream will separate out within just a few hours.

Use a spoon or a measuring cup to skim the cream off the top of the milk. If you skim off all the cream, you'll be left with skim milk. If you leave a bit, you'll have the equivalent of 1% or 2% milk, just FYI.

Ripening

To start the process of making butter at home, leave the cream out at room temperature for about 12 hours until it just starts to smell sour. Don't let it set out too long or else it will ripen too much and your butter will taste sour.

However, if you don't let it ripen enough, it will be hard to separate the fat from the milk.

Shearing

Once the cream has ripened, fill a jar 1/3 full of cream and put the lid on tightly. You can use a churn if you have one or if you want to make a large amount of butter, but the jar method is just as good, if not better. Don't overfill the jar because it won't be able to hit the sides of the jar hard enough to make butter.

Begin shaking the jar vigorously so that the cream is banged, or concussed, against the sides and top of the jar. This is what separates the fat molecules from the water and makes them stick together. It's hard to put a time frame on this process because it depends upon how vigorously you shake, the temperature of the cream, and how well it ripened.

Generally speaking though, it takes anywhere from 15-30 minutes. First you'll notice that the cream is getting thicker, then you'll see little blobs of butter forming. Keep shaking until you have one big blob of butter. Once you have this blob, you can stop shaking unless you want a really firm butter.

Straining and Cleaning the Butter

The next step in the process of making butter is to strain it. Using a colander or other straining device, separate the butter from the buttermilk. Leave the butter in the colander and rinse it with cold water for a few seconds. You don't want to use warm or hot water because it will melt your butter.

As the cold water chills and cleans the butter, it'll turn into little crumbles instead of one big glob. Now it's time to get the water out of your butter. Place it in a bowl with enough room to squish it against the sides. Tilt the bowl a bit so that the water can run out as you work the butter against the sides to "wring" it out.

Once it's fairly firm and there's no more water coming out, it's time to salt your butter. A good rule of thumb is 1 teaspoon of salt per pound of butter. You don't have to salt it but it does add to the flavor. This is really a matter of personal taste so go with what you like.

Pour the salt in and just start working it into the butter with your fingers or a spoon. Don't over mix it but make sure that the butter is combined.

You've now officially made butter at home for the very first time. Easy, right? And butter will make an excellent bartering item in a post-SHTF world. To keep your butter from going rancid, refrigerate it.

Canning Your Butter

Canning butter is a great way to prep for a future without access to your cow in a survivalist situation.

Here's the process in a nutshell:

1. Place clean pint jars in roaster and heat in a 250 degree oven. Just FYI, it takes a little less than a pound of butter to make a pint.

2. While your jars are heating, put your butter in a saucepan or pot and bring it to a simmer. Simmer for about 5 minutes, stirring constantly to keep it from burning. Use this time to heat your lids, too.
3. Using a ladle, scoop the butter from the top to the bottom to fill your jars. Do it this way because your butter may have separated a bit and scooping top to bottom helps. Leave 3/4 inch headspace in your jar.
4. Carefully and thoroughly clean the tops of your jars. Remove the lids from the boiling water and place on your jars. Screw on the rings.
5. Once some of the jars start to ping, indicating that they're sealing, shake the butter to recombine it because it will separate as it cools into a foamy top and whitish fat on the bottom. Shake while it's still warm and liquid and repeat a couple of times as it cools until it remains combined.
6. When the butter is nearly cool, put it in the fridge and shake a bit one final time right before it solidifies.

Your butter should keep for at least 3 years as long as it stays sealed!

Now you know how to make butter at home, as well as how to can butter. This is another great skill that preppers and homesteaders need to know because the more survival skills you have, the better off you'll be.



How to Make Sugar at Home

One of the best bartering products when SHTF is undoubtedly going to be sugar. It will also be a great product to have in order to make treats that boost morale and lend a sense of normalcy to life, which will be crucial to survival.

The problem is that storing large quantities of sugar is a challenge. It's bulky, takes up a ton of space, and is a bug magnet.

Even if you stockpile the sweetness, you will still eventually run out, but what if you knew how to make your own? It's really not that difficult and there are a couple of ways that you can do it. For that matter, as part of your homesteading way of life, you could make your own just so that you know where it's coming from.

Today we're going to tell you how to make sugar at home. As a matter of fact, we're going to teach you about two types.

Unless you're fortunate enough to live in a tropical climate and have a ton of expensive equipment, you won't be able to grow sugar cane, the crop that yields about 70% of table sugar in the US. You can, however, grow sugar beets, which is used to produce the other 30% of the sugar that you buy. You can also make maple sugar from maple syrup.

How to Make Beet Sugar



Not surprisingly, beet sugar is made from sugar beets. These aren't the same as the red or white bulbous beets that you've eaten as a dinner side or with pickled eggs; sugar beets actually look more like a parsnip or daikon than they do their sister beets.

They're elongated and have a similar coloring to white potatoes and sugar beets grow well in a variety of climates just like all beets do.

Sugar beets were originally grown to feed livestock but aren't really fit for human consumption.

Here's one of our favorite things about sugar beets – after you make the sugar, you can still use the leftover meat of the beet as a hot or cold mash for your livestock. No waste!

Beet sugar is super-easy to make, too. No special equipment is required and it doesn't take a long time to do it.

1. Scrub your beets to get all dirt and debris off of them.
2. Thinly slice, dice or shred the beets and place them in a pot.
3. Add just enough water to cover the beets.
4. Heat to a boil then simmer long enough for the beets to become tender and soft.
5. Remove from heat and strain the beet pulp out of the juice using cheesecloth.

6. Return the syrup to the pot.
7. Hold the cheesecloth full of pulp over the pot and squeeze as much water as possible out.
8. Simmer until it becomes thick, honey-like syrup, stirring frequently, then remove from heat.
9. Place in a storage container and allow to cool.
10. As it cools, the sugar will crystalize. Remove crystals and smash into a powder with your fingers so that it looks like table sugar.
11. Store and use just like you would regular sugar.

See how easy it is to make beet sugar at home?

Just FYI, you can expect to get about 17% of your original beet weight in sugar. To do the math for you, you'll need about 10 pounds of beets to yield 1.7 pounds of sugar.

How to Make Maple Sugar at Home

Maple sugar is deliciously reminiscent of the syrup that it's made from; it has that beautiful, sort of smoky maple flavor. Chances are that you've had maple sugar at least once in your life. It's frequently sold as candy in the shape of maple leaves.

Maple sugar is great for baking, eating, or just adding to your tea. Once you try it, you'll be hooked. You don't need anything too specialized but you will need a candy thermometer and a heavy-bottomed pan.

1. Start with about 3 gallons of pure, organic maple syrup.
2. Heat on medium high until the syrup reaches 290-300 degrees, which is between soft crack and hard crack stages. If the syrup starts to overflow, just reduce heat a bit then turn it back up after the foam settles.
3. Remove from heat and stir vigorously for about 5 minutes.
4. Pour into a heat-resistant container; it's going to be extremely hot!
5. Allow to cool completely.

6. Break into chunks and grate into a powder.
7. Store as you would standard sugar.

One quart of syrup will yield about 2 pounds of granulated sugar. If you live in an area with maple trees, you can draw the sap directly from the trees and make your own syrup. Making maple sugar is a great skill to have for survival because it's easy and requires very little specialized equipment other than a tap for the tree.

Just FYI, darker maple syrups tend to yield a moister sugar than lighter-colored syrups do. Since maple trees are tapped in the spring when the sap is running, you need a tremendous amount of sap, about 40 gallons, just to make 1 gallon of good syrup. Just to give you an idea, an average tree yields about 3-4 gallons per day and a little over 13 gallons per season, total.

It's easy to make both beet sugar and maple sugar at home and they both have their uses.

Maple sugar does taste differently so you may wish to use it when you're looking specifically for that flavor profile.

Beet sugar tastes just like plain white sugar so you can use it just as you would cane sugar.



When SHTF, sugar is going to be a primo product because of the luxury of the crop. Those who have it or, even better, know how to make it, will certainly benefit from both the time and effort.

Plus, you won't have to worry about drinking your tea unsweetened no matter how bad things get. In post-disaster times, a little bit of comfort or luxury may very well go a long way.



How to Make Vinegar at Home

Vinegar: the delicious, magical, germ-killing cleaning agent and wondrous elixir that cures what ails you.

Since you're a smart prepper, you may have plenty stockpiled, but wouldn't it be much easier, and prepper-friendly, if you could just make vinegar at home from ingredients that you already have on hand? Well, you can. As a matter of fact, it pretty much makes itself if you just combine a few basic ingredients and leave it alone.

You can make vinegar from just about anything that has sugar or starch in it. As a matter of fact, you can make it straight from sugar, but it's a bit more difficult.

Let's see the details of making apple cider vinegar from start to finish. The process transfers pretty easily to all other fruits that you may want to use.

Rules for Making Vinegar

There are only four important guidelines to successfully making vinegar and as long as you follow the simple directions and abide by these rules, you'll be using your own vinegar in no time.

1. Make sure that your equipment is clean. You don't want wayward bacteria affecting the process.
2. Don't use metal or plastic containers. They affect the process and the flavor and can derail the whole project.
3. If you're comfortable with the temperature, your vinegar probably is, too. If it's too hot, the good bacteria will die. If it's too cold, the bacteria will go dormant. Either way, you're not going to get vinegar. 70-80 degrees Fahrenheit is about perfect and you can go as low as 60.
4. Store your future vinegar out of direct light to avoid killing necessary bacteria. You can do this by storing in a dark place or by using a dark jar or crock to ferment it in.

What You'll Need to Make Vinegar

Just like with most homesteading projects, you don't need any super-fancy equipment to make vinegar at home.

For the sake of thoroughness and preparedness, we're going to talk about the entire vinegar-making process from apple to vinegar, though there are a couple of shortcuts that you can take if you have hard cider, starter, or vinegar on hand. Since you may have none if SHTF, we'll start from scratch so this list is inclusive.

1. Fresh juice from unblemished apples that have been thoroughly cleaned before pressing. Use sweet apples because it's the sugar that causes the fermentation. Fall apples such as Red Delicious, Golden Delicious, Gala, Jonagold and Fuji apples are all good ones. Taste them. If they're fairly sweet, they'll work. You can

also use store-bought juice as long as it has no additives and isn't pasteurized. You can also use apple scraps – cores and peels – as long as the apples are organic.

2. An airlock cap. You can buy these at any winery or make them from a piece of wine cork or corn cob. Drill a hole in the cork or cob and insert a snug-fitting piece of tubing long enough to go from the juice out through the hole and into a jar of water. A couple of feet should do. You don't need an airlock cap if you're starting with hard cider or wine already because the second fermentation stage NEEDS plenty of air. For that matter, you don't need it for the first phase but it speeds the process up considerably because carbon dioxide can escape without letting in any air that will slow down this stage of the fermentation process.
3. Glass or enameled earthenware jug(s)/bottle(s).
4. Cheesecloth or an old T-shirt (for us preppers who like to repurpose things).
5. Rubber band or string to secure cheesecloth or T-shirt on top of jug during the second fermentation.
6. Jars or bottles with lids for storing the finished vinegar.

3 Recipes for Making Vinegar

1. Making Hard Cider from Apple Scraps

Let your scraps turn brown then fill your jars up with them and cover with water, filling to the top. Put your airlock cap on. If you're using the homemade version, run the hose to a jar of water. Place in a dark place and allow to ferment for about 4-6 weeks.

A gray foam will form on the top of the cider; this is normal. It's harmless. You'll know the juice has turned to cider when there's no more air (bubbles) coming through the tube. This means that all of the sugar has turned to alcohol. There will be a thick layer of silt, called lees, in the bottom and the juice will smell like alcohol.

Strain the cider through cheesecloth, an old t-shirt or a coffee filter. Now you're ready to make vinegar.

Note: If you don't use an airlock device, you may want to use a wider-mouthed jar or crock so that the vinegar fermentation will go faster. Alternatively, you can watch for bubbles to stop during the cider fermentation, then strain the cider from the fruit and fill the jugs back up half way to finish the cider-to-vinegar fermentation so that you have more surface area exposed to air.

2. Making Hard Cider from Apple Juice

The process is basically the same except that you use juice instead of peels and water. Just fill your bottle or jug with juice and follow the same procedure as above.

Note: If you're worried that your juice isn't sweet enough, you can fix that by dissolving a couple of teaspoons of sugar per gallon of juice/water into the mix.

Speeding things up: Many people use a starter such as yeast or vinegar but this isn't really necessary because there are enough of the good bacteria in the air to cause fermentation without the additions.

You can use them, though, if you want to speed things up a bit. If you're using wine-making yeast, use 1 cake per 5 gallons of juice. If you're using vinegar, use a 1:4 vinegar to juice ratio.

Note: You don't have to use an airlock lid for this process but if you don't, it will take up to 6 months or so for the juice to turn to vinegar if you don't have a starter.

Still, if you don't have access and you want vinegar in a SHTF situation, you can always wait for your first batch to be finished, then use the mother or some of your vinegar to make speedier batches after that.

2. Making Apple Cider Vinegar from Cider

Now that you have your cider, you're ready to start the vinegar making process. This is the easy part: just put your cider in jugs, cover the top with cheesecloth or a piece of old t-shirt, and place it in a dark, warm place. It'll do its own thing and turn to vinegar on its own.

Since air is required for this process, you should only fill your jars to the widest part of the vessel, allowing as much surface area to be exposed as possible. You can also stir it daily, or regularly, to speed things up a bit.

You'll notice that the thick, gray or white gelatinous foam will form on top again during this process. This is called the "mother" and can either be discarded or used to speed up the process of making vinegar at home the next time.

The speed of this process depends upon temperature, whether or not you're using a starter, and how much air the bacteria has access to, but expect this fermentation phase to take 3 weeks to 6 months. Just keep smelling it and once it smells vinegary, taste it and let it ferment till it tastes strong enough to you.

There's a special kit called a titration kit that you can use to measure and adjust the acidity of the vinegar. It's important though that your vinegar be at least 5% acetic acid if you're going to use it for preserving foods.

Note: In place of apples, you can use grapes, berries, or any other high-sugar food to make vinegar. The process is basically the same. Ferment it to an alcohol state then ferment the wine or cider to vinegar.

Storage

If you want to keep your vinegar for more than a few months, you need to pasteurize it and store it in clean, sealed containers. Do this by bringing it to 170 degrees for 10

minutes. This will also burn off any residual alcohol left in the vinegar. Store in sealed bottles or canning jars and it'll stay good practically indefinitely.



How to Make Beer at Home

Have you ever been sipping a cold one and wondered to yourself, “Self, what would happen if there suddenly was no more beer manufacturers? Can I make this myself?”

As a prepper and a do-it-yourselfer, you most likely have, and the answer is yes, but we’re going to have to qualify it. Yes, you can make your own beer at home as long as you’ve stockpiled the equipment and the ingredients.

Making beer isn’t like making wine; you can’t just toss some grape juice, yeast and sugar in a bottle and wait it out. You really do need 3 specialized ingredients (hops, beer yeast, and fermented sugar) a couple of common ingredients and some fairly specialized yet simple equipment.

You can also opt to start with a beer kit, which will provide you with everything that you need to get started, but will only have enough supplies for your first batch or two. After that, you'll need to order ingredients but you'll have your equipment.

Since bottles may be rare in a post-SHTF world, we're going to tell you how to store your beer in casks instead of bottling it after we go through the process of making it, too. You know, just in case you want to open the first saloon when society starts to restructure, or if you just want really good beer.

For simplicity, because you probably won't be growing your own wheat and making your own malt, we're going to use an extract. You can, of course, make it straight from wheat but that would require, well, wheat.

What You Need for Making Beer

Equipment

- 2 food-grade 5-gallon buckets with lids, or 1 bucket and 1 "carboy", a 5-gallon glass bottle
- Large pot or kettle that will hold at least 3 gallons of liquid with extra room to spare
- 6 feet of plastic, food-grade tubing
- 1 airlock, aka fermentation lock, to keep bacteria out of your beer while letting Co2 out.
- 1 long spoon – you'll use this for stirring so make sure it's long enough to stir your pot.
- At least 55 bottles
- At least 55 bottle caps (not twist-offs)
- 2 bottle cappers
- Bottling wand
- 1 large funnel

- Food thermometer
- A cool place to ferment – cooler, fridge, cold basement, cellar

Ingredients

These are the ingredients you'll need to make basic are:

- 5 gallons of filtered, purified water
- 6 pounds of DME (dry malt extract)
- 1 oz. hop pellets, your choice (this will play a huge part in the taste of the beer)
- 14g (2 7oz packs) ale yeast
- 1 C warm water to activate the yeast in
- 3/4 C liquid corn syrup

Before you start the process of actually making beer at home, you need to carefully sanitize all of your equipment. Any bacteria will cause spoilage of your beer, or at the very least will affect the flavor.

As a good prepper, you should have plenty of bleach stored back so make yourself a bleach solution with 1T of bleach per gallon of water to sanitize stuff so that you kill all the nasties.

Brew It Up

Now to the good part – making your beer at home!

1. Gather all of your ingredients and equipment.
2. Place your hops pellets in cheesecloth or some type of clean cloth so that it just steps in the beer.
3. Pour 1.5 gallons of water into your kettle and bring it to a boil.
4. Remove from heat and add the malt, stirring so that it's all dissolved. If it sinks to the bottom, it'll burn, and burned malt tastes like crap.

5. Bring it back to a boil for about 50 minutes. It's going to bubble so be sure to watch it carefully. If you need to beat back the foam to keep it from overflowing, spray it with a bit of water in a spray bottle.
6. Add your hops. Now the mix will get REALLY foamy so watch it carefully and spray if necessary; you can't walk away at this point.
7. Boil for another 10-20 minutes, depending upon how "hoppy" you want your beer.
8. While your wort (that's what the mix is called) is boiling, dissolve your yeast in the water. If it doesn't activate (get bubbly), your yeast is no good. Try again with fresh yeast or your beer won't ferment correctly.
9. Next, you can either remove from heat and let it cool naturally or place the pot in an ice bath to cool it quickly. If you use an ice bath, it will take about 20 minutes to cool. Stir it a bit so that it cools faster.

Fermenting

1. Pour the remaining 3.5 gallons of water into your fermenting bucket or carboy and use the funnel to add the wort.
2. Sprinkle in the yeast and then stir it or add the lid and shake it so that the yeast dissolves.
3. Add the airlock and store in a cool place (60-75 degrees F) such as a dark room or your basement or cellar, where no light will get to it. Some foam will likely escape through the airlock so make sure that it's not going to ruin anything that the carboy or bucket is sitting on.
4. The fermentation process should take about 2 weeks. If the temperature of the room raises and the airlock stops bubbling, you need to move it to a cooler place right then.
5. If all is well, the airlock will have a slow trickle of bubbles that will increase for a few days, then decrease over the next few days.
6. It's possible that the fermentation process will pop your airlock out. If that happens, just sanitize it and put it back in.

Bottling or Casking

Now it's time to store your beer. Regardless of whether you're using bottles or a cask/keg, sanitize them well and let them air dry. Your bottles caps will come with sanitizing instructions.

- In a sanitized pot, bring the corn syrup and 1 cup of water to a boil and boil it for 10 minutes. Don't use too much syrup because the beer will over-carbonate and cause the bottles to explode.
- Cool for 10 minutes and pour the sugar mixture into your bottling bucket. (or your cask if you're casking)
- Set your full fermentation bucket on the counter and place the bottling bucket in the floor beneath it.
- Using your sanitized siphoning hose, begin to siphon the beer from the fermentation bucket into the bottling bucket (or cask). Control how fast it flows by pinching the siphon. You don't want it to splash but rather to flow gently in.
- After all the beer has siphoned into the bottling bucket, cover and allow it to set for 30 minutes so that the sediment sinks.
- Now move the bottling bucket gently to the counter and siphon the beer into your bottles, leaving 3/4-inch headspace.
- Cap each bottle securely.
- Let the bottles age for at least 2 weeks, but up to 2 months, then enjoy!
- If you've placed your beer in a cask, store it somewhere cool, 55-65 degrees, with the airlock still in place.
- Sample after a few days and drink it when it's ready, or bottle it if you were casking for flavor. If you do use a cask, make sure that your siphon hose is a couple of inches or so off the bottom so that you're not siphoning the dead yeast and sediment off the bottom.

Casked beers go bad more quickly than bottled beers, so keep that in mind. There's a whole art to choosing your casks, too, but that's an article for another day!

After you get the hang of this basic recipe for making beer at home, you can experiment with different hops and yeasts to alter the flavors. You can even add fruits or spices to make your very own craft beers. Once you get the basics and understand the science, the world is your brew-toy. Enjoy!



How to Make Alcohol at Home

Humans have been making, using, and consuming alcohol since the dawn of civilization. It first began with the cereal grains used to make beer by the cultures of Mesopotamia and Egypt. Later, the cultures of the Mediterranean—the city-states of Greece and the Roman Empire—adopted wine as an integral part of social, political, and religious life.

The Age of Exploration starting in the 15th century gave birth to a new range of spirits thanks to the improvement and growth of the distillation process. Drinks like rum, whiskey, and brandy were used as currency to buy slaves in the colonies of the New World. Eventually, these same spirits played a major role in the formation of the United States.

In today's times, alcohol is more than just a thirst quencher, religious symbol, or bartering agent. We now use alcohol as a disinfecting antiseptic, chemical solvent, in products like antifreeze, and as fuel. With such versatility, alcohol is one product whose demand will increase exponentially in the event of a disaster.

Thus, learning how to make your own alcohol can be an incredibly gratifying and potentially life-saving way to spend your time prepping. Doing so could yield an unlimited supply to be used for personal consumption, medical use, sterilization, fuel, and trade. If using a homemade still you can also create distilled water, another multipurpose survival substance.

The components for making alcohol are actually quite simple. Alcohol is made when yeast is added to a sugar-containing substance, which releases CO₂ and starts the fermentation process. In wine, yeast is added to a grape mixture to ferment the natural sugars over time.



The process is slightly more complicated in beer, as grains don't contain as much natural sugar. Thus, the grain-growing process is halted midway to harness the sugar enzymes and "malt" the grain before yeast is added.

Hard liquor requires the additional step of distillation, which serves to concentrate the liquid AFTER the fermentation process of a "mash" of corn or fruit.

Though the process is labor intensive, making your own beer and wine is perfectly legal. In fact, homebrewing has taken off as a hobby around the world in recent years.

You can purchase a kit with everything you need to get started or do it from scratch with your own materials.

Unfortunately, distilling alcohol remains illegal for personal use and distribution (in the United States) for reasons of safety, taxation, and regulation. However, distilled ethanol, or grain alcohol, is the most versatile and useful form of alcohol for survival purposes.

Ethanol is a clean burning fuel that can power your vehicle and be used as fuel for cooking or lighting. In fact, it was once mixed with turpentine as an alternative to whale oil for 19th century street lamps. Accordingly, ethanol mixes well with kerosene to allow for an extended supply.

If dehydrated properly, ethanol can also be added to unleaded gasoline to extend its life. If you face a scenario where the supply of gasoline is exhausted, ethanol could also be used to make your own E85.

The supplies and purification process are complicated, but this homemade fuel could be created for less than what you'd expect to pay at the pump.

Another benefit of ethanol is its extended shelf life. If stored in an airtight container, ethanol can retain its potency for years. If stored in your garden-variety lawnmower gas can or other open-topped container, ethanol will become less stable as a source of fuel.

Additionally, alcohol makes great fuel for cooking. Homemade tin can alcohol stoves are something every prepper should know how to make and carry in their bug out bags as a backup fuel source.

The basic process for making homemade ethanol alcohol is as follows:

Mash

Distilled ethanol alcohol starts with a mash. Corn is commonly used, as it is inexpensive and readily available. However, pretty much any compost material could be used granted it contains the right enzymes to react with yeast to break down the sugars. These could be potatoes, carrots, sugar cane, or any other starchy produce.

You typically start with equal parts mash starch and sugar in a five-gallon bucket with filtered water added until full. A few packets (recipes and amounts vary) of yeast is added and stirred until (roughly) dissolved.

Fermentation

The mixture in the bucket is then covered and left to sit for 2-3 days (or longer). The lid should not be opened at any point during this time.

If you would like a one-way vent, you can drill a small hole in the bucket of the lid. Then tape a surgical glove (or balloon) around the hole and poke a small pinhole in the tip of one of the fingers. As the mash ferments you will see the fingers of the glove (or balloon) partially inflate.

After 3 days, agitate the mixture by shaking the bucket without removing the lid. The mash should be ready after 4-5 days when the sediment rests at the bottom of the bucket and is no longer partially suspended. This is a sign the yeast has completed fermenting the sugars into alcohol.

Distillation

The distillation process requires boiling your mash, condensation of the liquid, and cooling and collecting the vapor. Ideally, this will be done in some kind of still.

Popular homemade versions are Reflux and Fractionating stills, typically used to make neutral, or tasteless, ethanol alcohol that can be used straight up or flavored for consumption later.

The alcohol will begin to boil off at about 170 degrees Fahrenheit. The outlet of your still should cool the vapors down to about 70 or 80 degrees and turn the ethanol back into liquid.

As the alcohol levels of the mash are boiled off and reduced, the temperature of the pot will begin to rise.

Once your mixture reaches about 220 degrees it is finished producing ethanol and a new batch of mash will need to be added.

While anyone can learn how to make homemade beer or wine, distillation is a bit more difficult. Yet with so many uses both in times of peace and crisis, knowing how to make homemade alcohol is a lifesaving skill no prepper should be without.